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AMATEUR RADIO

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EDITORIAL



HAPPY NEW YEAR

The Federal Council, Federal Executive and Divisional Councils extend New Year Greetings to members of the Wireless Institute of Australia and to outside readers of our magazine—"Amateur Radio."

As 1961 heralds the space age, now coupled with the ever-expanding electronic field with its hunger for radio frequencies, Amateur organisations all over the world must be united in their efforts to fight for the preservation of hard won frequency allocations to the Amateur Service.

In order that a Society can do this it must have finance, and to have finance it must have membership. It is the obligation of every Amateur in this age of the science to be a member of his Society regardless of his personal belief concerning its activities and what it appears to do or not to do for him.

The Amateur Society in every country is doing a lot—and must continue to even greater efforts in the future—if Amateur Radio is to maintain a place in the sun. If every Society fights for the protection of the Amateur Service, then every Amateur is deriving the benefit of its effort and for this reason alone should be a member.

You, the member today, can do your part by encouraging Amateurs who are not members to join the W.I.A. in Australia and become the members of tomorrow. It will be too late in the years ahead to say the W.I.A. should have fought your case. Only membership can provide the finance to do that, so start in 1961 to enlist one new member by telling him what this Institute is doing for the Australian Amateur.

—FEDERAL EXECUTIVE

WI BROADCASTS

All Amateurs are urged to keep these frequencies clear during, and for a period of 15 minutes after, the official Broadcasts.

VK2WI: Sundays, 1100 hours EST, simultaneously on 3575 Kc., 7146 Kc., and 145.6 Mc. Intrastate call-backs taken on 7050 Kc.

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VK7WI: Sundays at 1000 hours EST, on 7146 Kc. and 3872 Kc. Intrastate hook-ups taken on 7115 Kc.

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S-5017	1N1237	1,600	550	8	750	1¼"	3-7/32"	OZ4, 5X4, 5Y4, 6AX5, 6X5
S-5018	1N1238	1,600	550	8	750	1¼"	3-7/32"	5AU4, 5AW4, 5AZ4, 5T4, 5U4, 5V4, 5Y3
S-5019*	1N1239	2,800	1,000	5	500	1¾"	4-5/16"	5R4
S-5033	1N1262	4,500	1,600	2.5	250	1¾"	4-5/16"	6AU4, 6AX4, 6BL4, 6W4, 12AX4, 17AX4
S-5130	—	10,400	3,500	3	300	1-7/16"	5½"	866, 866A, 3B28
S-5207*	1N2490	1,600	550	5	500	13/16"	1¾"	6X4
S-5251	1N2389	1,600	550	6	600	1-3/16"	2-3/16"	5U4, 5Y3, 5AU4, 5W4, 5Z4, etc.
S-5343	—	7,000	2,500	3	300	1-7/16"	4½"	816, 836, 3B28, 866 at reduced Voltage
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* Hermetically sealed. All ratings are for capacitive input filter.

- ★ Ratings shown are maximum and not design centre figures.
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SIMPLIFIED METHOD OF DETERMINING MODULATION TRANSFORMER RATIOS

L. H. VALE,* VK5NO

THE normal method of determining the correct turns ratio of a transformer coupling a push-pull modulator to a Class C final is to take the optimum plate-to-plate impedance for the modulator from the manufacturer's data on the modulator valves and calculate the impedance of the Class C stage by dividing its anode voltage by its anode current; the turns ratio is the square root of the ratio of these two impedances. Most commercially available transformers are labelled in terms of impedance values in any case.

This has led to the establishment of two schools of practice, on the one hand we have those who use transformers whose winding impedances¹ are rigidly correct, and on the other, those who, because of necessity, use any old power transformer as a modulation transformer, in some cases with good results.

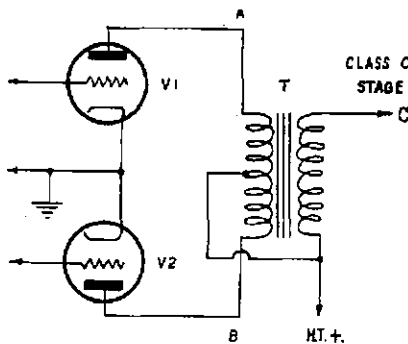
A much more simple approach is to think in terms of turns ratio and peak voltage swings only. This leads also to a "universal" modulation transformer of much simpler design than the multi-impedance devices generally considered necessary, particularly if the same plate voltage is used on both modulator and final, as in most Ham rigs.

Consider the normal modulation transformer circuit where V1 and V2 are modulator valves and T is the modulator transformer. The object of the modulator is to swing the secondary voltage between values of zero volts and twice the h.t. voltage, for 100% modulation. When no audio is applied to the grids of V1 and V2, their anode voltages are both at the same value of approximately the positive high tension voltage (for the purposes of this discussion we should neglect small resistance losses, etc.). If an audio signal is applied to the grids so that V1 becomes more positive and V2 grid more negative, then V1 plate swings negatively and V2 plate positively. The transformer primary acts as a "saw-saw", and ensures that the negative swing at point A is the same as the positive swing at point B and a corresponding audio voltage is developed at point C. If the turns ratio of one side of the primary to the secondary were one-to-one and point A swung down to zero volts, then point C will also swing down to zero volts. On the reverse side of the audio cycle, when V2 grid becomes positive, V2 anode (point B) swings negatively and points A and C positively; if point B swings down to zero volts, point C will swing up to twice the h.t. supply voltage. So, if we could obtain modulator valves that bottom down to zero volts when the grid swings positive, then a modulation transformer of one-to-one ratio will

★ Here is a scheme to permit the use of that power transformer as a modulation transformer. However, certain factors must be taken into account in modulator design and this article gives a few practical shortcuts which may help.

give us correct matching for 100% modulation under all reasonable conditions of secondary loading.

Fortunately, almost all of us use high efficiency modulators; either pentodes, beam tetrodes or Class B triodes. They have high efficiency because the anodes swing to low voltage values on negative swings—not quite to zero unfortunately, but in general to below a fifth of the high tension supply voltage. So that instead of a one-to-one transformer ratio, a turns ratio between one half the primary to the secondary of four-to-five will enable one to get 100% modulation (or so close to it that the difference cannot be heard) provided that the modulator and final are running at about the same voltage. It is as simple as that.



So, if you've got an adequately sized transformer with 250 primary and 200 a side secondary, you've got a reasonably good modulation transformer. If it is 300 a side, then you'll not get more than about 70% modulation before the modulator overloads, but that's only half an S point down anyway. It's better to take the laminations out of a power transformer and put them back all in the one way without interleaving, but that's hardly in the scope of this article.

But, you ask, if this magic turns ratio of four-to-five is all that is needed, why go to all the fuss of the normal design method anyway? If you'll go to the trouble of calculating the correct transformer ratios for 100% at maximum modulator output (using the same h.t. voltage on both stages) you'll find that the four-to-five ratio is generally very close to correct. But we seldom use the full audio output of our modulators; in the normal method the optimum load is always presented to the

modulator but the anode swings are reduced; in this simplified method the anode swings keep at their high value, but the load impedance on the modulator is increased according to the output requirement. In some cases one method results in less distortion, in some cases the other.

One thing that this simplified method does, incidentally, is to reduce splatter—the modulator starts to overload before the final is badly overmodulated and a harmonic filter after the modulator makes a reasonably clean signal, even though the modulator is being badly overdriven.

If you can think of modulation transformers in terms of voltage ratios and turns ratios instead of impedances, you can get rid of a lot of the complications.

According to the valve manufacturer's data on valves such as KT88s, 6L6s, 807s, 6V6s, etc., the use of a four-to-five ratio (half primary to secondary) transformer will give results varying in the worst cases from obtaining 93.5% modulation to using 85% of your available audio power for 100% modulation. In most other cases, as we would expect if the earlier reasoning is valid, the turns ratio of a transformer designed by the normal method to modulate an r.f. stage of twice the undistorted output of modulator is actually four-to-five (half primary to secondary).

If you have a modulator capable of giving over half the class C input power, and you use the same voltage on both, a big enough transformer with a ratio of four-to-five (half primary to secondary) will do your job. If your Class C supply voltage is twice that to the modulator, then the ratio becomes four-to-ten, and so on.

Wireless Institute of Australia

Victorian Division

A.O.C.P. CLASS

commences

THURSDAY, 2nd FEB., 1961

Theory is held on Monday evenings, and Morse and Regulations on Thursday evenings from 8 to 10 p.m.

Persons desirous of being enrolled should communicate with—
Secretary W.I.A., Victorian Division, P.O. Box 36, East Melbourne (Phone: JA 3535, 10 a.m. to 3 p.m.), or the Class Manager on either of the above evenings.

* 573 Main North Rd., Elizabeth North, S.A.
1 A transformer has theoretically no impedance. It merely transfers an impedance on its primary to reflect an impedance on its secondary. This is a function of the square of the turns ratio. A 2:1 turns ratio transforms a 4:1 impedance ratio.

A CRYSTAL CONTROLLED CONVERTER FOR 50 Mc. USING 12 VOLT H.T.

J. L. OCCOLOWITZ,* VK3ZAI

WITH the advent of hybrid tubes and transistors for use in mobile work and the disappearance of h.t. sources, a need has arisen for auxiliary equipment to work off a h.t. supply of 6 or 12 volts.

On the receiving side the equipment may be fully transistorised, but the cost can be high, especially for v.h.f. equipment, whilst for transmitting above QRP level tubes still are a must.

The converter described here should find use for those interested in mobile 50 Mc. reception only, where a 100v. h.t. may not be available. Although it cannot compete with transistors on a current drain basis, it compares very favourably in cost with a converter built from transistors and using the same number of stages.

● A simple efficient way of going 6 metre portable in your car, by feeding the output of the converter to a car radio receiver. Using 12 volt h.t., it poses no power supply problems.

CONSTRUCTION AND ALIGNMENT

The converter was made with the three tubes in line on an 8" x 3½" chassis. L1, L2 and L3 were positioned mutually perpendicular; the rest of the wiring follows the 3ZAI rats' nest form and need not be further described.

To align the converter put heater voltage on all tubes and h.t. on the overtone oscillator only, and tune for a

dip in plate current or maximum signal on 23.5 Mc. Then apply h.t. to the multiplier and tune for plate current dip or maximum signal on 47.0 Mc.

With h.t. on all stages, peak C1, C2, C3 and L2 for maximum signal strength on a 50 Mc. signal. Remove h.t. from the neutralised triode stage and with a strong signal tune Ln for a null in signal strength. Reconnect the h.t. and, if necessary, repeak the r.f. stages.

[In constructing this converter it will assist if a shield is run across the first 6ES8 socket in such a manner that it isolates the input triode from the rest of the circuit. Short, direct, well soldered earth connections will make for greater stability. The 6ES8 should be so orientated that pins 1, 2, 3 and 4 are used as the first triode, and the shield should run between the pins 1 and 9, and 4 and 5; this shield must be solidly earthed. A hole through the shield carries the connection between the cascode sections.—Ed.] ●

Table 1.—Characteristics of 6ES8 Triode measured on "AVO" Tester.

Ep. (V.)	Ip. (mA.)	—Eg. (V.)	Gm. (mA./V.)	Nearest Equivalent Valve Type compared on Gm. basis.
125	18.5	2.0	11.8	12BH7A, 6CG7, ECC40
125	14.0	2.5	9.2	
50	1.5	2.0	3.4	ECC81, 6J6
50	2.4	1.5	5.0	
50	5.0	1.0	9.0	E88CC
50	10.0	0.5	11.7	
20	0.3	1.5	1.2	ECC83
20	0.7	1.0	4.1	
20	2.4	0.5	6.1	ECC81 (Va. = 100v.)
20	3.6	0.3	5.2	
20	3.0	0.4	5.7	ECC84, 6BQ7A, ECC85, ECC81, 6BC8, E180CC, E92CC, E90CC.
20	1.7	0.6	6.0	

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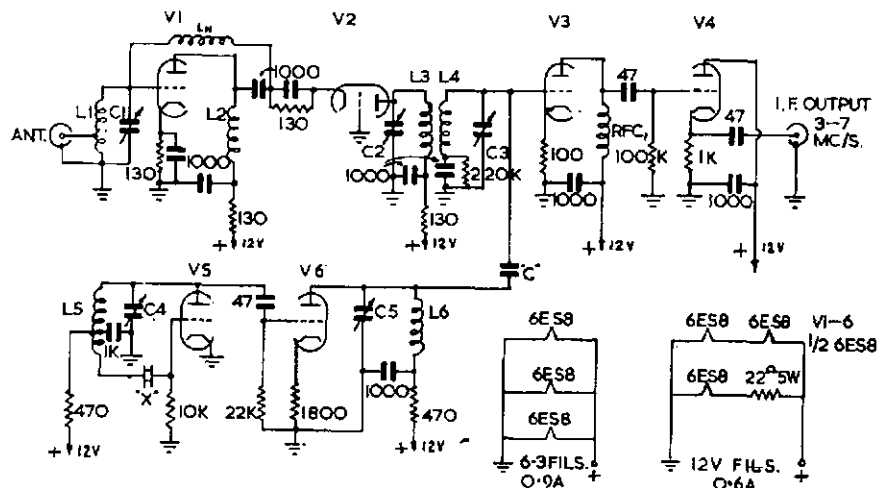
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Current drain is 0.9 amp. at 6.3v. for the filament supply and 0.15 amp. at 12.6v. for h.t. If a 12.6v. filament supply is used, filament current will be 0.6a., however by using a crystal whose third or fifth overtone requires no multiplication to generate the injection frequency, and by omitting the cathode follower stage, one 6ES8 may be omitted to halve the current drain to 0.3a. at 12v. Noise figure and gain with 12v. h.t. are comparable with a conventional converter using 150v. h.t.

The 6ES8s used were manufactured for use as high gain cascode r.f. amplifiers in t.v. front ends. Although they are designed for 125v. operation, they still have quite a usable gm. at low plate voltages (Table 1). Tests have shown that the converter will operate reliably at 5v. h.t., but with lower gain and power noise figure.

The i.f. frequency is arbitrary and was chosen in this case to work into a d.w. transistor receiver that I hope a kind and benevolent friend will be bringing from overseas. By using a 5.5 Mc. crystal, which will operate on its third overtone, a b.c. receiver could be used to tune the first megacycle of the band.



"C"—Nylax covered 10/010 fused together 1 in. long, tapped 3 turns from earth.
 L2—13 turns No. 21 B. & S. on ½ in. diam. slug-tuned former.
 L1—9 turns ½ in. diam. No. 21 B. & S., ¾ in. long, tapped 3 turns from earth.
 RFC1—2.5 mH. r.f. choke.
 C4—50 pF. trimmer.
 C5—1.5-8 pF. ceramic t.v. type trim.
 C1, C2, C3—1.5-8 pF. ceramic t.v. type trim.
 All resistances in ohms.

L3, L4—10 turns ½ in. diam. No. 21 B. & S. ¾ in. long. Cold ends ½ in. apart.
 L5—12 turns ¾ in. diam. No. 21 B. & S. 1 in. long, tapped 3½ turns from xtal end.
 L6—13 turns ½ in. diam. No. 21 B. & S. ¾ in. long.
 Ln—40 turns No. 28 B. & S. close wound on ½ in. slug-tuned former.
 "X"—23.5 Mc. on third overtone, or to suit i.f.

* 128 Gaffney St., Coburg, N.13. Vic.

The SCR211 Frequency Meter Series

C. G. HARVEY,* VK2AQU

HAVING owned and operated the famous "211" type frequency meter for more years than I care to remember, I had subconsciously come to regard all such boxes as secondary frequency standards, unlikely to lead one astray as long as the crystal was kept on WWV—and one used the right calibration book!

However, a difference of opinion with a P.M.G. monitor as to where the band edge was, revealed that although the crystal was on WWV, the heterodyne oscillator was nearly 3 Kc. out at 7150!

The subsequent witch-hunt disclosed a number of facts about these popular and expensive frequency standards which may not be generally known. First, the leading particulars:—

Output 2000 μ Volts
Accuracy $\pm 0.034\%$ at 4 Mc.
(i.e., 4.7 Kc. at 14 Mc.)
Accuracy .. ± 180 c.p.s. at 125-250 Kc.
Accuracy ± 985 c.p.s. at 2 Mc.
Greatest Error at 4 Mc. and —30 C
(and harmonics)
Minimum Volts 121 h.t., 5.4 Fil.
Output Impedance .. 2500-15000 ohms

Certain of these are worthy of further discussion, particularly as the principles apply in greater degree to Amateur v.f.o.s. First, the basic design accuracy: The Handbooks for these equipments state the following errors may occur individually or simultaneously even in correctly adjusted equipment:—

Small shocks, through panel pressure, dial thrust, etc. ± 100 c.p.s.
Effect of dial lock ± 30 "
Warm up ± 100 "
Changing load on antenna post ± 50 "
10% drop in h.t. ± 325 "
5° change in temperature .. ± 325 "
Calibration error ± 500 "
Crystal error ± 250 "

These add up to a possible 1.68 Kc. error at 4 Mc. (and nearly 8½ Kc. at 20 Mc.), if all effect apply in the same direction simultaneously. A fair average figure for normal operating environments is about 50% of the total figure. (This is Mr. "Bendix" himself speaking.) However, I'm told some meters have a bimetallic shorted-turn inside the heterodyne oscillator inductance for partial temperature compensation. If this seizes or binds, additional erratic errors will occur.

Not all the so called "crystal" check points are crystal harmonics! However, because the calibration curve is nearly straight when it leaves the factory, the difference between dial measurement of any frequency, using adjacent crystal check points, should be closer than 1.8 divisions on the low frequency band, and 1.2 divisions on the high band. I hope your meter checks out on this, because mine doesn't. An unsuspected deviation here can be the cause of inadvertent out-of-band s.s.b. operation, when each dial division represents a kilocycle and a bit.

* 52 McCauley Avenue, Glenbrook, N.S.W.

★ An informative article highlighting the fact that in any measurement, it is essential to know the accuracy of measurement and the probable tolerances of inaccuracy. Must reading for all owners of BC221 meters.

By the way, unless your meter has been modified to include a shield around the base of the crystal socket, you may not be able to determine zero beat against the crystal accurately. It should cover 0.1 division at 2 Mc., but without the shield is usually at least 0.3 division wide!

The crystal itself is supposed to be factory trimmed to within 5 c.p.s. of 1 Kc., at 20° Centigrade (i.e. 68°F.), but remember that although earlier meters had spare crystals supplied, only those identified as DC9N or higher can be interchanged without calibration difficulties in meters with the same suffix (N or higher).

The corrector capacitor for the heterodyne oscillator has been changed in later models from 1.8-3 pF. to 2.4-4.5 pF. to increase the ability to correct error found to occur in field service.

You may be surprised to know that the tubes in the meter are not "matched". In fact the grid of the electron coupled heterodyne oscillator is purposely tapped well down the coil to minimise the effect of tube capacitance. Oscillator tubes with low loss bases were used once, to minimise humidity troubles, but stock tubes are acceptable. For those who have lost their VT conversion list, the tubes in general use are:—

VT116	6SJ7
VT167	8K8
VT118B	6SJ7Y (low loss base)
VT77	77
VT76	76

Perhaps you are wondering which harmonics are used for calibration if the basic calibration is 125 Kc.-250 Kc. and 2000-4000 Kc.? For low frequencies, the harmonics used are 2nd, 4th and 8th. For the high band, the 2nd, 4th and 5th harmonics do the job. The 3rd, 6th and 12th are there in force, but are not calibrated. Under high temperature and humidity conditions, there may be sufficient shift of the heterodyne oscillator, to prevent zero beat correction by means of the corrector. This can be fixed in the shack, if you are game, but remember disturbing the heterodyne oscillator circuit can involve you in a recalibrating job. There are 1251 low range calibrations and 2001 on the high range, so take it easy!

The 160 pF. calibrated condenser is shunted with 7-10 pF. thermal trim, 10 pF. preset trim as well as the panel corrector. Set these as follows: Warm up for 20 minutes. On crystal check, set up 250 Kc. with corrector to mid scale (5.5 divs.). Rotate the "low" trimmer for zero beat. Then check all the

crystal check points to see if zero beat can be reached at all of them. If it can't, because the corrector reaches 10 first, check for correct filament and h.t. volts. If these are OK, repeat the trimmer adjustment, but with the corrector set 1 (or 2) division left of mid scale. (If the corrector reaches 1 in similar circumstances, set up with the corrector the required amount right of mid scale.)

Having practised on the low range, have a go at the high range, using the same procedure on 4000 Kc., and of course the "high" trimmer.

Finally, unless you own a BC221 AF or AH, which was designed for low impedance HS30 phones, go ahead and use any phones handy—low or high makes no difference to accuracy or output.

"Bendix" type equipments are well built and well designed, but are not primary standards. Sporadic checks of the crystal on 5 and 10 Mc. won't make them so either. To be safe near band edges, particularly on frequencies above 4 Mc., better get some positive checks on calibration, and make proportional allowance for the unavoidable errors caused by temperature, calibration, etc. And better have another think about that v.f.o. that "doesn't drift"!

[The official handbook (Publication 5341-CH1-42) states: "The equipment provides accuracies of 0.01 per cent. or 25 cycles, whichever is the greater, at any temperature in the range from minus 22 to plus 122 degrees F. . . . When connected as previously described, the heterodyne oscillator frequency will agree with the calibration book (to within the reset accuracies stated in par. 1) throughout the range of frequencies to which this particular crystal check point applies, provided, that the ambient temperature does not vary by more than $\pm 5^\circ\text{C}$., the filament and plate voltage do not vary individually or collectively by more than $\pm 10\%$." Thus the SCR211 series is capable of being reset to within 25 cycles or 0.01%, whichever is the greater error. They are not accurate to the above tolerance, as explained by the author.—Ed.]

★ ONE MORE NEW COUNTRY

A dipole quivers in the breeze
The hours fly on by,
A superhet. is running hot,
The listener heaves a sigh.
Where's that elusive signal from HQ?Z
It should be there on 14 megs,
The DX column said.
He tunes the band from high to low
And tunes back up again.
It's getting cold, he's feeling tired,
But there he still remains.
Then all at once a whisper
Impinges on his phones,
He strains his ears to catch the words,
His eyes no longer roam.
Then downs his pencil with a smile
And turns the power off.
He's worked one more new country,
Although he's caught a cough.

—I. Hunt, VK5QX.



IMPORTED CRYSTAL MICROPHONE INSERTS

3 Types: MC7 1 1/2" diameter 13/9 Pack &
 MC8 1-13/16" diameter 16/11 Post.
 MC9 1" diameter 14/8 6d.

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Record Player type £7/10/0 Speaker Box 6" £2/18/0
 Record Chang. type £7/19/6 Speaker Box 8" £3/3/8
 Speaker Box 12" £4/5/6

CABINETS OF DRAWERS

Rota CD1, 16 drawers each 6 1/2" x 4" x 2" £3/2/11
 Rota CD2, as above, each draw divided into 3, £3/11/8
 Rota MCD1, larger type, ea. draw 12" x 5" x 4" £9/17/9
 Freight forward.

INDICATOR LIGHTS, NEON TYPE 250V.

Complete unit fits into 17/32" hole 9/-
 250V. Neon Lamps M.E.S. or M.B.S., tubular 10 mm. 6/6
 Large Switchboard Type. Pilot assembly 1 3/8" diam., takes
 15 watt S.B.C. Flush Pilot Lamp up to 240V. Front
 Loading. 5 colours. 1 1/2" mount hole, £2/9/6.

SOCKETS

Transistor complete with mounting clip 2/6
 7-pin Miniature Sockets P.T.F.E. w/skirt 7/7
 9-pin Miniature Sockets P.T.F.E. w/skirt 9/8
 Shields to suit above 1/6

SPAGHETTI

1.5 mm. 3-Yard Packs, Fibre Glass 2/-

SOLDER, ERSIN MULTICORE

1 lb. Packs, 60/40 14/8. SAVBIT 14/8

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Suitable for T.V. Turrets, etc.
 Q Solv. with Silicone 7/8 per 1/2 pint tin.
 Jabel 1 1/2 oz. bottle, 3/9

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2" wide x 24 lugs a side 9/- plus Pack. and Post. 6d.
 1 1/2" wide x 48 lugs a side 17/8 plus Pack and Post. 6d.

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2 lugs 3/6 dozen 7 lugs 9/- dozen
 3 lugs 5/- dozen 8 lugs 10/- dozen
 4 lugs 5/6 dozen 9 lugs 11/- dozen
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 6 lugs 7/6 dozen. Plus Pack & Post. 6d. dozen

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2-pin 1/7 3-pin 2/2 4-pin 2/3
 Plus Pack and Post. 6d.

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FLEXIBLE INSULATED COUPLINGS 9/11

Plus Pack. and Post. 6d.

BRASS COUPLINGS

1" x 1/4" 2/6 1" x 3/8" 2/11

BRASS EXT. SHAFTS

1" x 1/4" x 2 1/2" 2/9 1" x 3/8" x 2 1/2" 3/4
 Plus Pack. and Post. 6d.

FLEXIBLE DRIVES

with 1/4" Shaft Coupling complete with 1 1/4" Black Instru-
 ment Knob and Mounting Bush and Nut:—

4" 8/10, 6" 9/10. 10" 11/9, 12" 12/7.
 8" 10/8 plus Pack. & Post. 6d. Plus Pack. & Post. 9d.

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Plastic, tapped 1/8" Whitworth each end. 1/4" diam. 1" long
 or 1/2" long, 9/- dozen. Plus Pack. and Post. 6d. dozen.

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3/8" 18/4 1" £1/10/0
 1/2" & 5/8" £1/0/0 Plus Pack. 1-3/16" £1/13/4
 3/4" £1/3/4 & Post. 1/3. Plus Pack. & Post. 2/-

SCREW TYPE:

3/8" £1/8/11. 1/2" £1/17/4. Plus Pack. & Post. 1/3.
 1" £2/14/8. 1-3/16" £3/0/6 Plus Pack. & Post. 2/-.

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CALL IN FOR A DEMONSTRATION ANY TIME.

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COLLARO Conquest Record Changer.

Monaural, £13/15/0 Stereo, £17/10/0

COLLARO RP594 Stereo Record Player £14/4/5

DUAL: 300 Record Player, Monaural £18/16/0

300 Record Player, Stereo £20/2/0

1005 Record Changer, Monaural £25/5/0

1006 Record Changer, Stereo £42/5/0

1007 Record Changer, Stereo £26/15/0

A few superseded model 1004 Monaural Record Changers
 to clear at £22/10/0, and a few Automatic Monaural
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4HF Transcription Record Players, Monaural, £36/15/0

4HF Transcription Record Players, Stereo £37/2/6

RC210 Record Changer Monaural £20/17/8

RC210 Record Changer, Stereo £21/5/0

301 Transcription Turntable £51/17/6

301 Transcription Turntable, superseded model,
 three speeds £32/10/0

B.S.R.: RP4 Record Player, Monaural £11/0/0

RP4 Record Player, Stereo £13/5/0

A few Monarch Stereo Record Changers to clear at
 £17/19/6 each

● SEE WARBURTON FRANKI FOR THAT TAPE RECORDER!

PHILIPS EL3515A 99 Gns.

VELCO TR7 99 Gns.

PHILIPS EL3542A £149/10/0

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Any of above equip-
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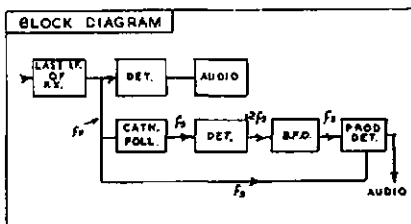
A METHOD OF RESOLVING D.S.B.S.C.

IAN MacMILLAN,* VK3ZDG

A RECENT article in "A.R." regarding the synchronous detection of d.s.b. signals prompts me to point out that there is another method which may turn out to be somewhat simpler.

First I will re-state the problem. With s.s.b. not only is the exact frequency of the re-inserted carrier, at the receiver, not important (you can read it even if the b.f.o. is 100 cycles off in the suppressed sideband direction; somewhat less in the other direction), but the phase of the carrier is not important.

With d.s.b., not only has the injected carrier got to be on the right frequency, but it has to be in the correct phase. The only way to achieve this is to synchronise the b.f.o. with the signal in some way.



One method was described in a recent "A.R.," and I propose to outline another method.

Suppose we have a d.s.b. signal on 100 Kc. and our modulation is a pure sine tone of 1 Kc.

The resultant signal consists of a sideband at 99 Kc. and another at 101 Kc., while the carrier is, of course, suppressed.

If we feed this signal to a square law detector we will obtain a 2 Kc. note ($101 - 99 = 2$) under normal circumstances. But suppose we put a tuned circuit in the anode of the detector at 200 Kc. We can then select the sum of the two sidebands ($99 + 101 = 200$ Kc.) and if you look at the idea closely you will see that the sum of the sidebands for any modulating frequency is

* 1 Norfolk Rd., Surrey Hills, E.10, Vic.

200 Kc. Of course there will be all sorts of other frequencies present—harmonics, etc., but the important thing is that there is a signal present on twice the carrier frequency no matter what sort of audio is applied to the signal.

Now, it is a fairly well known fact that an oscillator will synchronise quite nicely to a signal on twice its frequency.

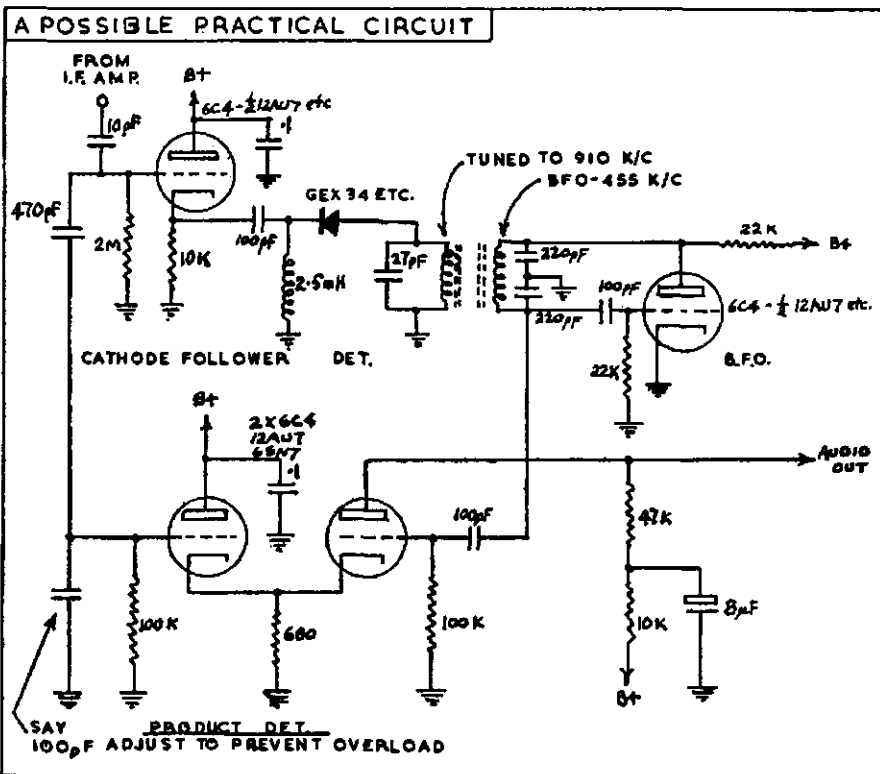
You get the idea? Good, now let's have a look at what sort of a circuit might do the job.

It is suggested that the tuned circuits consist of a modified standard i.f. transformer. You may find that better

locking is obtained if the d.s.b. signal is tuned slightly to one side, as not using a square law detector, the sum frequency may not be sufficiently strong when both sidebands are of equal amplitude.

I have not actually tried this, but extremely clued up gentlemen whom I have consulted have h'mmed and grunted, and assured me of its practicability.

When I get around to mounting the bits in a chassis I bought for it some months ago, I may write on it again, and give you some facts and figures. ●



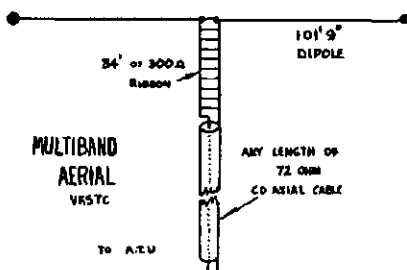
A MULTIBAND ANTENNA

Extracted from the South Australian Division W.I.A. Journal.

DETAILS of a simple multiband aerial using co-axial feeder. This antenna was designed by Louis Varney, G5RV. It works all bands, 80 through to 10 metres, with low standing wave ratio on all bands except 15 metres.

Aerial consists of 101 ft. 9 in. dipole as shown. The antenna is three-quarters wavelength on 40 metres and the 34 ft. matching section matches the dipole impedance to that of the co-axial cable.

Alternatively, the antenna may be fed via an antenna tuning unit direct into the 300 ohm feeder.



The antenna can be loaded into a normal pi-network arrangement without difficulty.

The use of 300 ohm open wire feeder is recommended for the matching section; this can be constructed of 14 B. & S. wire spaced at about 1 inch, giving an impedance slightly over 300 ohms. Spaces can be ceramic, paxolin or similar material, but perspex should not be used. No difficulty has been experienced with this open wire feed, and results on all bands have been gratifying. ●

—G. T. Rylatt, VK3TC.

P.M.G.'s. Message to Amateurs

The following is a copy of the Postmaster-General's (Mr. Davidson) message to Australian Amateurs, given through Senator Hannan, at the recent Victorian Division of the W.I.A. Annual Dinner, on Friday, 25th November, 1960.

Mr. Chairman and Gentlemen,

"The Postmaster General (Mr. Davidson) who, unfortunately, was unable to visit Melbourne because of official Ministerial commitments, has asked me to express his personal appreciation of the thoughtfulness of the Victorian Division of the Institute in extending to him an invitation to be present at your Annual Dinner and to convey to you his best wishes for an enjoyable and successful evening. Whilst I share your disappointment at his absence, might I say that I feel particularly honoured in having been asked by the Minister to represent him at this function.

"As I think most of you well know, Mr. Davidson has ably demonstrated his keen personal interest in all matters affecting the Australian Post Office. During his term of office there have been many important developments affecting radio services in both National and International fields. Some of these developments have posed very difficult problems and, in particular, have focussed considerable attention on the limitations of frequency spectrum space. It is in this connection, of course, that members of the Institute have a very special interest. Mr. Davidson wishes me to say that in considering these

problems he has come to learn and appreciate a great deal of the history and development of the Institute and its membership since its inception, and fully recognised the important contributions the Institute has made and will undoubtedly continue to make towards the development of radio services in this country. In particular, the Minister asked me to pay tribute to the enthusiasm and unselfish devotion of members in times of emergency and to acknowledge on his behalf the value of having a trained force in such an important field of activity.

"The Postmaster-General has been most impressed with the close interest and enthusiasm displayed by members of the Institute in regard to apportionment of the frequency spectrum and welcomed the proposal to include one of its members in the Australian Delegation to the Administrative Radio Conference in Geneva late last year. Mr. Davidson was pleased to approve of the late Mr. J. M. Moyle as a member of that Delegation. We were all greatly shocked at the sudden and tragic ending which followed so soon after Mr. Moyle's active participation in the work of that conference and I take this opportunity of paying a tribute to the untiring and the sterling work which he performed in furthering the interests of your Institute. The Post Office members of the Delegation greatly valued Mr. Moyle's assistance as a colleague whose fund of knowledge proved immensely useful during deliberations.

More importantly, too, they came to value him as a close personal friend.

"By the very nature of its vast distances, Australia lends itself uniquely to the employment of radio as a communication medium and make considerable use of the frequency spectrum, both for internal and international purposes. With the sustained commercial and industrial development now in evidence, even greater demands must be expected and all practicable steps must be taken to secure the most economic use of the spectrum by utilisation of the latest techniques and developments. The intensification of the demand on the spectrum in recent years has greatly increased the complex task of allocating frequencies and, as members of the Institute know, following a recommendation by the Postmaster-General, the Government constituted a broadly based frequency allocation review committee under the Chairmanship of Professor Huxley to examine the situation thoroughly with a view to ensuring the most equitable distribution among the many users of radio services and to consider measures which can be applied for meeting future demands. Membership of this Committee had, of necessity, to be restricted to major interests and it is gratifying to record that the Government recognised the importance of Amateur interests by including a representative of the Institute as a member of this important body. The Committee is applying itself to the many problems which have to be considered and the results of its investigations will be awaited with a great deal of interest.

"Mr. Davidson has asked me to make special mention of the cordial relationship which has existed between members of the Institute and officers of his Department. This has continued over many years and shows no sign of diminishing in spite of divergent opinions which must inevitably arise in dealing with frequency allocation and other problems. The Minister believes a great deal can be derived from a continuance of such a relationship so far as the Post Office and the Institute are concerned and has asked me to add that Departmental officers are always appreciative of the ready co-operation they receive from representatives of the Institute whenever there are problems of mutual interest requiring consideration.

"On behalf of the Postmaster-General, and on my own behalf, may I express the hope that the Institute will continue to grow in strength, and may I take this opportunity of extending Seasonal Greetings to all members of the Institute and its Executive."

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6280, 4095, 4535, 2760, 2524 Kc.

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100 Kc. and 1000 Kc. Frequency Standard, £8/10/0 plus 12½% Sales Tax.

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50 Mc. W.A.S.

Call	Cer. Add. No. Cntr.	Call	Cer. Add. No. Cntr.
VK2WJ	13 4	VK3AEZ	10 1
VK3PG	5 3	VK3XA	11 1
VK2VW	9 3	VK3GM	12 1
VK4RY	2 2	VK3ACL	14 1
VK4HR	4 2	VK3ZD	16 1
VK5LC	1 1	VK3HO	17 1
VK6DW	3 1	VK3ABC	6
VK3RR	6 1	VK3WH	15
VK3HT	7 1		

HINTS AND KINKS

EXPERIMENTS WITH COMMAND RECEIVERS

Many Hams use Command receivers as tunable i.f.s. but find that the receiver is too broad and still only get about one inch or less of the dial to cover the band. Well here we have experimented with a 6-9 Mc. Command receiver.

Firstly, I removed all except two of the rotor plates in each section of the main tuning condenser. Additional trimmers (3-30 pF. Philips) had to be placed across each section in order to retain coverage of the 40 metre band.

This reduced the coverage of the receiver from 6-9 Mc. to 6.8-7.9 Mc. This will be ample for most converters even in the v.h.f. region. No other changes at this end need be made.

The tuning dial may be recalibrated or in my case the drive was disconnected and a vernier dial connected directly to the gang shaft at the side.

To increase the selectivity somewhat, a 175 Kc. i.f. was substituted for the last 2.83 Mc. i.f. The 12SK7 i.f. amplifier before this i.f. was re-wired for a 12K8 converter.

The coil former in the discarded i.f. was removed from the can. The pie winding was removed, leaving the single layer intact. Three turns of hook up wire were placed over this as a tickler coil and a 3-30 pF. across the winding made up the oscillator coil.

Any circuit in A.R.R.L. or out of your head will work. The oscillator is quite stable providing the leads are not too long.

By removing the i.f. stage, one of the condensers screwed to the side can be discarded so the oscillator coil can be mounted in its place.

Total cost? One 175 Kc. i.f.

More experiments are in progress so I will let you know the results in a later article.

—J. E. Barker, VK5ZCJ/T.

PORTABLE SIX METRE BEAM

I am going to build a 6 metre portable beam. As the width of the beam makes them awkward for transport, I have thought of a way to quickly assemble and dismantle the beam. The beam will be 10 ft. long with four elements. I am going to attach 1/2" dural tubing through the element support bar. This 1/2" dural will only extend about 6" either side of the support, up to about 12" for the driven element, if it is to be Gamma matched for 6 metres.

This is the method I intend using, with co-ax cable to the transmitter. To make up the additional length of the elements, use 3/8" dural, which will fit tightly into the 1/2" dural. The various elements can be marked so that they don't get put into the wrong position.

The 3/8" elements are pushed as far as they will go, until they reach the bolt holding the 1/2" tube to the element support tube. This method of sliding one element inside the other makes it easy to adjust the aerial for different sections of the band. Nicks can be cut in the elements to show how far they

need be pushed in for various frequencies. This idea would work alright on other bands, 2 metres in particular.

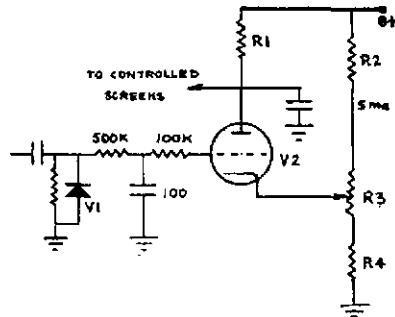
The pole used to support the beam would be a 12 or 16 ft. long 2" diam. dural tube. This would get the beam a reasonable height above ground and would give quite good results from a hill top. A bigger beam could be constructed, but it would start to get a bit cumbersome.

—Rodney D. Champness, VK5ZCD.

A SUPPLEMENTARY A.G.C. SYSTEM

The idea of twin a.g.c. systems, or this system in particular, is not new. However, as well as being effective, it is economical and will control straight valves (i.e. non variable mu types). An improvement in regulation is obtained since the load is held more constant.

Briefly, this system uses a positive a.g.c. bias to control a d.c. amplifier which varies the screen voltage of the controlled stages. The d.c. amplifier should be a valve having high gain, not too short a grid base, and able to carry the maximum current involved.



The a.g.c. take off point is preferably the primary of the last i.f.t. V1 was a thermionic diode, but could be a crystal unit. V2 is conveniently a pentode strapped as a triode. R1 is the screen dropper, and its by-pass. (This will probably need a higher wattage component than original.) R2, R3 and R4 pass at least 5 mA. for stable operation. R4 provides protective bias, and R3 sets the operating point. If the valve is just cut off there is no delay, but if bias is increased a delay is introduced.

Action is as follows: Under no-signal conditions, R3 is adjusted to cut off the d.c. valve (and any extra delay bias is also given). R1 then acts purely in its former capacity as a screen dropper. When the a.g.c. (positive) is applied, and the bias overcome, the valve conducts and draws current through R1, lowering the screen volts, and gain of the controlled stages.

Many variations can be arranged in conjunction with "normal" a.g.c. The d.c. valve need not be cut off but in this case the screen dropper must be varied for two reasons, i.e. added voltage drop and increased dissipation. To obtain "no delay" conditions, a very slight current was found necessary.

No calculations have been given as conditions vary too much as if theory fails, practice is almost as quick if you possess a simple multimeter.

—B. M. Oliver, VK3ZLM.

POLISHING "PERSPEX"

When wishing to polish "Perspex" or other clear plastic dials, etc., which have scratched surfaces or rough edges, use "Repo" car polish, or any other abrasive car polish.

Cut edges should be filed as smooth as possible and after polishing they will be as clear as glass.

—J. E. Barker, VK5ZCJ/T.

SOME IDEAS THAT WILL HELP

A few two-foot lengths of covered wire with alligator clips soldered to each end are invaluable about the shack, for extension leads.

★

An elastic band left twisted round the handles of your pliers turns them into a handy little vice to hold wires steady when soldering.

★

Don't melt the YL's transistor seven. A few inches of copper wire wound round the soldering tip will place a drop of solder where you want it.

★

Ice-cream sticks make lovely spacers for 600 ohm feeders, but stand them in a tin of hot candle grease before use, and they last longer and insulate better.

★

Have trouble removing push-on plastic knobs from tiny portables? If not, please write and tell us how to do it.

★

Solder is easily removed from hollow pins on plugs by melting with the iron, pulling out old wires, then blowing vigorously down the cool end of the pin; a little spray of solder will come out before it has time to set.

★

Change those old electrolytics before they blow up and wreck half the wiring.

★

Want to anchor a loose meter glass without pulling it apart? A strip of plastic tape will help you grip the glass, and any adhesive will flow out of a tube onto the edges. That should at least hold the glass clear of the needle.

—Rev. Bro. D. L. Kinsella, VK2AXK.

NON-DELIVERY OF "A.R."

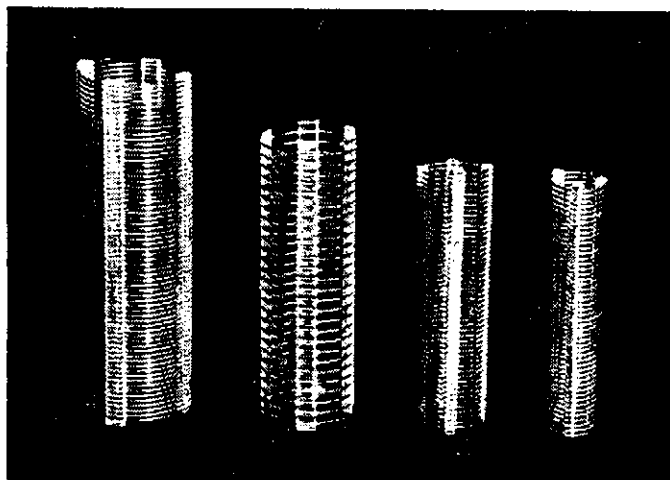
If you are not receiving your copy of "A.R." please follow these steps which will ensure the correct procedure is followed; any attempt to short circuit the system will only further delay matters.

Write to your Divisional Secretary advising non receipt of "A.R."; do not write to "A.R." The Divisional Secretary should write to the Circulation Manager "A.R.," P.O. Box 36, East Melbourne, C.2, Vic., advising him of the problem. Unless this advice is received before the 8th of the month, a further month must elapse before the member can be re-instated upon the circulation list.

Please ensure that you always advise your Divisional Secretary in writing, verbal advice will not do.

Air-Wound Inductances

No.	Diam.	Turns per		B. & W. Equiv.	Price
		Inch	Length		
1-08	1/2"	8	3"	No. 3002	5/3
1-16	1/2"	16	3"	No. 3003	5/3
2-08	5/8"	8	3"	No. 3006	6/3
2-16	5/8"	16	3"	No. 3007	6/3
3-08	3/4"	8	3"	No. 3010	7/4
3-16	3/4"	16	3"	No. 3011	7/4
4-08	1"	8	3"	No. 3014	8/5
4-16	1"	16	3"	No. 3015	8/5
5-08	1 1/4"	8	3"	No. 3018	10/6
5-16	1 1/4"	16	3"	No. 3019	10/6



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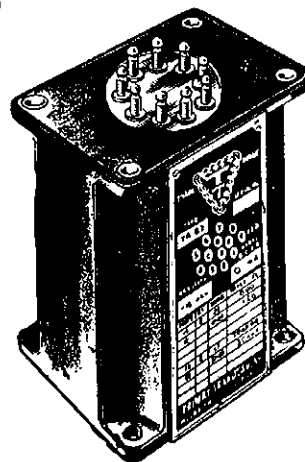
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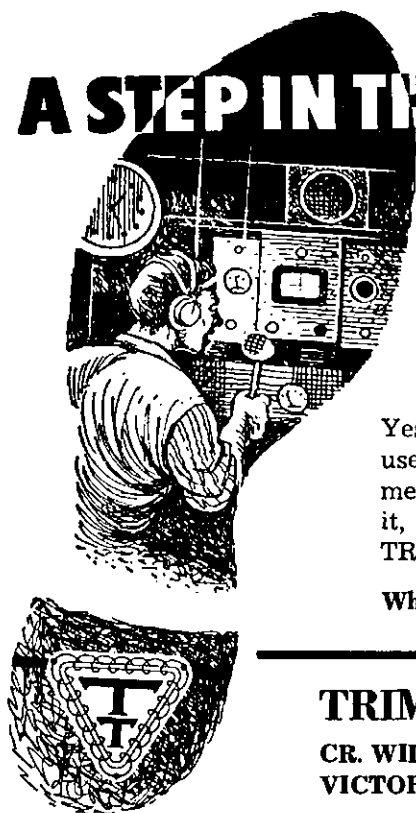
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BOOK REVIEWS

"HI-FI AMPLIFIER CIRCUITS"

By E. Bodenhuis

This 106 page book deals with the major elements of a Hi-Fi system in so far as the amplifier and pre-amplifiers are concerned. A well illustrated text gives detailed descriptions of 3, 10 and 20 watt amplifiers with particular reference to the output transformer design, which the author rightly points out is a major component which has a very great influence upon the final tone quality of the unit.

Examples of single ended and push pull output stages are given, together with pre-amplifiers with full recording compensation, filters with both high and low pass characteristics, and a four channel mixer.

It is a very good booklet for the builder of Hi-Fi equipment, and the section dealing with the output transformer design would be of interest to local manufacturers. A useful reference work for a well equipped library.

Our copy direct from Philips' Technical Library, Holland. Supplies should be available from local booksellers at 18/- each.

"THE RADIO AMATEUR OPERATOR'S HANDBOOK"

This forty-eight page booklet, produced in conjunction with the International Short Wave League, is a very comprehensive listing of data which has general application to the s.w.l. and DX enthusiast. It includes data which, whilst available in other publications, is not presented in such a form as to be specifically useful for ready reference. The eight page index provides a useful means of compiling your DXCC scores and includes provision indicating the use of the five main Amateur bands. Amateur prefixes, zones, distances and directional bearings all add to the usefulness of the booklet. It would be a very useful adjunct to the s.w.l. who requires to improve his knowledge. In addition, the chapter on DX operating technique is applicable to all Amateurs.

Our copy direct from Data Publications Ltd., London. Now available locally in book series No. 6.

"AN INTRODUCTION TO THE CATHODE RAY OSCILLOSCOPE"

By Harley Carter

This 132 page booklet deals in a brief manner with the main component parts of a c.r.o. Eight chapters cover this very wide and complex field. Twenty-one pages are devoted to the theory of sweep generators, yet the practical application chapter only has twenty-seven pages on this subject in a book which is designed for those using the equipment. The text, in the second edition suffers from various typographical errors, but these are minor.

It is felt that a bibliography at the end of each chapter could prove very valuable to students or others connected with using this gear in the field. Some very interesting practical applications are briefly mentioned, but an expert knowledge of electronics would be required to develop a circuit from the description given. Chapter eight deals with practical circuits and this gives a very good description of equip-

ment which would have application in the laboratory, school, or workshop.

It is a good book to serve as an introduction to this vast subject, and the absence of formulae tends to prevent the text from becoming theoretical. The subject is dealt with in a logical manner, but assumptions are made that the reader is well versed with this subject. In spite of these comments, this book would be a valuable addition to many libraries and schools. It would assist those who use a c.r.o. in industry to appreciate the versatility of this equipment, and does so in a manner which does not require preknowledge of the subject. The text is well illustrated with the standard Philips' clear drawings.

Our copy direct from Philips' Technical Library, Holland. Australian price 18/-.

"INDUSTRIAL ELECTRONIC APPARATUS"

By Van der Ploeg

This booklet sets out to show the attention to detail which is required to obtain reliable electronic equipment. It has obviously been written by a practical engineer judging by the remark, "Only then may h.t. be applied and, nine times out of ten, it will appear something is wrong. This is by no means unusual, for in electrical equipment there are many opportunities for slipping up . . ."

If the publication of this booklet in any way assists to overcome the current industrial ignorance regarding electronic equipment it will serve a useful purpose. It gives a very comprehensive review of the steps required to establish, produce, maintain and instal equipment which will do the required job. In addition it points out that mechanical, electrical and electronic equipment each have their own purpose and it is incorrect to interchange these functions.

Simplicity is the desired requirement and the author sets out in broad lines how this may be achieved. A typical item is covered from design to installation and suggestions upon servicing are outlined.

An excellent book which could profitably be read by everyone concerned with electronic gear. It will not state how to design equipment, but the philosophy throughout could well be adopted by all designers. Various tube data is given and this logically applies to gas filled rectifiers and thyratrons which are types most encountered in industrial equipment.

Our copy direct from Philips' Technical Library, Holland. Local price 13/-.

"THYRATRONS"

By C. M. Swenne

This 82 page booklet deals with a family of tubes which daily are becoming of increasing importance. A brief outline of the tube functions are given then the author deals with the practical application to various circuits, highlighting the fact that these tubes are particularly suited for high speed switching type circuits in which heavy currents are required to be handled. Various circuits are given which provide useful data upon using these tubes, but the text does not advise how to design a circuit.

A non-mathematical treatment has been adopted which does not detract from the usefulness of the booklet. Each circuit given is a typical example of how thyratrons may be used and is a time proven design. One interesting example is a d.c. to a.c. converter using thyratrons and is an application which is not so widely known. Another example is a dimming circuit for use with fluorescent tubes.

This booklet will be of use to those who require a guide as to the means whereby various industrial processes must be controlled, e.g. spot welding, and who are concerned with servicing equipment using thyratrons. No mention is made of possibly the best known electronic application of thyratrons, namely as saw tooth sweep generators. Well worth reading by those who use these tubes, or by those who require a broad outline upon this subject. The text contains a few typographical errors, but these do not detract from a well prepared booklet.

Our copy direct from Philips' Technical Library, Holland. Local price 17/6.

"MOBILE MANUAL," 1960 Edition

By A.R.R.L.

This two hundred and seventy-nine page book is produced in the typical A.R.R.L. style on good quality paper, well illustrated with clear drawings. It contains much to interest every Amateur, particularly those concerned with mobile operating, but the circuits, etc., have application in any Amateur shack. The transmitters cover from 160 to 2 mx., and associated converters are shown. Transmitter hunting, battery gear, aerials and power supplies receive adequate attention. The article on "Short Antenna for Mobile Operation" will provide much data and ideas which will tend to dispel certain erroneous thoughts normally held by many Amateurs.

An excellent book to have on your library shelf if you have not the past issues of "QST," but even then it is a collection of like articles which will save you having to search through your copies.

Our copy direct from A.R.R.L., U.S.A. Now available from local booksellers.

★

COLLINS RADIO CREATE A RESEARCH DIVISION

Collins Radio Company announce the creation of a corporate research division to advance basic research in electronics. The new division will be located in close proximity to a university in Southern California. Such an arrangement offers advantages to both the research division and the university staff.

Location sites under consideration include La Jolla and Newport Beach. The University of California is developing facilities at both cities.

Formation of the new division was the result of a study conducted over the past several months to determine long range research objectives of the Company and the means of attaining them.

Among the fields the division will work in will include solid state physics, electromagnetic wave propagation, thermoelectric phenomena, information theory, network synthesis, radio astronomy, digital processing and it will not be restricted to the special interests of any one of the Company's operating divisions.

The research division will be directed by Dr. R. L. McCreary, who is presently director of research at the Cedar Rapids (Iowa) Division. Members of his staff will form the nucleus of the division and they are scheduled to move during 1962. Additional scientists and engineers will be recruited for the new organization.

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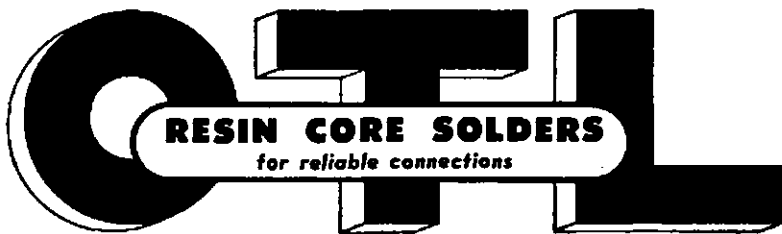
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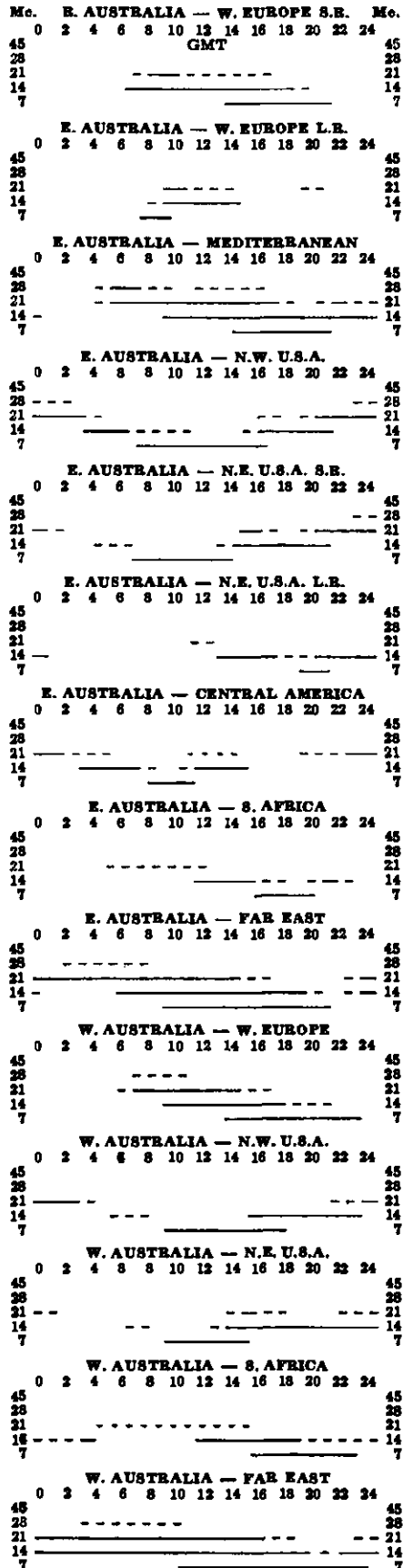
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Rules of Australian DX Century Club Award

1. The Australian DX Century Club Award is open to any Australian Amateur who has established two-way contact with one hundred or more countries in the world and complies with the following Rules.

2. All contacts must have been made since the return of licenses after the 1939-45 War.

3. The official Countries List, as published annually and amended from time to time in the Federal Notes of "Amateur Radio" shall be used for the purpose of determining "countries".

4. All contacts shall be made with other Amateur stations operating in the authorised Amateur bands, or with stations licensed to contact Amateur stations.

5. Contacts made with ship or aircraft stations will not be allowed, but land mobile stations may be claimed provided the location at the time of contact is clearly shown on the confirmation.

6. Credit may only be claimed for stations using regular government assigned calls for the country concerned.

7. Stations of a portable nature which are using their own call sign followed by the prefix of the country in which they are operating may be credited under Rule 6 above, provided

that the confirmation submitted indicates the particulars of such operation and the other requirements are in accordance with these Rules.

8. Each confirmation submitted must show the date of contact, type of emission, the report, the band, and the location of the station.

9. Confirmations must be submitted exactly as received from the station contacted and altered or forged confirmations will be grounds for disqualification.

10. Out-of-band operation used to contact a station will result in disqualification and be retrospective in the case of members.

11. All stations must be contacted from the same Australian call area and by the same licensee, although if the call sign is subsequently changed, contacts will be allowed if still within original call area and by the original licensee.

12. Confirmations submitted which show both phone and c.w. reports may be accepted for both sections if the date of each contact is shown and emission is indicated.

13. Should a country be deleted from the official countries list at any time, members and intending applicants will be credited with such country if

the date of contact is before the date of such deletion.

14. Certificates will be issued for "All Phone", "All C.w." and "Open" contacts with a hundred countries and stickers will be subsequently issued for each additional twenty countries confirmed over the one hundred.

15. Successful applicants will be listed monthly in "Amateur Radio". Subsequent to the first application, members must submit additional confirmations of not less than five at any one time, for additional credit.

16. Applications for membership shall be addressed to the Awards Manager, G.P.O. Box 2611W, Melbourne, and accompanied by sufficient postage for return of confirmations to the applicant, registration being included if desired. Confirmations must also be accompanied by a list of claimed countries and stations, showing relevant details or explanations where necessary.

17. The decision of the Awards Manager in the interpretation and application of these Rules shall be final and binding.

18. Notwithstanding anything to the contrary in these Rules, Federal Council of the Wireless Institute of Australia reserves the right to vary or alter them when necessary.

WORKED ALL VK CALL AREAS (W.A.V.K.C.A.) AWARD

Object

1. This Award, to be known as the W.A.V.K.C.A. Award, is offered by the Wireless Institute of Australia as tangible evidence of the proficiency of overseas Amateurs in making contacts with the various call areas of the Commonwealth of Australia.

2. The Award may be claimed by any Amateur in the world who is a member of an affiliated Society of the I.A.R.U., but no Australian Amateur will be eligible.

Operation

3. Contacts between overseas stations and Australian stations must have been made on or after the 1st January, 1946.

4. Contacts may be made using any authorised frequency band or type of emission permitted to Australian Amateurs, but cross band contacts will not be allowed.

5. No contacts made with ship or aircraft stations in Australian territories will be eligible, but land-mobile or portable stations may be contacted provided the location at the time of contact is shown on the confirmation.

Requirements

6. A handsome Certificate will be awarded to any applicant who makes twenty-one (21) contacts with Australian Amateur Stations in the areas shown in the attached Appendix. The number of contacts required in each area is also shown.

7. Reserved.

Verifications

8. The applicant must submit documentary proof, in the form of QSL cards or other written evidence, confirming that two-way contacts have taken place. Such verifications must show the date and time of contact, type of emission and frequency used, signal reports and location (in the case of portable or land-mobile operation) of the stations contacted.

9. Verifications must be submitted exactly as received, and forged or altered evidence may result in the disqualification of the station concerned.

10. A list, in accordance with the details required in Rule 8, must be submitted with the application for the Award.

Application for Award

11. All claims for the W.A.V.K.C.A. Award must be made by the submission of the confirmations (Rule 6 or 7), together with the list (Rule 10), direct to "Awards Manager," Box 2611W, G.P.O., Melbourne, Australia. Sufficient International Reply Coupons must be enclosed to cover return postage of the confirmations to the applicant.

12. Where a reciprocal agreement exists between the W.I.A. and the applicant's Society, the appointed officer of that Society will carry out the check, and if correct, will forward a written application for the Award on behalf of the applicant, together with the list (Rule 10).

13. Applications will be examined by the Awards Manager, who will arrange for the Award to be forwarded either direct or through the applicant's Society. The Awards Manager's decision on the application and interpretation of these Rules will be final and binding.

14. Notwithstanding anything in the Rules to the contrary, the Federal Council of the W.I.A. reserves the right to amend these Rules as necessary.

APPENDIX

Territory	Call Area	QSLs Required
(1) Australian Antarctica	VK0	1
(2) Heard Island		
(3) Macquarie Island		
(4) Australian Capital Terr.	VK1-2	3
(5) Lord Howe Island		
(6) State of New South Wales		
(7) State of Victoria	VK3	3
(8) State of Queensland	VK4	3
(9) Thursday Island		
(10) Willis Island		
(11) State of South Australia	VK5	3
(12) State of West. Australia	VK6	3
(13) Flinders Island	VK7	3
(14) King Island		
(15) State of Tasmania		
(16) Northern Territory	VK8	1
(17) Admiralty Islands	VK9	1
(18) Bougainville Island		
(19) Cocos Islands		
(20) New Britain		
(21) New Guinea		
(22) New Ireland		
(23) Norfolk Island		
(24) Papua Territory		

Note.—In Areas above, where more than one confirmation is required, contacts may be made with any or all of the Territories listed in brackets.

AUSTRALIAN D.X.C.C. COUNTRIES LIST

	Phone	C.W.		Phone	C.W.
AC3	Sikkim		*FF8	French West Africa	
AC4	Tibet		FF (from 20/6/60)	Mauritania	
AC5	Bhutan		FF (from 1/8/60)	Dahomey Rep.	
AP2	Pakistan		FF (from 7/8/60)	Ivory Coast Rp.	
BV (C3)	Formosa		FF (from 3/8/60)	Niger Rep.	
BY (C)	China		FF (from 20/6/60)	Senegal and Sudan-Mali Federation	
C9	Manchuria		FF (from 5/8/60)	Voltaic Rep.	
CE	Chile		FG7	Guadeloupe	
CE9, KC4, LU-Z, VK0, VP8, ZL5	etc., Antarctica		FI8 (prior 20/7/55)	Fr. Indo China	
CE0A	Easter I.		FK8	New Caledonia	
CE0Z	J. Fernandez Arch.		FL8	Fr. Somaliland	
CM, CO	Cuba		FM7	Martinique	
CN2 (prior 1/7/60)	Tangier		FN (prior 1/11/54)	French India	
CN2, 8, 9	Morocco		FO8	Clipperton I.	
CP	Bolivia		FO8	Fr. Oceania	
CR4	Cape Verde Is.		FP8	St. Pierre & Miq. Is.	
CR5	Portuguese Guinea		*FQ8	Fr. Equatorial Africa	
CR5	Principe, Sao Thome		FQ (from 13/8/60)	Cen. Afric. Rp.	
CR6	Angola		FQ (from 11/8/60)	Chad Rep.	
CR7	Mozambique		FQ (from 15/8/60)	Congo Rep.	
CR8	Goa (Port. India)		FQ (from 17/8/60)	Gabon Rep.	
CR9	Macao		FR7	Reunion I.	
CR10	Port. Timor		FS7	Saint Martin	
CT1	Portugal		FU8, YJ1	New Hebrides	
CT2	Azores		FW8	Wallis & Futuna Is.	
CT3	Madeira Is.		FY7	Fr. Guiana & Inini	
CX	Uruguay		G	England	
DJ, DL, DM	Germany		GC	Channel Is.	
DU	Philippine Is.		GD	Isle of Man	
EA	Spain		GI	Northern Ireland	
EA6	Balearic Is.		GM	Scotland	
EA8	Canary Is.		GW	Wales	
EA9	Ifni		HA	Hungary	
EA9	Rio de Oro		HB	Switzerland	
EA9	Spanish Morocco		HC	Ecuador	
EA0	Spanish Guinea		HC8	Galapagos Is.	
EI	Rep. of Ireland		HE	Liechtenstein	
EL	Liberia		HH	Haiti	
EP, EQ	Iran		HI	Dominican Rep.	
ET2	Eritrea		HK	Colombia	
ET3	Ethiopia		HK0	Arch. of San Andres and Providencia	
F	France		HL	Korea	
FA	Algeria		HP	Panama	
FB8	A'dam & St. Paul Is.		HS	Thailand	
FB8	Comoro Is.		HV	Vatican	
FB8	Kerguelen Is.		HZ	Saudi Arabia	
FB8	(Madagascar) Malagasy		I1, IT1	Italy	
FB8	Tromelin I.		II (prior 1/4/57)	Trieste	
FC	Corsica		15 (prior 1/7/60)	It. Somaliland	
FD	Togo		IS1	Sardinia	
FE8	French Cameroons				

*Fr. West Africa and Fr. Equatorial Africa: Only contacts dated prior to when the particular area obtained separate listing (as shown) will count.

	Phone	C.W.		Phone	C.W.
JA, KA	Japan		PX	Andorra	
JT1	Mongolia		PY	Brazil	
JY	Jordan		PY0	Fernando de Noronha	
JZ0	Neth. New Guinea		PY0	Trindade & Martin Vaz Is.	
K, W	U.S.A.		PZ1	Netherlands Guiana	
KA0, KG6I	Bonin & Volcano Is.		SL, SM	Sweden	
KB6	Baker, Howland and American Phoenix Is.		SP	Poland	
KC4	Navassa I.		ST2	Sudan	
KC6	Eastern Caroline Is.		SU	Egypt	
KC6	Western Caroline Is.		SV	Crete	
KG4	Guantanamo Bay		SV	Dodecanese	
KG6	Marcus I.		SV	Greece	
KG6	Mariana Is.		TA	Turkey	
KH6	Hawaiian Is.		TF	Iceland	
KJ6	Johnston I.		TG	Guatemala	
KL7	Alaska		TI	Costa Rica	
KM6	Midway Is.		TI9	Cocos I.	
KP4	Puerto Rico		UA1, 2, 3, 4, 6	Eur. R.S.F.S.R.	
KP6	Palmyra Group, Jarvis I.		UA1	Franz Josef Land	
KR6	Ryukyu Is.		UA9, 0	Asiatic R.S.F.S.R.	
KS4B	Serrana Bank and Roncador Cay		UA0 (prior 1/9/60)	Wrangel I.	
KS4	Swan Is.		UB5	Ukraine	
KS6	American Samoa		UC2	White Russian S.S.R.	
KV4	Virgin Is.		UD6	Azerbaijan	
KW6	Wake I.		UF6	Georgia	
KX6	Marshall Is.		UG6	Armenia	
KZ5	Canal Zone		UH8	Turkoman	
LA	Jan Mayen		UI8	Uzbek	
LA	Norway		UJ8	Tadzhik	
LA	Svalbard		UL7	Kazakh	
LU	Argentina		UM8	Kirghiz	
LX	Luxembourg		UN1 (prior 1/7/60)	Kar-Fin.Rep.	
LZ	Bulgaria		UO5	Moldavia	
M1	San Marino		UP2	Lithuania	
MP4	Bahrein		UQ2	Latvia	
MP4	Qatar		UR2	Estonia	
MP4	Trucial Oman		VE, VO	Canada	
OA	Peru		VK	Australia	
OD5	Lebanon		VK	Lord Howe I.	
OE	Austria		VK4	Willis Is.	
OH	Finland		VK9	Christmas I.	
OH0	Aland Is.		VK9	Cocos Is.	
OK	Czechoslovakia		VK9	Nauru I.	
ON4	Belgium		VK9	Norfolk I.	
OX, KG1	Greenland		VK9	Papua Terr.	
OY	Faeroes		VK9	Terr. of New Guinea	
OZ	Denmark		VK0	Heard I.	
PA0, PI1	Netherlands		VK0	Macquarie I.	
PJ	Neth. West Indies		VO (prior 1/4/49)	Newf./Lab.	
PJ2M	Sint Maarten		VP1	British Honduras	
PK1, 2, 3	Java		†VP2 (prior 1/6/58)	Leeward Is.	
PK4	Sumatra		VP2	Anguilla	
PK5	Neth. Borneo		VP2	Antigua, Barbuda	
PK6	Celebes & Molucca Is.		VP2	Br. Virgin Is.	
			VP2	Montserrat	
			VP2	St. Kitts, Nevis	
			†VP2 (prior 1/6/58)	Windw'd Is.	

† One contact with each group formerly known as "Leeward Is." and "Windward Is." dated prior to 1/6/58 may be credited, in which case no further credit as a separate listing, as from 1/6/58, will be given those particular islands.

	Phone	C.W.		Phone	C.W.
VP2	Dominica		YS	Salvador	
VP2	Grenada & Deps.		YU	Yugoslavia	
VP2	St. Lucia		YV	Venezuela	
VP2	St. Vincent & Deps.		YV0	Aves I.	
VP3	British Guiana		ZA	Albania	
VP4	Trinidad & Tobago		ZB1	Malta	
VP5	Cayman Is.		ZB2	Gibraltar	
VP5	Jamaica		ZC4	Cyprus	
VP5	Turks & Caicos Is.		ZC5	Br. North Borneo	
VP6	Barbados		ZC6	Palestine	
VP7	Bahama Is.		ZD1	Sierra Leone	
VP8	Falkland Is.		ZD2	Nigeria	
VP8, LU-Z	South Georgia		ZD3	Gambia	
VP8, LU-Z	South Orkney Is.		ZD6	Nyasaland	
VP8, LU-Z	South Sandwich Is.		ZD7	St. Helena	
VP8, LU-Z, CE9	Sth. Shet. Is.		ZD8	Ascension Is.	
VP9	Bermuda Is.		ZD9	Tristan da Cunha and	
VQ1	Zanzibar			Gough I.	
VQ2	Northern Rhodesia		ZE	Southern Rhodesia	
VQ3	Tanganyika Terr.		ZK1	Cook Is.	
VQ4	Kenya		ZK1	Manihiki Is.	
VQ5	Uganda		ZK2	Niue	
VQ6 (prior 1/7/60)	Br. Somalil'd		ZL	Chatham Is.	
VQ8	Cargados Carajos Shs.		ZL	New Zealand	
VQ8	Chagos Is.		ZL1	Kermadec Is.	
VQ8	Mauritius		ZL4	Auckland and Campbell Is.	
VQ8	Rodriguez I.		ZM6	British Samoa	
VQ9	Seychelles		ZM7	Tokelaus	
VR1	British Phoenix Is.		ZP	Paraguay	
VR1	Gilbert & Ellice Is.		ZS1, 2, 4, 5, 6	Union of S. Africa	
	and Ocean I.		ZS2	Prince Ed. and Marion I.	
VR2	Fiji Is.		ZS3	South-West Africa	
VR3	Fanning & Christmas Is.		ZS7	Swaziland	
VR4	Solomon Is.		ZS8	Basutoland	
VR5	Tonga Is.		ZS9	Bechuanaland	
VR6	Pitcairn I.		3A	Monaco	
VS1 (from 1/4/46)	Singapore		3V8	Tunisia	
VS4	Sarawak		3W8, XV5	Vietnam	
VS5	Brunei		4S7	Ceylon	
VS6	Hong Kong		4W1	Yemen	
VS9	Aden & Socotra		4X4 (from 14/5/48)	Israel	
VS9	Maldiva Is.		5A	Libya	
VS9	Sultanate of Oman		6O1, 6O2 (from 1/7/60)		
VU2	India			Somalia Rep.	
VU4	Laccadive Is.		7G1 (from 1/10/58)	Rp. of Guinea	
VU5	Andaman & Nicobar Is.		9G1, ZD4	Ghana	
XE, XF	Mexico		9K2	Kuwait	
XE4	Revilla Gigedo		9M2	Malaya	
XW8	Laos		9N1	Nepal	
XZ2	Burma		9Q5 (previously OQ5-0)	Rep. of	
YA	Afghanistan			The Congo	
YI	Irak		9S4 (prior 1/4/57)	Saar	
YK	Syria		9U5 (from 1/7/60)	Ruanda-Urundi	
YN, YN0	Nicaragua		—	Aldabra Is.	
YO	Roumania		—	Cambodia	

VHF

David Tanner, VK3ZAT
C/o. British Nylon Spinners,
Bayswater, Victoria.

After these notes appear, I shall probably be abused by all and sundry for the rather limited amount of material which is in this issue. The reason, however, is simply this, I have only received notes from a few scribes. Don't point the finger at your own particular scribe either, as each one of you is also capable of putting pen to paper and letting me have your version of the activity on the bands you use.

Now to give you some news. Up to date, the sporadic E season appears to be off to rather a slow start, but it should be on in earnest very shortly. I have noticed a few very short openings during the last couple of weeks, at times when activity was very low.

Of interest to all those chasing that elusive VK8, is the news that Kel VK3ZPQ is well under way in his preparation for the trip to Alice Springs. Kel should be audible quite often, as the skip distance to Alice is close to optimum for most of the capital cities.

From VK0PM and VK3AKN comes the news that Keith VK0ED (ex-VK3ZED) at Davis, has heard signals from VK on 50 Mc. Keith is on 50.4 Mc. at 1500 E.A.S.T., especially Sunday and given half a chance should be workable as signals have been heard from down that way in previous years.

A word of advice to some of the newer operators, and may also be helpful to those interested in looking around for the weak ones. It is very helpful if you give your own call sign last when signing over as it avoids a great deal of uncertainty as to who you actually are.

Finally let me make a plea on behalf of the sideband operators. Please try and do your best with us, you don't need to have any fancy product detectors but a stable rx and b.f.o. are a must. As a guide to those who have not yet learnt how, here is the best way to tune in that sideband signal. First of all, with the b.f.o. off, the audio gain right up and the r.f. gain backed off, peak up the signal so that it is centred in the passband of your rx. Any gain control adjustments should preferably be made with the r.f. gain control. Next, turn on the b.f.o. and adjust the b.f.o. frequency until it sounds intelligible. It may not sound natural, but then neither are a lot of phone signals. Once you have a signal tuned in correctly and your rx is stable, resist the urge to fiddle with the tuning because it will only get you into trouble again. I hope 2AQJ will forgive me for stealing a little of his thunder.

Please address all correspondence to D. Tanner, C/o. British Nylon Spinners, Bayswater, Victoria.—3ZAT.

VICTORIA

The following are the official VK3 v.h.f./u.h.f. records as at the beginning of 1961. The v.h.f. records in particular have stood for a long time. Can anyone better any of these? Don't be backward in coming forward! Let the V.h.f. Group know.

- 50 Mc.—VK3ALZ-KEIFU, 1st May, '59, 8419 miles.
- 144 Mc.—VK3ZCW-VK7LZ, 512 miles.
- 288 Mc.—VK3ALZ-VK7LZ, 10th Jan., '60, 284 miles.
- 578 Mc.—VK3ANW-VK3AKE, 11th Dec., '49, 82 miles.
- 2300 Mc.—VK3ANW-VK3KA, 18th Feb., '50, 9.1 miles.

60 Mc.—Over the past month, this band has provided plenty of interest. The second instance of 50 Mc. auroral propagation occurred on Sun, 13th Nov. (the first case was in Feb. '58) when a number of Victorian country stations were worked by the Melbourne gang. 2WH at Forbes was listening to 3ZJE Melbourne from 1800-2000 hrs., but was not able to work John until 2000 hrs. at which time signals rose to S8 and the aurora became visible at Forbes. In all cases of auroral QSOs, beams were south and signals very garbled. Apparently this aurora affected 28 Mc. (3VL) and there is an unconfirmed report of a VK3 to W QSO via aurora made on 14 Mc.

After the aurora faded, nothing much in Melbourne, but Hugo 2WH had some JAS. However earlier, about midday, 3IM QSOed VK4. JAS did come through on the 18th Nov.,

a Friday, after midday but there was not many on to work the very strong JA signals.

The evening of the 14th Nov. proved interesting, with VK7 and short skip to VK2 (Sydney) whilst later VK4 came through. VK5 were being called by some but I heard no contacts being made. I did log 3ALU and the Call Book gives his QTH as Nyah West (near Swan Hill). Back scatter as well? My beam was a shade west of north at the time. Anyone else hear him?

20 stations including 4ZBL (mobile Melbourne) were on for the scramble on 27th Nov. when 3ZEO acted as control. Michael 3ZCV and Neil 3ZJN tied for first place and Neil was elected to act as control next time. Remember 50 Mc. scrambles are the fourth Sunday of the month, 1945-2015 hrs. E.A.S.T.

144 Mc.—Noel 2OU is on 144.6 Mc. from 1900-1905 hrs. E.A.S.T., every evening with the beam on Melbourne. Preliminary tests with Bob 3UW at Wodonga were a failure, however they are continuing. Are the Melbourne gang prepared to encourage these fellows by keeping skeds? They could be arranged by post you know!

Col 3FC at Maldon, 75 miles N.W. of Melbourne, is back on the band and Arthur 3NB has reported hearing Col. at good strength. Al 5ZCR is stoking up from Mt. Gambler on 144.066 Mc., whilst David 3AW at Fenola has shifted to 144.84 Mc.

Conditions were good on the evening of 28th Nov. when 3AGV Colac, 3ZER Ballarat, 3ZEA Rainbow, 3NN Yanac and 5AW Fenola had a round table with good signals all round. Longest path involved was 3AGV to 3ZEA—185 miles. Signals were still good on Sunday morning, 27th, when 3AGV again worked 5AW and 3ANQ as well. Gordon had a 5 x 9 signal into Melbourne at 1145 hrs. The evening saw a QSO between 5AW and 3ZFX (230 miles) before David closed with converter trouble. Herb 3NN was also worked by Melbourne stations.

The 144 Mc. scramble on 13th Nov. had 23 starters and Bill 3ARZ won with 18 contacts, whilst Tom 3ZHT was second with 17.

Field Days.—Field days to come are as follows: Jan. 29, Mar. 12, and Apr. 23.

V.h.f. Group activities. The following notes are by courtesy of Bob 3ZAN. The Nov. group meeting on 18th took the form of a visit to the State Electricity Commission's communications centre at Flinders Street and Richmond. The Flinders Street centre contains a 70 Mc. base station for metropolitan coverage with additional remote receivers at Deer Park and Mt. Waverley connected via a link on the 160 Mc. band. This centre is also terminal for links in the 160 Mc. and 490 Mc. bands for multi-channel telephone services to six major country centres.

The Richmond centre is the Commission's maintenance and manufacturing point. Here, a large array of equipment was on display, including Yagis for 160 and 490 Mc. complete with polar diagrams plotted during field trials. A very fine collection of high quality v.h.f. equipment indeed.

Thanks are due to the officers of the S.E.C. who conducted members around. However it was most disappointing to the organisers that only five turned up to take advantage of such an interesting visit.

Thanks Bob, and indeed it must have been disappointing to you with that turn up. What is the matter with members? They complain meetings are boring them, when a first class visit is arranged for them they won't participate. I give up.—3QV.

SOUTH AUSTRALIA

50 Mc.—Interstate openings on 6 mx were quite frequent last month with VK4s and VK2s being worked at very good strength. The first opening occurred on 8th Nov. at approx. 1000 hours S.A.T. when VK4s and VK2s were worked in fine style. Signal strengths were very good, 2ZLP and 4ZBL being received at S9 plus most of the time.

In the afternoon many VK3s were audible on back-scatter, with antennae beaming north. Garry 5ZFM worked several stations but signals were down in strength. On 14th Nov. at approx. 2100 hours the band again opened up—this time in addition to VK4s and VK2s we had some contacts with VK7s. During this break-through Graham 5ZAP/2 was worked mobile whilst motoring through the Blue Mountains in New South Wales.

Several other break-throughs also occurred, some of these being in the day time. Dean 5ZDS successfully worked into VK2 during his lunch hour from Minlaton, S.A.

At the V.h.f. Group's Fox Hunt on Saturday night, 12th Nov., Ron 5MK led the field in both events with Neil 5ZAW second in the first event. Eugene 5AV was the fox, and his hiding places were cunningly chosen.

The VK5 V.h.f. Group conducted another scramble evening on 6 mx at 2000 hours S.A.T. on 13th Nov. Approx. 15 stations participated, your scribe being the M.C. Three scrambles were held in all—Brian 5TN winning the first two, and Garry 5ZFM winning the third.

Last month the V.h.f. Group held its Annual General Meeting for the re-election of officers who will be as follows for 1961: Chairman, Mick 5ZDR; Vice-Chairman, Neil 5ZAV; Secretary-Treasurer, Barry 5BQ; and Councillors George 5GG and Garry 5ZFM. Mick 5ZDR will be originating the Sunday morning v.h.f. news on 6 mx to be relayed by 5WL. All scrambles, fox hunts, etc., will be advertised at least one week prior to their commencement, so the v.h.f. group is reminded to listen at the somewhat early hour of 0900 hours S.A.T. for details.

The 6 mx mobiles are still very active and John 8ZDL is in Adelaide on leave from Darwin. He runs quite high power to his mobile rig and has recently been heard on the band in VK5. Mick 5ZDR is contemplating higher power for his mobile rig and Brian 5TN is now equipped with 6 mx mobile gear. Graham 5ZAF has been touring VK2 and reported having many mobile contacts including VK5 and VK7.

By the time these notes are read, Eugene 5AV will be in Daly Waters and, we hope, "crouched over his 6 mx rig" with the beam in the south. Eugene now has the call 8AV and will be there for at least 12 months. It is on record that Ron 5MK has offered practically any component part to Eugene to keep him calling "CQ 6" from N.T. Dane 4ZAX/5 is expecting a visit from Laurie 5ZBL who is also equipped with 6 mx mobile, and should provide interesting contacts for the VK5s. The only newcomer on 6 this month is Graham 5ZAD and he is welcomed to the band.

144 Mc.—On Nov. 25 your scribe made a visit to the South East of S.A. including Mt. Gambler and Fenola and the v.h.f. scene, as viewed from Al 5ZCR's QTH at the Mount was quite interesting. Al's closest 2 mx contact is David 6AW at Fenola, 30 miles away. He works David at 5 x 9 nearly every night and also other stations just across the border into VK3, ranging up to several hundred miles. When conditions permit, Al hopes to work into Ballarat and possibly Melbourne on 2 mx. Al has a converter featuring a 41A in the r.f. stage and runs approx. 60 to 70 watts to a 6/40; the antenna is a 10 element Yagi.

David 5AW at Fenola also has a very good 2 mx installation and is extremely keen. There is 2 mx activity every night in these areas and the majority of contacts are over distances of 100 miles and over. Col 5CJ at Mt. Gambler is starting up on 2 mx also, and will increase s.b.f. activity at the Mount. Unfortunately Adelaide has not altered much since last month, Mick 5ZDR being the most active.—5BQ.

WESTERN AUSTRALIA

The last meeting of the W.A. V.h.f. Group (Inc.) was attended by Cole 6CS and Jim 6RU who put the case of the W.I.A. in VK6 for the amalgamation of the v.h.f. Group and the VK6 Division of the W.I.A. There was some lengthy discussion before the matter was held over for a motion to be formulated and put to the next group meeting. It is expected that the future of the Group will be decided at the November meeting.

The last 145 Mc. fox hunt was run by Cedric 6ZBC. Unfortunately the fox suffered from a flat battery and most of the pursuers gave it away under the impression that their listening gear had gone coput. However, Lance 6ZBK stuck tenaciously to the job and loped home an easy winner, not before he churned up some of the sand on the median strip on the Freeway.

50 Mc.—Some DX has appeared on 6 over the last few weeks, chiefly in the form of JAs and HLKA. This latter station still appears frequently, but openings are well down on last year. There was one good JA opening during the week, 14th to 21st Nov., following the big sunspot burst on the previous week-end. There has been no E's activity. Incidentally, the 50 Mc. beacon VK6VF still runs auto m.c.w. on 50.001—the beam will be turned east over the contest period.

288 Mc.—Five or six stations are now producing some activity on this band, 6WJ, 6ZAA, 6HK and 6ZAV among them. It is hoped that some a.t.v. will be forthcoming in the future.

General.—Was surprised to receive a visit from Gordon MacDonald, VK3ZJ, recently. Gordon is in VK6 for the next two or three years, with the possibility of remaining permanently. Gordon ran regular skeds on 2 mx with VK8 last year. His main mode of operation has been 144 Mc. s.s.b. He is at present house-hunting.

(Continued on Page 21)

CORRESPONDENCE

Any opinion expressed under this heading is the individual opinion of the writer and does not necessarily coincide with that of the publishers.

ROYAL NAVAL AMATEUR RADIO SOCIETY

Editor "A.R.," Dear Sir,

After just over three months since the inaugural meeting of the Society, it now boasts a modest membership of 83—62 Corporate members, 7 Associate members, and 5 Junior members.

Membership of the Society is open to all serving, or past, members of the Royal Navy, Royal Marines, Women's Royal Naval Service, Reserves or Commonwealth Navies. Associate membership is open to civilians who are, or have been, connected with the above services in any way. Further information can be obtained by writing to the following address: Hon. Secretary, Royal Naval Amateur Radio Society, H.M.S. Mercury, Leydene, Petersfield, Hants., U.K.

The Headquarters Amateur Radio Station (G3BUZ) is regularly on the air on 40 metres, and the DX bands, and will welcome calls from "Naval Types".

Amongst the membership at present are five overseas members: VK3AST, VQ4HE, ZLAOP, 5ASTQ and VO2NA. Other overseas Hams have written to the Society's Headquarters asking for further details. The Society has applied for affiliation to the Radio Society of Great Britain.

Proposed projects include special members QSL cards and a Morse Code proficiency transmission run at regular intervals.

—M. J. Mathews, G3JFF/VS1HU.

MORSE CODE

Editor "A.R.," Dear Sir,

Roth Jones, VK3BG, states that he is convinced about sideband transmission and after reading his letter I am convinced also that he is slipping badly and how! For a man of his years and experience to advocate the abolition of c.w. in favor of the garbled bilge and balderdash that masquerades as phone on our bands is incredible.

I realize that telephony as such is a reasonable means of communication for speed of contact over short distances such as aircraft radio, etc., but to suggest that c.w. is outmoded and useless is pure tripe. Perhaps the a.m. and s.s.b. and d.s.b. exponents fail to realize that Hams are not the only ones who listen in on our frequencies and we are judged in the ears of the listening public by what they (the public) hear, and I repeat, some of the bilge that emits from these tonal twisters stations must convince John Public that all Hams are raving ratbags and by this I'm slamming those galahs who persist in using c.w. abbreviations in their speech. For example a Ham goes after a job and when the boss says, "Where do you live?" he says "My Kew Tee Halch is . . ." or would he walk up to his best girl and say "Best 73s dear". To the c.w. man that's "Best Best Wishehses".

I could go on for hours about that drive, but to get back to the reason of this note. Why do all the major communication companies use c.w.? be it teletype, f.s.k., m.c.w., but c.w. at that. Because, Mr. Jones, they must get their information through and it has been proven from our earliest days of radio communication that c.w. will get through when phone R/T is a miserable flop. I run a weekly sked with K9KXCM on c.w. and to date 90 per cent. of contacts are successful; would phone be as good. One only has to hear the frantic struggles of almost any phone Ham to get more than a signal report across to answer that one!

I will grant you that there are lids on key-pounding, clicks, thumps, bad fists, etc., but at least they are using a means of communication that does not hog the limited space allotted to us. It's a well known fact that for every phone station, 10 c.w. stations could operate in the same space.

"We can't afford to abolish c.w. Good Code operating gives prestige to the hobby; it is the mark of a good radio operator; it is a skill which cannot be picked up from a book and which sets the Amateur apart from the tinkering layman." I quote this from "QST".

Roth calls the key-pounders strange chapel! Well to name three only, the late Dougal Whitburn (VK5BY), VK8RX and VK5JT, according to him, they are strange—cause why they were and are c.w. ops. and good ones. All were so strange that they amassed DX scores. Yet at the same time, brother, name three better W.I.A. workers!!!

And talking of chasing countries. OM, I notice in the VK DX Club that phone exponents are not behind the door when it comes to chasing that "one country, the majority of which are uninhabited"—your own words OE.

I'll suggest that if the bands be reallocated that we put a.m., s.s.b. and d.s.b. in the h.f. top 40 Kc., give the rest to the c.w. operators. Let the boys who speak to their "Great Australian Public" try this for six months and I'll bet that after they have seen the error of their ways they will see the light and change over to the method which allows hundreds of Hams the world over to enjoy their hobby.

I have been a member of W.I.A. since 1928. I started on the key and until the time comes when I join my ancestors above or below, there will always be a vibroplex and a straight key locked to my transmitter.

Can't waste any more time, sked up in 10 minutes, it's on 14080 c.w., solong.

—Leth Cotton, VK5LG.

Editor "A.R.," Dear Sir,

I read with amazement the letter from VK-3BG in October "A.R." and would like to believe that coming from such a well known Ham it was written purely to "start something" and does not express his real sentiments.

We are continually hearing the same old cry, "C.w. is outmoded," whereas it is an undeniable fact that it is still the most efficient method of communication and will remain so until someone comes up with something new, which will have to be better than s.s.b. C.w. can be used under conditions impossible for phone, can be copied through QRM the phone man could not cope with, is more accurate and faster for traffic handling, and more stations can operate in a given frequency band—surely a big point these days. These facts are, of course, well known to c.w. operators, but apparently not to some others, and although I admit that more ability is required to use a key than to speak into a microphone, that ability can be attained by anyone with a little bit of go in him.

Morse code in one way or another over the years has been the means of saving many lives and should be learnt by everyone. To cut out the Morse in the A.O.C.P. would only be a retrograde step, as was the unfortunate decision some years ago to eliminate the probationary period on c.w. for new licensees. Had that remained I feel sure many newcomers to the Amateur ranks would now be enjoying the great satisfaction that comes from a good c.w. QSO.

The suggestion to hand over to a.m. the 40 Kc. that Roth will so magnanimously allow us for six months is surely the most selfish suggestion ever put forward for band allocation, and cannot be taken seriously. Maybe my ideas are old fashioned, but after pounding brass for over 30 years I still think the other chap is entitled to operate as he wishes and be allowed a slice of the available frequencies in which to do so. Imagine the reaction from the phone fraternity to a proposal to eliminate them from the DX bands, which is just as silly as the proposal to eliminate c.w.

Finally, from a quick perusal of s.s.b. notes in various magazines it appears that many s.s.b. operators also belong to those strange types who like working DX, so the affliction is apparently not confined to c.w. alone.

—Chas. Harrison, VK7CH.

Editor "A.R.," Dear Sir,

I really must take exception to a letter from Mr. Roth Jones, VK3BG, appearing in October "A.R.," together with suggestions for dividing the 14 Mc. band.

From an Amateur with Mr. Jones' undoubted experience I consider the suggestions, and especially the heading "Abolition of C.w.," to be an affront to a greater percentage of the Ham fraternity than those using s.s.b.

Has Mr. Jones even listened in the 100 Kc. c.w. band of 14 Mc. where the peanut whistles coexist with the k.w.'s and nobody complains of QRM and I should say 99 per cent. of the QSOs convey intelligence from one end of the circuit to the other. Can the same be said of any mode telephony transmission?

Seriously, is this an outmoded means of communication? and could phone exist under the same conditions?

It is certainly a fact s.s.b. is a useful and up-and-coming means of communication and need not be excessively expensive if one is satisfied with just the transmitter. However, test gear necessary to fully align this system

could cost as much as the transmitter if the job is to be done properly.

Recently I have observed several s.s.b. stations (and yes, including the leading lights in the art) occupying as much as 70 Kc. due, no doubt, to faulty adjustment, as no one will argue that a properly adjusted s.s.b. outfit is excellent and overcomes many of the objections of a.m.

Regarding the abolition of the Morse test for the A.O.C.P. I think anyone of average intelligence and keen enough on hobby will have no difficulty.

Let's leave the c.w. boys (and girls) alone and let s.s.b. prove itself under conditions that offer no problems to c.w.

—H. N. Bowman, VK5FM.

★

FEBRUARY ISSUE TO BE LATE

Due to circumstances beyond our control, the February issue of "Amateur Radio" will be distributed late in the month.

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All S.w.l. and Amateurs please take note. The address of Eric Trebilcock, BERS195 and WIA-L3042, is 340 Gillies Street, Thornbury, N.17. Not Fairfield as printed in the 1960-61 Call Book.

Quite a lot of S.w.l. and Amateurs alike have always wondered why it is so hard to hear or make contact with North Dakota in U.S.A.

Early last year on 14/3/60 I heard my one and only North Dakota Amateur Station. His call sign is W6ZTL, of Glen Ullin. He called CQ and made contact with a VE3. He turned his beam around and his signal dropped, but I was still able to copy him.

As a rule I try to send an Amateur reports of more than one of his transmissions, but to no avail did I hear him again. After waiting six months, in September last year, I sent him my card and report. Eight weeks later I received confirmation with a card and a letter. Here below is that letter, explaining why we here in Australia cannot hear North Dakota Amateur Stations.

"Thank you very much for the interesting and informative report on my sigs on March 15, 1960. I very seldom write letters in response to s.w.l. reports, but I felt that your excellent report deserved an answer. It was quite interesting to hear what happened to my signals when the beam was turned to VE3 land. I expected that it would make some difference, but not as much as your report indicated.

"The reason that you do not hear very many sigs from North Dakota is that most of the Hams in North Dakota operate on the 3.8 or 7.2 Mc. band. They are not much for DX and as a result they pretty well stay on the lower frequencies. There must be about 400 or 500 Hams in North Dakota, yet it seems that every time I QSO a DX station they tell me its their first contact with our State. I hope more of them will get on the DX bands.

"I have been a Ham since 1938 and my age is 43. My present set-up is v.f.o., buffer and 813 final, running 300w input on all bands. The mod. are a pr. of 811s. The rx is a double conv. superhet. All the equipment is home-brew except for the rx. The antenna is a Mosley TA-33 Triband beam mounted on 55 ft. steel tower. I am in the grain and farm machinery business. This is strictly a farm community and it has a population of only 1,300 people. The winters get very cold here and the summers are very hot. The highest temp. this past summer was 108 degrees and most every winter it drops to 30 or 35 degrees below zero F. This is a very good cattle country and also good for wheat, oats, rye, barley and flax. Quite a few sheep are raised also.

"Perhaps the next time you copy my signals it will make you feel that you know me just a little bit better. Once again, I want to thank you for the very interesting report and best of luck in your work teaching s.w.l.'s to give more informative reports. Incidentally, I used to send out s.w.l. reports, too. Keep up the good work and hope that I can QSO you some time in the future.—A. J. Muggil."

There are about 12 s.w.l. who intend making their presence known at the S.w.l. Convention next month on 4th and 5th. Are there any more coming? Please advise me, will you.

SOUTH AUSTRALIA

The group in Mt. Gambler will be holding a meeting as soon as the school exams are completed. Colin has done little listening but managed one new country, 9N1MM. He has also built up the S meter from Feb. "A.R." and is pleased with its performance. Fred L5020 has been busy with other organisations and can't find time to listen to the bands. Now Fred, that's not like you, come now, how about some DX news for the page. Gary Smythe, L5026, is at present constructing two 50 ft. antenna poles. He is also going to build a rx, the same as Colin's. Best of luck with it Gary.

TASMANIA

Michael, the Secretary, has built a d.f. loop for 80 mx Fox Hunts, but as yet it's not performing correctly. They tested it with Ted's g.d.o., rx, Class C, etc., but the way the band

conditions were, it made the S meter jump all over the place from 6 to 9. What do you expect from the Apple Island, hi, keep at it Mike.

At their last meeting 12 s.w.l. were present plus a new member. What's his name, Mike? Let me know the names of all members, please, for inclusion in this column. Their next meeting will be a lecture on conversion of surplus gear.

We hope you get your A.O.C.P. Mike, keep the fingers crossed. Keep up the good work.

NEW MEMBERS IN VICTORIA

The S.w.l. Group heartily welcomes S. W. Lockwood, L3098, L. Banks, L3096, A. E. Holmes of Wangaratta, and J. Jobson, L3099, of Trisco, to the ranks of the s.w.l. and may we hope to see you at our meetings which are held at the club rooms on the last Friday of each month.

I apologise to John Johnson for incorrectly giving his number to another member. This has been rectified, and John has 99. That's a good number, John.

CORRESPONDENCE

Letters were received from Colin Hutcheson VK5, Mike Jenner VK7, Eric Trebilcock VK3, Barry Thomson ZL land, John Jobson VK3, Dave Jenkins VK3, Afton Westcott VK2, Don Grantley VK3, and Chas. Abernethy VK2. Thank you all very much. It what keeps the S.w.l. Page alive. S Lockwood has just become a new member and is very interested in becoming an Amateur. All the best of luck in listening and studies OM.

My old mate, Eric, says, regarding A3, he doesn't last long at it, hi, as for s.s.b. he is sick and tired of sitting on a station for minutes at a time then hear go ahead OM, no mention of call signs, that's a killer as far as he is concerned. So he has gone back to the beloved c.w.

His 1960 scores are 172C, 202 head, and confirmation from 118C and 38Z. His QSL cards received this month are CTIID, DLABS, EA4CR, F9YH, FK8AU, G2DFD, HASKDQ, KP4AEQ, LUSAQ and so on. It's really terrific the cards this man has. I could go on and on, but space will not permit.

Barry Thomson, ZL140-DX37A, is really enjoying his stay in VK land and we may see him at the S.w.l. Convention next month. (Don't forget, chaps, it is open to all VK S.w.l.'s.) Hope we can meet you Barry.

John Jobson, of Trisco, L3099, tells me his gear is very elementary—an R. & H. converter home-brew (doesn't say what brand), feeding to a mantel at 1600 kc. He's also gradually constructing a 522 rx for use on 2 mx, but on a fruit settlement he doesn't get nearly enough time. Thanks for the letter John, see you soon.

Dave Jenkins up in the Alps. He's still struggling to get up the double extended zepp. What he has heard in the way of DX has been on a long wire, half of which is lying on the ground. Dave, I am glad the old bug is biting you again. Get up those antennae, complete your transistorised gear, and send us down some DX notes. How about the Convention, will you be there?

Afton Westcott of VK4, pleased to meet you Afton and thanks for the letter. Afton's rx is a HQ170 which is a mighty rx, going by his band reports. His QTH is up in the Atherton Tablelands, 2,500 ft. above sea level. Conditions are good apart from tropical QRN. His antennae are a long wire 425 ft., 60 ft. at one end down to 35 ft. at the rx end. A 4 element Yagi for 80 Mc. is 37 ft. high, plus a tri-band Q.Q. 50 ft. high. He says the HQ170 gives astonishing good results on s.s.b. His latest and rarest DX is EP2AT at Tehran in Persia. See you again Afton, good DX up there with all that nice equipment.

Don Grantley has at last got his AR7 working on all bands. The last being 15 mx on which he heard at 1920 hours: V5SGS, KR6IM, KB6BH and Z56AOW—the latter two on s.s.b. Well good for you, Don. Anyhow, Don hasn't sent me his usual DX this month due to lack of news, so that's the lot from him. See you next month, Don.

Chas Abernethy, L2211, tells me he started off as a s.w. b.c. but soon realised that it was limited and is quite happy with his 19 confirms which is enough for him. One can always receive a b.c. station but never knows what is going to happen on the Amateur bands, so he's definitely an Amateur listener. He only listens one hour per day. The SX28 is to be overhauled and has received dope on it from U.S.A. and Chas says if any s.w.l. would like info on the SX28, i.e. valves, resistors or capacitors, etc., they could drop him a line. He sent away his 50 Mc. report to a VK3ZGD (how about that, Bert, one for you to answer). Chas heard his first HB9 and says ZL1ALG replies to s.w.l.'s.

BAND CONDITIONS AND DX HEARD

According to Eric Trebilcock, 40 mx has not been very good at all. The best he has heard are JA1CVO, UA4PA, SP8KAF and DM2ABL. Apparently he is the only one who has heard anything on 40 mx. Would like some more news re 40 mx from the rest of you.

Col Hutchesson says 20 mx has been poor in the Mount of an early evening, but is much better around 2000. I find it peaks around 2300 to W land and Asia. Did hear a DJ0 and it shows that anything could happen on 20 mx.

Eric Trebilcock, 20 mx phone: FM7WQ (1st FM7 this year on A311), W8GOB, ZLIHY, KR6DO, KA8CK, VK0IT, and in brackets he says, "You can't say any more, I don't listen to A3, hi." Well, Eric, what were the above then if you don't listen to A3? S.s.b.? You just stick to your beloved c.w. OM. On c.w. Eric listed these in three days: Q9S5F, SM-5KV/9Q5 and a couple other SM/9Q5, ZD2GOF, MP4BCV, KM6BV, KW6GD, ZC4AK, VQ3HZ, VQ4DX, FA2VC, 4X4JV, ET2UV, VR2DK, VV-2AZ, V99MC, 5A5TA, V8PCX, ZBIHC, 4S7EC, ZK2AD, ZK1AK, VQ8BC. In the past month he has heard three new countries: Q9S, 9U5 and 601, but his QSL situation is deteriorating, can't get off 258 confirmed. Leah, like me, Eric, I can't get off 28. Thanks Eric for your reports and letter.

Col Hutchesson has logged 20 mx phone: 4S7YL, VU2AD, VU2BR (s.s.b.), AP2Q, VP5BL, EA2DJ, WZKFA, 9N1MM, G8PO, KA2F9, 9M2EF and KP4ANH.

Afton Westcott, phone: 4X4MC, KA5, ZE1JN, ELIK, HIAFT, KH6s, KR8s, VK9RM, VR1D.

Don Grantley has found 20 mx wide open on some mornings and has logged PJ2AA, 9N1MD, H51B, T2HP, BV1US—all s.s.b.; an a.m.: VU, VR, VK, VSI, KW6 and KX6. On c.w. he heard 8U5MC, CR7CH, SV1AM, VP-2MB, FA3AQ, FA9UO and FQ8HF.

Chas. Abernethy is doing well with his SX28: VP5V, VE11E, DJ0CE (W3VKD, first time on for 12 months), VE7CE, KP4ZC, Ws, KM6BI, BV1USE and USG, KGs, KHs, YE5A1P, CE3HL, KA2VE, TG9AL, VE11E, KL7DBJ, PA0HBO, OA4JH, ZS1KW, G3NMT and VU2BK—all on a.m.

That's it for 20 mx this month. I didn't put any in because I've heard most of the a.m. stations above.

15 mx.—There has been good and bad conditions, but really very quiet. Col Hutchesson managed KZ5BA and 4S7YL. Afton Westcott did better: DL6ZU, DU1BSF, DL2UZ, EP2AT, EA8CM, F8BO, G5TP, G3GHP, 4X4AJ, JA6AV, KR6s, VS9ME, JZ0PM, VS6IM, CR9AN, 4S7YL, AP2Q, CX6AR, CE3HZ and VU, CE2CC, FK-8AU, G2PU, G3KYA, HK3LZ and 5KW, KB-6BH/KH6, W7VU/M, PY1AGP, T15RV, UA-0EH, YV5APM, LC4AK, XK1BS, JZ0PM.

That's all for 15 mx. I have some logged but will hold them over till next month.

10 mx very quiet indeed, only a few W, VEs and JAs.

50 Mc.—Afton Westcott says, "We have had no openings here since I have been back, though there was a very good one on 8/10/60. I believe a KH6 was open to Central Queensland for five hours, but this is only grapevine. The only JAs heard this month were JA1CB working DU6RG and JA1CMN. With the forthcoming approach of the sporadic E, there will be bucketfuls of JAs and each year we have substantial openings to KH6."

That's it S.w.l.'s. A Happy and Prosperous New Year to you all. The very best of health and DX—Maurie L3055.

DX LADDER

	Hrd.	Con- firm.	Zon.	No. of Cards
L3042 Eric Trebilcock ...	275	285	40	—
L2022 D. Grantley ...	206	61	31	—
L3074 Mac. Hilliard ...	193	52	23	130
L3055 M. Cox ...	188	26	18	76
Rod de Balfour ...	180	122	—	—
L3065 Ian Thomas ...	126	16	13	—
VK4 C. Thorpe ...	114	82	32	—
L5031 C. Hutchesson ...	96	5	5	—
L3015 Mike. Ide ...	86	28	—	—
L3072 Tom Heyward ...	80	11	10	—
L2185 A. Chatto ...	79	—	—	—
L2158 B. Vieck ...	79	—	—	—
L2159 R. Thompson ...	73	2	2	—
L3068 Don Grantley ...	65	4	—	—
L5020 F. Aslin ...	40	4	4	—
L2204 S. Ferry ...	35	—	—	—
L2211 C. Abernethy ...	31	13	4	—
L5026 G. Smythe ...	28	1	1	—
L3077 Dave Fraser ...	69	—	—	—
L2011 G. Albeck ...	18	—	—	—
L2052 T. Mills ...	14	2	5	—
L2185 P. Irvine ...	8	—	—	—
L3006 I. Woodman ...	4	1	1	—
L2057 R. Wood ...	3	8	3	—

SIDEBAND

Bud Pounsett, VK2AQJ
22 Selfert Centre,
Queanbeyan, N.S.W.

AUDIO QUALITY

There is an old saying that maintains that "you can't make a silken purse from a sow's ear," and applied to a sideband transmitter, this is very true. It is essential to treat your transmitter audio section, from the microphone to the balanced modulator, with care. Use a good microphone and apply techniques that you would to the low level stages of your hi-fi. I certainly do not advocate using a wide frequency response, but make sure your speech amplifier is free of distortion and hum. It is a bad start to have poor audio quality to begin with, so this rather rules out carbon mikes, doesn't it. Let us all aim at good clean audio in the 300 to 3,000 cycle band.

ARS5-ABS5A S.B. EXCITERS

These exciters are manufactured by Don Haberecht, VK2RS at Albury. At my request, Don has furnished me with some information on this equipment. The speech amplifier consists of a restricted frequency response speech amplifier using one and a half 12AT7 dual triodes. The phase-shift network is the well known "Aswel" unit, manufactured by two of our Sydney sidebanders. Half of a 12AT7 is used as a 9 Mc. crystal oscillator, while twin-coil r.f. phase shift is employed. Two 6AL5 balanced modulators and a 6BA6 amplifier round off the ARS5 line-up.

The ARS5A is similar, but a 6BE6 mixer replaces the 6BA6 amplifier, giving band-switched output on 80 to 10 metres in five bands. Low or high impedance output is available and the cabinet, finished in grey hammer-tone with black lettering, measures 9 x 7 x 5 inches. Figures on performance are, for s.b. suppression at 1 Kc., 40 db., and at 2.5 Kc., 30 db. or better. Carrier suppression is of the order of 30 to 45 db. Don has given me some circuits that he suggests could follow the units. This month, the one following the ARS5 is shown, watch for the ARS5A version next month. Don has a wide range of other types

of Amateur equipment which will be made to order; drop him a line if you do not have the time to "roll your own."

PERSONAL

Graham VK8GR finds time, between farming chores, to stir up some activity on the bands. Graham is lucky enough to have a Central Electronics 20A with which to drive his 813 ZL linear amplifier. The clamp tubes used in the linear are a pair of 6F6 tubes. An SX100 receiver and a vertical dipole completes the station.

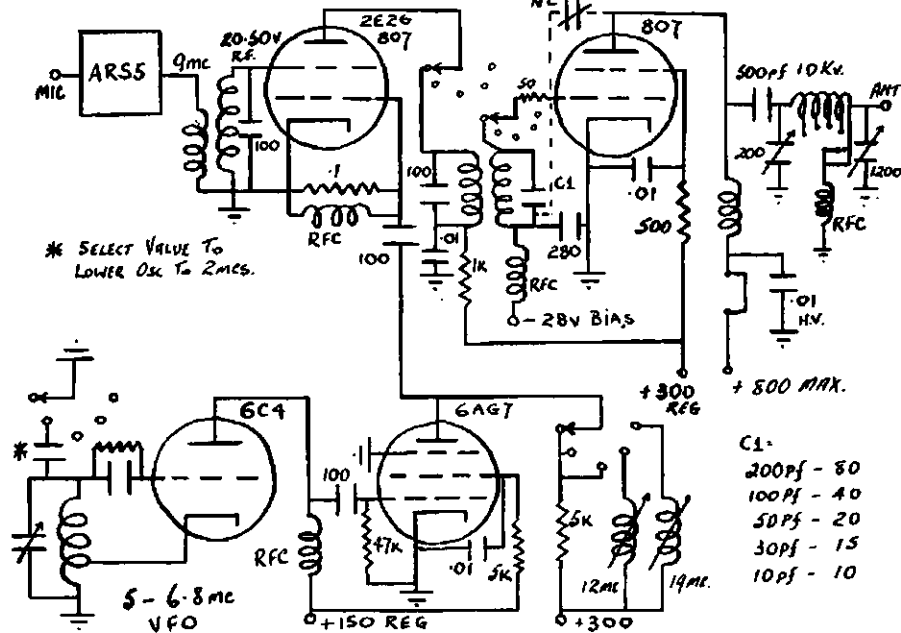
A Collins KWM2 is the V.I.P. being driven to Darwin in a Cadillac by John VK2QJ, via Kempsey, Brisbane, McKay, Townsville, and Mt. Isa. John has been worked mobile on the

way and by now will, no doubt, be soaring to fame as the first s.b. station in VK8.

A very up-to-the-minute transmitter, using a 7360 tube, a Jap. 2.4 Kc. mechanical filter and a pair of 6148 tubes, is that of Angus VK3IY. The transmitter is designed along the lines of "The Sideband Package" and occupies a chassis 12 x 18 inches. Angus has a monitor scope, built in.

My spies tell me that VK2ACA is on s.b., using an HT37 and that VK2ABY is using a home-brew job similar in design to the HT37. Also I hear that Santa Claus has taken one of 30Z's sidebands with him.

May I wish you all a happy 1961 and make a resolution to apply even better techniques to your sideband operating than you did in 1960.



Circuit to follow ARS5.

Reminder regarding

NATIONAL FIELD DAY CONTEST

Week-End of 11th and 12th FEBRUARY, 1961

THE RULES WILL BE THE SAME AS THOSE FOR THE 1960 CONTEST (published in "A.R." of January, 1960) WITH A FEW MINOR CHANGES, MOSTLY TO SUIT THE ALTERED DATES.

FOR FURTHER DETAILS LISTEN TO YOUR "WI" BROADCASTS.

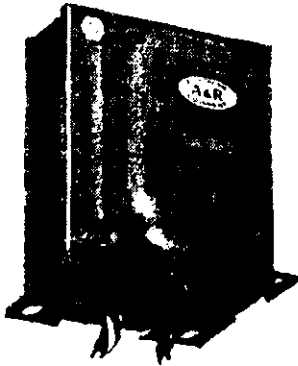
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Type No.	O.C. Output M.A.	D.C. Output Volts	A.C. Secondary Volts	Filaments Volts	Filaments Amps.	Effective R (See note*) Ohms	Weight lbs. ozs.	Overall Height inches	Mounting Dimensions inches	Base Dimensions inches	Mounting Type
2062	80	290 265	115 TAP 105	6.3 C.T.-2.25		25	3 2	3 1/2	2 1/4 x 2 1/4	2 7/8 x 3	VLN 31
2063	80	340 315	135 TAP 125	6.3 C.T.-2.25		29	3 3	3 1/2	2 1/4 x 2 1/4	2 7/8 x 3	VLN 31
2064	125	340 315	135 TAP 125	6.3 C.T.-2.25 6.3.-2.25		16	4 15	3 3/4	2 1/2 x 2 1/4	3 1/2 x 3 1/4	VLN 34
2065	150	290 265	115 TAP 105	6.3 C.T.-	6	10	5 10	3 3/4	2 1/4 x 2 1/4	3 3/4 x 3 1/4	VLN 34
2066	190	320 265	125 TAP 105	6.3 C.T.-	6	7	6 3	3 3/4	3 x 2 1/4	4 x 3 1/4	VLN 34

All voltages given are those obtained under fully loaded conditions. Maximum temperature rise 45°C. fully loaded. Attractively finished in baked Silver-Dray Hammetone with Black Cores.

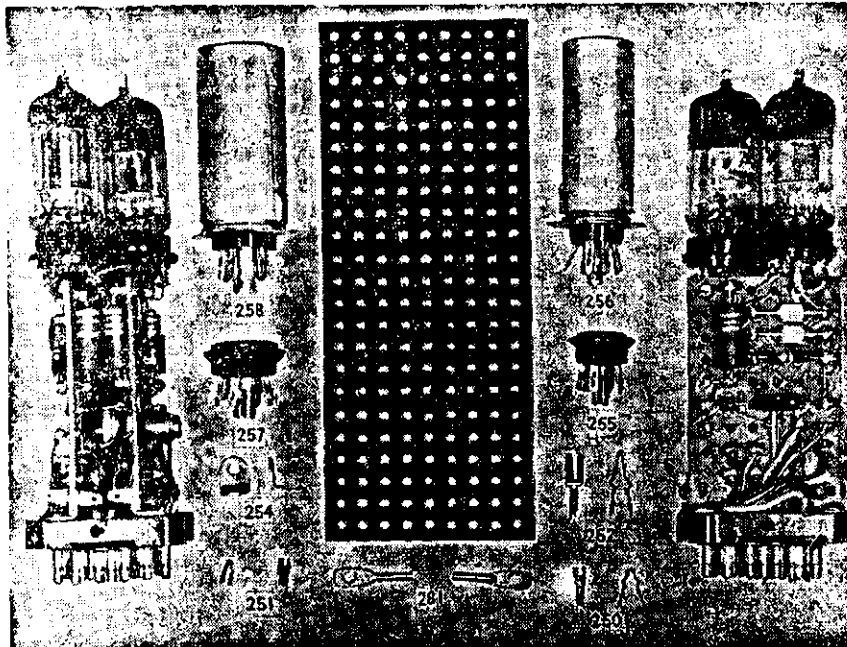
Note* — Effective Transformer Series Resistance referred to Secondary

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NOTES

FEDERAL

I.A.E.U. REGION I, DIVISION

The fourth meeting of the Region I. Division, I.A.R.U. was held at Folkestone, United Kingdom, June 13-17, 1960. The Executive Committee Chairman, Mr. Harry A. Laett, HB9GA, was elected Conference Chairman. Conference Secretary was John Clarricoats, O.B.E., G8CL, Secretary of the Executive Committee. There was 40 delegates from 15 societies present, along with five members of the Executive Committee, six observers including I.A.R.U. Secretary, and a secretariat of six. Additionally, three societies were represented by proxy. A special programme was organised for the wives of delegates who attended.

The conference agreed that, in view of the International Telecommunications Union's intention to set up a panel of experts to study allocation methods, member societies shall pass along any official information that may come to them about the constitution of the panel, its policies and its terms of reference to Region I. Division for further action.

The European Band Plan was continued in its present form. However, it was agreed that when the sharing by Amateurs of the broadcasting segment at 7100-7150 Kc. is terminated, the phone band at forty metres will be 7050-7100 Kc.

The conference discussed Recommendation 33 of the Geneva Conference, which recommended that administrations study whether the national Red Cross societies should be assigned frequencies at the edges of Amateur bands. The Region I. group felt that Amateurs should be encouraged to prepare for emergency work, and to offer their services as Amateurs to such organisations as the Red Cross, but they were not in favor of any move to allocate frequencies in the Amateur bands to the Red Cross or any other body.

The conference agreed that it was extremely important that member-societies should continue and strengthen liaison with the governmental authorities in each country, in order to preserve Amateur bands. Non-member societies should be encouraged to join I.A.R.U., and contacts should be made with Amateurs in those countries where there are no Amateur societies to encourage them to form societies and apply for I.A.R.U. membership. It was felt that societies should encourage full use of all the bands by their members.

The conference also considered a number of internal administrative matters, such as adoption of a new set of rules for the Region I. Division, co-ordination of contests and the like.

On the technical side, the conference recommended that Amateur Radio teleprinting in the Region use the international code number 2 and 850 cycles frequency shift keying. The group also recommended that narrow band image transmission be permitted on all possible bands except 160 metres. No action was taken on a proposed set of standards for Amateur equipment.

A new executive committee was elected to serve until the end of the month following the next Region I. Division Conference. Mr. Laett was re-elected chairman; Mr. Clarricoats, secretary; Major Per-Anders Kinnmann, SM5ZD, vice-chairman; Dr. Jacques Simonnet, F9DW, treasurer; and Mr. Janez Znidarsic, YU1AA, as a member. Mr. Alfred Shadlich, DL1XJ, was newly elected as a member of the committee. It was agreed that the next conference would be held in Stockholm, probably in 1963 unless it appears desirable to hold a meeting earlier.

The I.A.R.U. Secretary addressed the meeting on matters arising from the Geneva Conference.

EMERGENCY WORK BY AMATEURS

Amateurs the world over are alike in their readiness to assist the local or national government, the Red Cross, and members of the general public in all sorts of emergencies, civil or natural. Here are reports from two I.A.R.U. societies on the work done by their Amateurs during the serious emergencies of the past few months.

BELGIUM AND THE CONGO

What is believed to be the most extensive emergency operation ever set up by the Radio

Amateurs has been in progress since the beginning of July. When the Congolese armed force mutinied, the Europeans living in this country were threatened in their possessions and lives. Normal communications were disrupted, as well inside the Congo as between Belgium and its former African possession.

The Amateurs were asked to step in and in a few hours several Belgian stations were ready to communicate with the Congolese Amateurs. The Congolese Amateurs had in the meantime taken advantage of the existing Amateur and small commercial stations existing in large numbers to organise an internal communications net which proved to be very efficient.

Very soon a repatriation operation on an enormous scale began, with an absolute priority for women and children, so the families were broken up, and an even more acute need for radio communication arose.

In the meantime, the number of Belgian stations used for the traffic to and from Congo had risen to about thirty, working mostly in the 21 Mc. band, in phone, with powers ranging from 75 to 150 watts and beam antennae. The number of messages rose to several hundred daily. The Belgian administration helped by setting up a tx and a multiple receiving facility using rhombics, and giving the Amateurs free use of the long distance telephone for the delivery of the messages.

As a result, thousands of messages have been passed, giving news from Congo to the anxious families, informing the fathers of the safe arrival of mothers and children in Europe.

On several occasions, Amateur Radio saved lives by directing rescue parties to groups of Europeans besieged in farms or plantations, or to road-blocked columns of refugees attacked by the excited natives, and unable to raise directly the local authorities.

At this moment the operation is slowing down a little, as the Amateur stations left in operation in Congo become fewer.

In some places the local authorities try to impede this traffic, and the Amateurs are forced to operate under cover. In other places, which had been abandoned, Amateurs come back and resume operation.

It is foreseen that this operation will be continued as long as Europeans will live in Congo and the normal communications are not restored.

The U.B.A. has worked up to now as a message dispatching agency, and is at present setting up a powerful tx at its national shack ON4UB, to pass directly its share of the traffic.

The U.B.A. wishes to thank the Amateurs of the world who did their best to clear the upper part of the 21 Mc. band for this traffic, and have very effectively reduced the QRM.

—Joseph Mussche, ON4BK, President, Union Belge des Amateurs-Emetteurs.

CHILEAN EARTHQUAKE

During the weeks subsequent to the earthquake and seaquake of the South that went through 10 of our 25 Provinces, we Chilean Amateurs had certainly an extraordinary work creating a communication emergency net headed by the official station of the Radio Club de Chile, CE3AA, here in Santiago.

During approximately eight weeks about 50 CE Amateurs duly selected and authorised were working practically 24 hours a day substituting for all means of regular communications which had been destroyed. This emergency net was set between the frequencies of 7000 and 7100 Kc. and it is not possible to relate even approximately the work that these CE Amateurs had. It was so tremendous a volume of activity that it is difficult to tell of the numberless help given by Amateurs, who saved lives, goods, and desperate situations.

Many foreign Amateurs helped by sending medicine and money to the Radio Club de Chile to be distributed among those who needed it. We must mention among others our friend K3SED who made a call to American Amateurs, many of them answering with donations. Also sent donations: HC1FG, W4FZC, K2UBG, W4SIB, OD5CL, K5IMF. Radio Association of Western New York, Radio Club Argentino, Asociacion Radio Ecuatoriana, Chatham Kent Amateur Radio Club (Canada), Evans Amateur Radio Club (Angola, New York), and many others.

The Radio Club de Chile most deeply appreciates the help that foreign Radio Amateurs gave to Chile on those days of misfortune.

—Luis M. Desmaras, CE3AG, Foreign Relations Secretary, Radio Club de Chile.

Though it is obvious that some of the work done by individual Amateurs will never fully come to light, we have a story from the Pittsburgh Catholic of July 21, 1960, concerning the service performed by one Chilean Amateur, Father Raphael de la Barra, CE7BN. The young priest had gone to a resort on Osorno Volcano to check out a rig. When he made contact

with a Ham in Valdivia, 70 miles north, to get a signal report, he was told that a severe earthquake had just struck that city. Quickly he checked with another Ham in Puerto Varas, 70 miles south, and found that the southern town had also suffered an earthquake. CE7BN immediately warned the forty tourists at the resort, and most of them fled with the priest. Nine were skeptical and remained on the volcano. The refugees were not out of sight of the building when it was crushed by an avalanche, the nine scuffers buried under fifteen feet of rock. Seldom is there such a clear-cut example of the saving of lives through Amateur Radio!

SUMMARY OF I.T.U. MONITORING REPORTS

Here is a summary of unauthorised stations heard in the Amateur bands during the period November through April, as reported by the International Frequency Registration Board. Stations operating in accordance with the Atlantic City Convention (1947) are not reported. Stations heard in the Amateur bands only once or twice during the six-month period are not reported either.

Freq.	Call/QRA	Type of Sig.	Nationality
3788	EQD	Broadcast	Iran
7008	APK	Broadcast	Pakistan
7008	EFEI	Broadcast	Spain
7009	HMF21/22/23	Automat. A1	Korea
7025	BZP57/67	F1 Teletype	China
7039	HLA86	PI T'graphy	Korea
7019, 7054, 7080, 7081	Peking	Broadcast	China
7050	Calro	Broadcast	U.A.R.
7053	—	Broadcast	China
7057	—	Broadcast	Greece
7075, 7080, 7085, 7090	Ioninna	Broadcast	Greece
7100	—	Broadcast	U.S.S.R.
14272	RIF	Manual A1	U.S.S.R.
14300, 14320	—	Broadcast	U.S.S.R.
21004	VNB48	Automat. A1	Australia
21080	OLU	F1 T'graphy	Czechoslov.
21300, 21389	ULV	F1 T'graphy	U.S.S.R.
21414	EPD	F1 Teletype	Iran

ANNIVERSARIES

Further extracts from the I.A.R.U. Calendar include the following:

"Our hearty congratulations to the Wireless Institute of Australia, which finished a half-century of service on March 10, 1960!"

N.Z.A.R.T., N.R.R.L., E.D.R., S.S.A. and U.S.K.A. have recently completed 30 years of membership in the I.A.R.U. The predecessors of I.R.T.S. and P.Z.K. were also admitted thirty years ago. J.A.R.L. originally became a member of the I.A.R.U. 25 years ago. We wish these societies continuing prosperity and success in all their endeavours.

W.I.A. DX.C.C.

Listed below are the highest twelve members in each section. New members and those whose totals have been amended will also be shown.

PHONE

Call No. ries	Cer. C'tnt- No. ries	Call No. ries	Cer. C'tnt- No. ries
VK6RU .. 2 251	VK6KW .. 4 202	VK6RK .. 12 187	VK6R .. 3 176
VK6BK .. 45 243	VK3BZ .. 50 171	VK3WB .. 23 164	VK3ATN .. 28 204
VK4FJ .. 14 211	VK3EE .. 10 163		

Amendment:

VK7LZ .. 38 113

C.W.

Call No. ries	Cer. C'tnt- No. ries	Call No. ries	Cer. C'tnt- No. ries
VK3KB .. 10 251	VK4HR .. 8 218	VK3CX .. 48 213	VK4FJ .. 29 282
VK3CJ .. 28 270	VK3LU .. 17 212	VK3NC .. 19 236	VK6RU .. 18 210
VK4FJ .. 29 282	VK3YL .. 39 203	VK3FH .. 15 228	VK3BZ .. 6 222
VK3NC .. 19 236	VK5RX .. 23 195	VK3BZ .. 6 222	

OPEN

Call No. ries	Cer. C'tnt- No. ries	Call No. ries	Cer. C'tnt- No. ries
VK2ACK .. 6 232	VK3BZ .. 4 221	VK6RU .. 8 265	VK3HG .. 3 225
VK6RU .. 8 265	VK3WL .. 45 225	VK4FJ .. 32 265	VK7LZ .. 23 223
VK6MK .. 74 247	VK3XU .. 61 221	VK3NC .. 77 238	VK4HR .. 7 233
VK3NC .. 77 238	VK6KW .. 13 216	VK4HR .. 7 233	

AWARDS

Members may be interested in the Directory of Certificates and Awards, started by William Clark, W3RPG, but now being published by Cliff Evans, K6BX, Box 365, Bontia, California. The directory is divided into twelve sections, making it easy to revise the book. It covers more than 350 awards from over 50 countries. The price is \$4.75 including first class postage and a one-year subscription to the revision service; revisions are issued four times a year. After the first year, renewal subscriptions are \$2.10 yearly by first class mail.

Societies changing the rules for an award or instituting a new one are invited to submit the information direct to Mr. Evans.

.....

FEDERAL QSL BUREAU

Phil ZC5AE, who has given many VK stations their initial ZC5 contact, is closing down as from 7/12/60. Phil will return to his former posting in Hong Kong until the end of January 1961 when he will return to the U.K. For those VK stations who still owe him a QSL card, his new address for direct mailing is: Sgt. Phillips, Sgts. Mess, R.A.F., Little Sai Wan, Hong Kong.

Early in 1960, VK5NO, VK7SM and VK2DI were judged worthy of a DX Contest Award by the Contest Committee of the Central Radio Club in Moscow, U.S.S.R. The operators of the three stations concerned have each received a medallion and certificate for their efforts in the contest.

The Okinawa Amateur Radio Club advises amended requirements for obtaining the O.A.R.C. Certificate. These are that any duly licensed Amateur Radio operator is eligible. Also that no I.R.C. is required and no cards need be sent. Furthermore, a letter from your club secretary or QSL manager certifying that you have in your possession five or more QSL cards from KR8 stations should also list call signs, date, type of emission and freq. If you do not belong to any club you may have any public official certify your letter with signature and seal of office. Forward claim to the Awards Manager, O.A.R.C., at appropriate address.

Among the real rare QSL cards handled by the writer during November were VQ9TED and JT1KAB. Very limited number in each case.

For the certificate minded VKs, another new one. This time it is the Turin Diploma for contacts with at least three Turin/Italy stations. Further details from the undersigned.

Late November, Ray VK3RJ and XYL were in GM land. After U.S.A. and Europe, they have been to EI, GI and now GM. After this to London for three weeks. Will commence return trip to VK late December. Ray reports all well and been entertained by HB-9QL, GI8TK, GI8TK (Frank Robb, former well known DXer and now almost blind), EI9Y and GM3CMB.

Advice is to hand of a new address for the QSL Bureau of the Irish Radio Transmitters' Society: I.R.T.S., QSL Bureau, 24 Wicklow Street, Dublin, Ireland. The Hon. Secretary, I.A.T.S., Thomas O'Connor, EI9U, also mentions that the following EIs are active on s.s.b. on 14 Mc.: EI4Q, EI4J, EI8P, EI8N, EI7D and he himself (EI9U) will be on shortly.

—Eric Trebilcock, BERS195, Act. QSL Mngr.

NEW SOUTH WALES

HUNTER BRANCH

Greetings for 1961 chaps, wonder how many have made the usual resolution to obey the Amateur Code? An improvement is certainly needed. All the best to "Amateur Radio"—its staff and contributors—bless them all.

The November meeting was attended by VKs 2ZDF, 2CS, 2ZIF, 2RJ, 2AYL, 2QB, 2AKK, 2ZK, 2ZJR, 2ZL, 2ZMO, 2AQR and associates Finch, Gray, Stobbs, Blyth, Munn and Davis. Keith 2AKX brought along one of his Booragul High Hamburgers—one Ian Forrest. Pili-pounder, Ian Fyfe, now sports his new call sign—VK-2ZIF; no doubt Ian is already getting ready to shave it off and obtain a full-blooded clean-shaven call. Judging by the furrowed brow of our Mr. Gray, he must be studying for his ticket.

The lecturer for the evening was President Lionel, who brought his crystal set with him and spoke on crystal locked converters and tunable i.f.s. No doubt the attendance would have been greater but it was rumoured that Lionel was to speak on things s.s.beerish. I must admit the rx worked, in fact Varley 25F sounded very nice over it but we were all very disappointed when he did not give the meeting a cheerie call. If the Editor will increase my salary, I will use it on phone calls

at the appropriate times. (As a New Year's resolution, we have decided to double all existing salaries.—Ed.)

In the absence of our bed-ridden Secretary and amnesiarish Vice-President, Stuart 2ZDF did the honours and wrote down apologies from 2AEE and Max McLoughlin. I don't know if it is only a coincidence, but it seems that Gordon loses a bit of grip on life at the end of each year as the last Nov. meeting he was down with U.R.T.I. It looks as though the work he does for the Annual Dinner and Field Day pulls him down. This year we will put him on clinic emulsion a few months prior to the event—either that or take him for an overhaul to 2AC. Yes, I know, Leo is a gynaecologist. The meeting disbanded after Keith 2AKX thanked the speakers, yes there were two, the other being Stuart 2ZDF, who displayed his xtal-locked converter which was built in a bar-cake-tin.

When I was leaving, I still heard the voice of 2SF coming out of Lionel's speaker; wonder if it was the same over? No doubt this will be the last time I will be mentioning 2ZDF as Stuart should have his full call by next time of writing—congratulations, and if you behave yourself and have an alarm clock you might be able to get into the Goon Show. Stan 2AYL is still trying to get the Sydney boys to talk to him on 144, without success.

During the month all tv. sets within a mile radius of Bar Beach surf pavilion got a hiding when the local boys held a fox hunt. Les 2RJ was first home, followed by 2ZDF, whilst Harold 2AHA is yet to arrive, however I believe he got boils as a consolation prize. The hunt coincided with the return of Bill 2XT from a trip to Japan, so he expressed the wish that they did not hold the event near his place as he gets blamed for all t.v.i. troubles (who doesn't). Bar Beach was therefore chosen as it is close to Gordon 2CI, who is never troubled with that disease. I believe the next hunt will be on Bill Hall who will christen his Gosford prize by giving a barbecue. Some say good old Bill.

Did anyone hear a certain Kotara gent using his XYL as DX-bait the other day? Don't know who it was myself, but methinks Romeo and Juliet should get their DX-CC in record time, judging by the answering wolves. Someone also told me that somebody was tossing up whether to purchase a new batter or alternatively a Collins net-filter.

As usual the Gosford turn was an excellent meet, but I still wasn't able to hear the 2WI broadcast, however the weather was perfect and those noticed from this neck of the woods were 2CS, 2XT, 2CN, 2PZ, 2ZL, 2KQ, 2AYL, 2AKX, 2ZDF, 2SF, 2RJ, 2ZMO, 2AEE, 2ANA, 2ANT, 2VU, 2FP, 2BZ, 2ZJR and 2QB. Bill 2XT won the 7 Mc. scramble and had the lowest mileage in the morning 144 fox. Mrs. 2BZ won the ladies' quiz.

During the month the official station, 2AWX, was conducted by 2CS, 2SF and 2AYL. Copy has not been good and on two nights nothing was heard at all, but only one night was due to conditions. To date there is no information re the January meeting, however information will be given over 2AWX, so until then, cheers.

CENTRAL COAST SECTION

The weekly net on 3640 Kc. usually involves about 10 stations. It is conducted by 2AFY, the Gosford Radio Club. An interesting point is that four stations have the facility for s.s.b. The recent sudden increase here can be explained by the ready availability of good gear from W land.

Alec 2AAG uses his sideband rig on a.m. on Monday nights and it sounds very fine. Geoff 2AI is interested in working Sydney stations on 144 megs. He has a modest set-up at his North Gosford hilltop and receives signals well on a three-element beam. Ken 2AFH and Frank 2AFJ, from the heights of Man-



About to set off on the 2 Metre Hunt at the Gosford Field Day on 20th Nov., 1960.

grove Mountain, should manage a few good contacts when they have time to invade that band. At present they are busy picking oranges and working 3.5 and 7 meg. bands.

Ex-patriate Rex 2YA was heard in our net recently, the first time since moving to Sydney. Geoff 2MV is reputedly shaking the dust from his 3BZ transmitter. This should put North Gosford on the air twice as well as at present. George 2ADZ has his AT5 working and at the writer's location it sounds very loud and clear. Nevertheless, George has his fears of t.v.i. I do hope he's disappointed. Len 2AMU is back from his leisurely trip to Japan, complete with one or two electronic mementos. Had a wonderful time.

The Gosford Field Day held at the Sailing Club was very well attended again this year, 86 Hams being present and many associates, wives and harmonics. The weather was tailor-made and ideal for the launch trip, a two-hour tour of Brisbane Water. 16 cars lined up for the 2 mx hunt. Prizes were given for the shortest distance travelled and for the first man in. The ladies did a marvellous job of catering. Other attractions included the 7 meg. scramble, display of American equipment, and quiz contests for Hams and XYLs. Hope to see you next year again folks.

Your scribe, 2ON, is involved in some mental turmoil over T/R switches. Are they better or worse than antenna relays? Can a relay be made silent? Can a simple electronic switch be designed, without losses at higher frequencies? The answer will come in due course.

CLUB NOTES FROM ST. JOSEPH'S TECHNICAL SCHOOL

This month our club at Newtown, 2ATQ, has for the first time taken part in a field day. On Nov. 20 at Gosford we entered the 7 Mc. scramble with a whipped-up portable. Our 11 contacts weren't quite enough to win that super new mike, but we're hoping they'll have good prizes ready next year.

Home again this week, we started out on 20 mx with Lee's rx (2AKK) and a Zepp aerial. First contacts were with Laurie 2AMB, Muriel 2AIA, then we were 5/8/9 in 5JT's shack; couldn't find DX anywhere. It seems that we are on at the wrong time of day, just before 20 and 40 comes good.

Our regular friends for the year on 40 have been Bob 2IN and Allan 2RX/M, with an occasional call from Bill 2ZL, Bob 2AQR, and John 2ASC.

One Sunday afternoon we visited Dural. Dave 2EO, being there, we were able to make full use of the 7 and 14 Mc. rigs. We worked our first Z calls, and 2LIATW gave us 5 and 7.

John 2ASC arranged a trip to Kingsford Smith Airport, where we inspected the v.h.f. control tower, teletype equipment and air traffic control centre. A fast run round the 'drome on the back of a fire truck was an added attraction!

Everyone was pleased with the fine article about the club in the weekly women's paper (23/11/60), but we hope you'll excuse those inaccuracies we weren't responsible for.

Just a reminder, fellows. If you hear us on 40 or 20, give us a yell (a.m., p.m., c.w. or s.s.b.); QSOs are hard to get these days. If that new antenna ever goes up we'll have the R.I. out in no time measuring anode volts and current, but till then listen carefully to any faint het. whistle—it might be us!

Happy New Year, lots of DX and 73 de Mike (and others).—2AKK.

VICTORIA

Well, the 1960 R.D. Contest was won by VK7 again! Congratulations VK7. Who had the highest State log average? VK3 Division! Congratulations to us! To those who stayed up all night, to those who went to bed, to those who came on on Sunday morning when they wouldn't be bothered with t.v., and to all who participated in the R.D. Contest, thanks and congratulations. Incidentally, the 1961 R.D. Contest is not far away—be in it!

My personal thanks to 3IZ and 3ZKO who helped me battle with an incomplete tx to work the minimum five contacts. Did we have fun? Have you ever put 240v. a.c. on your filaments by mistake? That's the stuff fried Ham is made of. Anyway, see you in August this year.

1960 ANNUAL DINNER

A resounding success! 137 filled Scotts Hotel (or was it vice versa?) and a jolly fine time was had by all. Congratulations to Doug Bowie, VK3 Council, and all others who helped make this the event of the year.

Official guests included: Senator Hannan, representing the Postmaster-General; the Deputy Director of Telecommunications, Mr. L. Fear-

son; representing the Superintendent Radio Branch was Mr. North; Royal Melbourne Technical College was represented by Mr. MacKay; Mr. D. McDonald, the Director Technical Services, Australian Broadcasting Control Board; the Federal President, W.I.A., Mr. M. Hull; VK3 Division Federal Councillor, Alan Elliott; VK3 Division President, David Wardlaw; the VK3 Secretary, Michael Owen; Keith Roget, VK3 Treasurer, and Fred Bail.

Senator Hannon delivered a message from the Postmaster-General (printed in full elsewhere), and many people were seen being ear-bashed, and were seen ear-bashing Mr. Arthur Tinkler, our representative on the Ad Hoc Committee.

The "give-away prize, a microphone, was won by Geoff 3AUX; he's already using it to good effect. I believe there were dancing girls, too! Anyway, all in all, a very fine business Dinner.

VK3WI ON THE AIR!

More congratulations are due to that winning band of workers who have put so much effort, time and energy into getting our official station on the air from the rooms again. The broadcasts had been non-existent for some people during November, due to sunspots, but with the mighty half-kilowatt roar from 3WI, Old Sol has some competition now.

We are all indebted to Keith 3YQ for keeping 3WLP on the air each week; Keith has done a fine job, and we are all grateful for his efforts. Thanks, Keith!

INSTRUMENT LIBRARY

The VK3 Division Instrument Library has been enlarged and re-organised. The librarian is Michael 3ZCZ, so please contact him if you have any requests or queries.

NEW YEAR GREETINGS

Well, having read all that, can anyone say VK3 Division is inactive? Don't forget all the Conventions held—State and Zone; don't forget the Jamboree; don't forget the tx hunts; the v.h.f. scrambles, moon-bounce, satellites, and most of all—don't forget the fine work that led to the setting up of the Ad Hoc Committee earlier in the year; etc., etc.

I feel that 1960 was a very eventful year and much was achieved. There is a lot more to be done yet!

Best wishes to you and yours for 1961, and best wishes to the W.I.A. for the coming year, 73 to Amateur Radio. May it flourish and prosper in the future—it will, if we all want it!

To my mind the most important part of the Amateur Service is the "service" part. Will you offer to serve VK3 Division in 1961? Please, we want some more willing hands this year; if you are offered a job, please accept it, and if you are not, then please offer to help. We have many jobs to do and the same old crowd is doing the work still. It is to these men, and their XYLS, that the sincere appreciation of all Victorian Amateurs is due, for all the work they've done in the past year. Also our sincere thanks to all Amateurs who have supported them in their efforts during that rather momentous year—1960. Thanks, blokes!

SOUTH WESTERN ZONE

We are happy to be again the holders of the Kinnear Trophy. Now is the time to start thinking of the next year's work for if we don't keep moving forward, we go backwards. There is no standing still. Perhaps the next thing to think about is the National Field Day. Now that we have our W.I.C.E.N. well under way what about making this contest a try-out

of our emergency gear as the sponsors of the contest intended?

The Zone Convention has taken place quietly. Other attractions reduced the attendance somewhat, but the smaller the number, the better the eats. Members of the Geelong Amateur Radio Club were at the clubrooms to meet and refresh the members on arrival. Among the early arrivals were Bill 3XE and XYL Betty, and Brian 3ADV. Our old friend, Bill 3AWZ, came with his family but Kevin 3AKR just made it for the eats. Bill 3BU had his new Geloso tx and the Eddystone rx set up in the rooms to work the incoming mobiles.

The meeting later had a full agenda sheet, one item of which was a request from State Council inviting representatives from the Zones to attend Council meetings. Give this some thought, chaps, for if Council doesn't hear our views, can we blame them if we don't get a go? Also the W.I.C.E.N. operators were empowered to elect their own officers each year and to conduct their own affairs. Following the meeting, Dick 3ABK and Peter 3ZAV enthralled their audience with their 1296 Mc. equipment and the moon-bounce project. This rig was shown in "A.R." Oct. last.

Later the W.I.C.E.N. Group met and elected Jim 3ABT as zone co-ordinator and zone control. Bill 3BU, who is now Eastern Group Control, gave a very interesting resume of the early days of emergency work in the zone.

After lunch on Sunday, the Eastern Gardens was the setting for the afternoon events. The best mobile prize went to Gordon 3AGV with his ATR2B. Brian 3ADV had a walk-over in the 80 mx tx hunt and now holds the G.A.R.C. trophy. Brian also won the all-band scramble in spite of some nefarious work on v.h.f.

As usual, the ladies had the final word with a luscious afternoon tea and we thank them very much. Thanks also to VK3 Division and to Mr. A. Bent for prizes donated and a very large bouquet to the Geelong Club for their effort which resulted in a profit on the weekend's work. Venue for the next Convention will be Hamilton or Warrnambool, next March.

These notes have not been strictly confined to members of the zone, but have included doings within and without which, I hope, are of interest to members. Recently in QSO with a well known resident who has been inactive of late, mention was made of his appearance in the notes. "Yes," he said, "I did see the reference although I am not a member of the Institute. Wouldn't take much persuading though." All the persuasion needed was the proposal form in the next mail. So perhaps amongst the chaff—a grain of wheat.

Thorb 3APS has been quiet of late, but still carries on regular skeds across the Pacific on 40 mx sideband. Neil 3HG has gone further and worked W and ZS on 80 mx s.s.b.

Congratulations to Jock 3CS, who broke the ice on 40 mx c.w. with a zone station. Chris 3AXU has come up again with a n.b.f.m. adaptor to the AR7 and reports that it works nicely on certain ex-disposal mobile rigs. What next will you have on the AR7 Chris? How about a wooden tap for base station operators in the smoke nets?

Well chaps, the dead line draws nigh, so we wish you all the very best for 1961. Happy New Year and best DX de the South West Zone.—3AKN.

EASTERN ZONE

The broadcasts from the new 3WI tx have been very well received over most of the zone with signals S9 plus here in Sale and well able to compete with the Sunday morning QRM and "unmodulated carriers" which magically appear on 7146 Kc. between 1030K and 1100K.

6 mx openings were recorded during Nov. on 8th, 15th, 21st and 27th. On 15th, 2AXI was putting an S9 plus signal into East Gippsland from 2000K until well after midnight. VK4s were logged and two VK5s, working each other, were peaking at S9 and apparently unaware that they had an audience over 800 miles away. On the evening of the 14th, signals from 3ZJE were heard by 3ZDP off the aurora to the south.

A welcome is extended to Sid, WIA-L3098, a new s.w.l. member of the zone. We hope to have him on the road to at least a Limited Licence before very long. 3ABC is back on 2 mx after a short journey into the field of hi-fi and tape recorders. He is at present mumbling about some secret weapon for 2 mx. His mumbblings are so unreadable, however, that it sounds as though he may be losing his carrier!

Two W5s have been spending a short time in the zone, but unfortunately were unable to spend time on the air. W5ABT and W5BDO were members of the U.S.A.F. mission at the East Sale R.A.A.F. Base and were operating KWM-2 s.s.b. transceivers driving 30S-1 linear amplifiers on point-to-point circuits. Anyone who has had the opportunity to inspect this equipment will be more than favourably impressed. Designed mainly for Amateur use, and looking more like hi-fi studio equipment than s.s.b. Ham gear, the exciter features a mechanical filter and has two 6146s in a pi-coupled final capable of being loaded to 175w, input on any frequency from 3 to 30 Mc. The only feature that didn't impress me was the db. value—£600 plus! The final linear amplifier uses a 4CX1000 and its value is unknown.

3ZDP is working on a new 2 mx t.v.i.-proofed tx with a QJE06/40 final and hopes to have it warmed up in the next few weeks. During a break in the building programme he managed to work into Melbourne on 6 mx from Sale on Sunday evening, Nov. 27, after rounding off a DX session with a fist-full of VK4s.

Now an appeal to zone members. Please let your corro. have some news to boost these notes, particularly on the lower bands. Cheers for now and best DX for 1961.—3ASW.

QUEENSLAND

TOWNSVILLE

As we stand on the threshold of a New Year, one ponders and tries to think what it has in store for us. Will it mean more restrictions or if we put up a bold front and stand firmly on all sides, will our voices be heard? Will there be relaxing of present red tape and that our frequencies be broadened, and that we hold present 50 Mc. band, also may be able to transmit third party messages of unimportant nature? Surely if one of the greatest nations in the world with their many, many thousands of operators can do this and foster good will amongst their near neighbouring countries, surely in this enlightened age our powers that be can do the same.

The roll up at the last meeting of local radio club was the poorest for some time, but those present soon got down to the main business to make this year's final get-together on Dec. 10 the best there has ever been.

Paid a recent visit to the boys in the neighbouring town of Ayr and made real welcome, even asked questions when I attended the A.O.C.P. classes. Claude 4UX proudly showed his log of rare DX that was about, while I was away on holidays. Nice juicy ones like Nepal, Reunion Is., Pitcairn and hosts of other call signs that I never seem to hear. His local Z boys made scratchy contacts on 144 Mc. with 4LK and 4ZAK. They are easily worked on 6 mx.

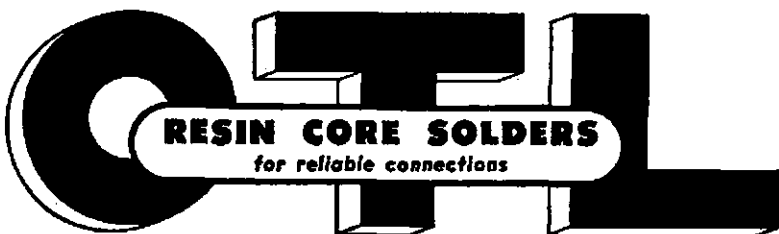
S.s.b. seems to have a couple of the locals enthralled and others are making the necessary modifications. Owing to change in my work,

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do not hear much of the locals on the band, but believe Charlie 4BQ and Allan 4PS go hunting on 21 Mc. A recent visitor in these parts is a very new Amateur, 2GJ, who is touring the far northern parts of Australia. His car and equipment is the envy of all who have seen it. John promises to call if he passes this way on the return. Good hunting with your s.s.b. mobile rig.

Harry 4OH been on a walkabout in the back country and used his mobile gear to keep in touch. Bill 4ZBE had a recent trip to the capital and visited a few of the Z boys. Ken 4ZAK is a very disappointed man to hear that the gear he won in the recent ballot has gone astray and his money returned. This creates ill feeling just at a time when we are on the canvas for members. It is to be hoped in future that this does not happen again.

Congratulations to Frank Sturgess in getting his call sign, 4ZFS. As 40 mx is not holding up, unable to get any news from the far northern boys. Would appreciate a line on the doings up there; any offers?—4RW.

SOUTH AUSTRALIA

The monthly general meeting of the Division that is always multiplying, to wit, the VK5 Division, was held to a very representative gathering of members with the guest speaker being Mr. R. Roper (5FU) who gave the second of his lectures on "Splatter prevention, and associated subjects." Both theoretically and practically, Bob knows his subject and possesses that happy knack of making his subject of interest both to the serious minded experimenter and to the type like myself who only wants to know enough to keep out of trouble. A good deal of the lecture was on the blackboard, and of course this lets me out somewhat, because Council with its usual obstructive tactics where I am concerned, would not let me include the blackboard in my monthly notes (some talk about the expense in posting it over to VK3) and therefore I cannot comment any further on the lecture.

This I can say, however, judging by the number of questions asked by members at the conclusion of the lecture, it was a huge success and all present fully agreed with the sentiments expressed by Phil 5NN, who ably proposed the vote of thanks to the speaker. Incidentally, one of the questioners also asked Bob if he could possibly write an article on the subject of splatter suppression for the magazine, and if Bob did not seem over-enthusiastic in his reply, it would probably be because he sent me an excellent article on his previous lecture, which I forwarded on to the magazine, but to this day nary a word has been heard or seen. (The article will appear in the very near future.—Ed.)

Following upon the lecture there was a "Smoko," and delivery of the QSL cards by George 5RX, followed by general business which according to Lloyd 5OK, the Chairman and President, "would not take long because there was little business." This was the under-statement of the year, as I left at 11.15 p.m. and they were still at it. A letter from Pete 5FM was read to the meeting concerning weak t.v. signals in country areas, and just where Amateur interference came into the picture (no pun intended!) with the t.v. signal varying in signal strength in a matter of minutes. It was decided to seek information on the matter from official sources. The rest of the correspondence was read through in record time, and it looked as if Lloyd's prophesy was about to be fulfilled, when hey presto! a seemingly simple letter was read seeking the Division's opinion on the granting permission to a VK2 to experiment on a fixed frequency on 7 Mc., with teletype.

The discussion started off with the usual "I am alright Jack" motion, moved in good faith, seconded also in good faith, and then thrown open for what was thought no discussion, and everybody prepared to make for home. This was where most of us fell down, because there were present one or two who remembered that the Amateur has a Code, that this was not time to bar any fellow Ham from genuinely experimenting, irrespective of the type of transmission, and also that this type of transmission probably would not occupy as much space in the band as some types already on the band, trying to keep others out.

Clive 5PE, almost single handed, eloquently talked the meeting around from almost a complete veto on the application, to an almost complete unanimous pat on the back for the courageous teletype Amateur. In fact, rumour has it that the Chairman had to be escorted to his car at the conclusion of the meeting, through a booing and angry mob, because he dared to put such an infamous motion to the meeting! Of course, rumour is a fickle jade

and probably that story is all wrong, but I feel sure that a lot of old-timers who have said at various times that the present-day Amateur does not compare with the old-timers, would have been proud of the gang present at the meeting in their battle for the Amateur Code and the policy of live and let live.

After a couple of further skirmishes over purely domestic matters, the meeting closed at the witching hour of 11.30 p.m., or even later, and everybody retired to their couch or couches of virtue, well satisfied with the entire evening's entertainment. However, Leith 5LG muttered and muttered a little in his sleep!

A welcome visitor to the meeting was Gerry Ralph (GWLNLZ) from Wales, North Wales to be exact, who is temporarily based in Adelaide. We were pleased to meet him and I think he was pleased to meet us, so much so that he consented to come along to our next meeting, the Xmas Get-Together, and we did not even have to twist his arm.

Noticed the two t.v. twins, John 5SJ and Sid 5ME, sitting together at the meeting and apparently closeted in deep consultation concerning the whys and wherefores of those who cluster around the goggle-box. John is in the throes of s.s.b. construction, and Sid is working on a hush-hush project which he alludes to as a real fair dinkum Dick Tracey set-up. I gave Sid a hearing, but that s.s.b. from John, not for me, I leave that to Comps 5EF.

Things fairly quiet down the South East this month, probably because Arch 5XK is over in VK6, Mayoral robes and all, and my spies tell me that he and the XYL are enjoying themselves to the full. Claude 5CH has been busy helping Ron 5VH to make his debut on the air, but should be heard more often now the weather is clearing up. Erg 5KU is another one who is a little bit inactive, but as the gliding weather is upon us, I expect he will even be more inactive. Ron 5VH, as mentioned earlier, is now on the air on 7 Mc. and his first QSO was with Luke 5LL. Keep an ear open for this newcomer chap. Stuart 5MS is very pleased with his new rx, an NC300, and is still chasing the rare ones.

Leo 5GJ has been very busy at his vocation and has not been seen or heard this month. Dave 5AW, at Fenola, is more than active on the v.h.f. frequencies, only using the peasants' bands for arranging schedules. Al 5ZCR has been active on 144 Mc. and has been heard working the VK3s on this band. Col 5CJ has been on 40 and 2 mx, but only to keep schedules. His vocation has demanded all of his attention this month and probably will for a little while yet. He woke up that the notes were due a week earlier this month and after a lightning dash by sea, land and air, he made it.

My spies tell me that Bram 5AB was quietly working on a scheme to do a little s.s.b. working from VK8 in some not too distant future, but the entire scheme went into the melting pot with the news that Chuck WARHE is at the time of writing resident in VK8 and plans to do a little s.s.b. himself. Incidentally, my little digs at Comps 5EF and my not being able to read his s.s.b. signals bore fruit at the meeting, because at least three members came up to me and gave me some well-meant advice on how to receive s.s.b. I was quite grateful for their interest in me, but I am still in a bit of a quandary because the three methods differed to a marked degree. Oh well, it could be me, but I still think that it would sound much plainer if they did not speak through the snorkel pipe!

By the time that you read this Keith 5KH will have taken over the 5WI session from Gordon 5XU who has decided to give it away. Gordon has had the session for so long that it will seem strange without him, and it goes without saying what a splendid job he has done, and we are sorry to lose him. Keith 5KH is a very solid type and will without a doubt do a good job of the session and I for one hope that this chore will lead to him acting one day on the Council.

Ron 5FY, who is best known to posterity as the Secretary of the Elizabeth Amateur Radio Club (hereintoafterwards to be known as E.A.R.C.), has been busy with club affairs, but has found time to move his antenna, although just where he has moved it to seems to be the best kept secret of the month. I take it for granted that he knows himself; let's hope so, anyway. Don 5TM is spending many hours at the local E.P.S., maintaining radio equipment, etc. When last seen he was trying to unwind a fuse in the battery charger caused by someone making a back-to-front job of connecting up. Clive 5PE has been coaxed by Don into also joining the E.P.S., and if anyone would like to see two giant and brave firemen running as if there was some juicy DX signals coming through at the fire station, then just press the button for the siren. Wear your running shoes!

Cyril 5DY has been very busy in the garden, but understand that he takes time off occasionally to build a rx that will end all rx's. He gives 14 Mc. a go now and again, but it would appear that the city slickers do not turn their beams in the right direction these days. Don 5KD, probably surprising himself as much as he did the locals, bobbed up on the Monday night for the 7 Mc. hook-up, and then went on to comply with the requirements for the Elizabethan Award, to everybody's satisfaction. Ian 5QX has completed his three-band mobile tx complete with transistorised power supply, speech amp. and modulator.

Ben 5BP has now recovered from the VK-5BP/8 trip and all QSL cards have been sent out. Steve 5HA is another one who is hiding his light under a bushel or something, but is expected to come on one dark night and frighten the living daylight out of everyone. Pardon me mixing my metaphors. Tubby 5NO recently made another trip to G land, with a couple of days in Singapore to boot. This joker certainly gets around. John 5ZH has not been heard much on the bands, but is still going around poking his head in the Elizabeth goggle-boxes. John 5EV has been having his share of aerial troubles, but was heard, on 7 Mc. making enquiries as to his "A.R." Can it be that I have a reader? Keith 5EJ is in the land of the missing at the moment, but my spies are hot on his track and news should arrive any day now as to his doings.

The Elizabeth Club station 5LZ was heard operating from the showgrounds in connection with the birthday celebrations from the famous locality. Two of its most keenest members, Layton Catford and Peter Field, have now become the owners of rx's which are in the process of being overworked. Welcome visitors to the last club meeting were Joe 5JO and Dave 5DS, and a cordial welcome is extended to any other visitors who might care to drop in. The club meets at the Elizabeth South State School at 8 p.m. on the first Saturday night of each month.

Ben 5BP and Ron 5FY have been having fun with completely transistorised tx's of the 40-80 mc. class, getting near matchbox size. One of Ben's efforts with about 60mw. worked into Adelaide, and quite a number of stations from hither and thither popped up on the band to give reports. Bill 5HR bobbed up on 7 Mc. the other Sunday morning, prior to going to a picnic in the hills. Bob 5BC was another stranger to appear on 7 Mc. on Sunday morning at the 5WI call-back, and admitted that he was not usually on this band.

Charlie 5ON heard at odd times on the 7 Mc. band, and if you care to look up towards Eden Hills when he is on the air you can see his dual-diversity system of transmission in action. As he speaks, puffs of smoke float up over the hilltops in synchronisation with his voice, giving the effect of Chief Standing Cow signalling to his tribesmen. The fact that the smoke comes from his filament transformer which is liberally coated in paraffin wax, affords him considerable amusement, judging by his reactions on the air the other Sunday. What a sense of humour, what a capacious pocket. Still, it's not a bad way to spend long service leave, is it?

Norm Coltman is well on the road to recovery from his nasty fall as mentioned last month, and all he has to have now is a major surgical operation to separate him from his bed, and all will be well. Does he love that bed! Roy 5DA, one of the real VK5 old-timers, is reported to be in hospital, but so far I have little details. Hughie 5BC not very active these days. Harry 5KW paid a short visit, in the course of his vocation, to Renmark—his old stamping ground—this month and renewed acquaintance with the old gang. Fred 5MA has been doing his share of listening these days, but is not very active on the air.

Tom 5TL, apart from some slight activity on 14 Mc., has been on the quiet side. He made his second appearance on the A.B.C. programmes this month, but unlike his first appearance, which was in the recorded version publicising the VK5 Divisional activities, he was not thrilled with the second appearance! Neither was the bloke that knocked at his door and made the complaint! No doubt about it, when these actors get bitten with the publicity, they have to get back into the act, no matter how. There are easier ways than b.c.i. Tom, to get into the act.

As I write, Keith 5KH has just completed his first W.I.A. session and should feel more than satisfied with the results. It was good to hear the boys line up and lend him moral support, both before and after the session. This session is one of our front windows, and it is surprising just who listens to it. Council must feel proud of its choice of operator, and so say all of us. I knew if I waited long

NORTH WESTERN ZONE

A new year has begun; I wonder what it has in store for us. I trust everyone had an enjoyable Xmas and made all the appropriate New Year resolutions, giving due regard to our great hobby.

Our last meeting for the year was held at the usual QTH and was attended by a goodly number. The most important piece of news discussed was the completion, at long last, of the radio units for the Burnie Fire Brigade and I take this opportunity on behalf of the Zone to thank everybody who in any way whatever assisted in the project. Supper was, as usual, and zone funds benefited proportionately from the sale of a rare collection of electronic equipment. The meeting closed with everyone wishing everyone else all the best for Xmas and the New Year. A Tx Hunt was discussed but deferred till later in January.

When going to press, the results of the R.D. Contest were not to hand, so will have to comment on that later; I hope Tasmania was successful. (It was.—Ed.)

George 3AHN, accompanied by his XYL, visited VK7 land during November and no less than five Hams were present to welcome them, including Lance 3ZA (who was also visiting VK7 at the time); and yours truly made sure they left again a fortnight later without removing too much of our island. I believe they will be back next year.

Dennis 7DR has deserted us at Ulverstone, but I am thankful to say he is still within the Zone, having only moved to Burnie. Max 7MX was heard working from Tarraleah at end of Nov.; the portable gear was working OK. Max. I guess you'll be working DX on it soon. Reg 7RL has been heard working with his "low powered rig." Glad to hear you can take an active interest once again, Reg.

Well, cheers all till later—all the best of everything to everyone for the ensuing year.

Well Francis 6WD finally landed up in hospital in search of his voice. He has been heard on the air for some time now in a whisper and has not been able to get his voice back. Francis, the rest will do you good because all the time you're home and on the air, it does not do your throat any good and I think the doc knew that. So hurry up and QSY because we miss your melodious voice after the news.

Jack 6BU has really found his feet again, in spite of being heard in the East Perth cemetery. He can be heard most nights and every week-end talking about mobile gear and transistorised converters which he is working very well now that he has his oscillator working on one frequency only. hi. Jack and Bob 6RW were dashing around Perth madly in QSO mobile in spite of the fade out. Bob was later heard on 40 mx portable even though he had left his modulator driver at home. His modulation did not suffer even though he was only modulating with a 6AQ5. The Wednesday lunch-time ragchew on 40 mx is becoming very popular; stations heard include 6VM, 6BU, 6RW, 6WD to mention a few regulars.

Many S.w.'s. will be pleased that the Department has given its blessing on the Slow Morse and has allowed us to use m.c.w. This will greatly benefit the newcomer who is receiving on a commercial shortwave set without a f.b.o.

I visited Tom 6OY in Narrogin the other week. Tom is one of the very unlucky chaps who lives in the deep fringe area of t.v. and is experiencing t.v.i. in its worst form. He is really battling to clear it as the t.v. signal at most times is down to five microvolts, so Tom has his work cut out. I think people who want to put up with looking at t.v. with that sort of a signal should put up with all that goes with it. Still best of luck, Tom, and good DX when you can. 73, Pat.

TASMANIA

The highlight of our Institute activity in the South during November was the Field Day and Picnic held on Sunday, 20th. 22 cars and about 100 people took part. The tx's were hidden and operated by Alan 7MY and Geoff 7ZAS, and the rx's were hidden with a difference this time. In fact, the gear was operated from 7MY's shack, just to fool the pursuers. Barney 7ZAK was the first to unravel the mystery. The Picnic held afterwards on Cremorne Beach was a great success. Most members have made remarkable recoveries from the tug-of-war, but one or two participants still claim that they feel the effects of that mighty struggle. We were pleased to welcome Lance 3ZA and George 3AHN, who arrived near the end of proceedings in the afternoon.

Two comments come to mind about the day's activities. The first is the undoubted success of the 144 Mc. boys in tracing the tx on that band and the comparative failure of the hunters on 3.5 Mc. band. The second comment is the poor response to the opportunity to operate mobile. As we hope to conduct regular days such as this one, the points raised in both comments should receive productive attention. As a result of the day's activities, £7/10/0 has been added to the fund for our new club-rooms.

The "CQ" Contest, phone and c.w., is over. The c.w. boys had by far the better of the two week-ends and several new countries were worked, including Malta by Ken 7KA, who is very near to his DXCC now. We welcome Brian Eyre to full membership of our Institute. He has taken out the call sign 7ZBE.

For you DX chaps, if you should hear the prefix EP, well, jump to it if you can. It belongs to Iran, which has just recently reversed its policy and is now allowing Amateur operation.

Bill 7TY will be operating portable from the Fort Davey area from about the middle of January for a period of about five months. Keep an ear on the 80 and 40 mx bands for him. During the summer months, as from the New Year, look for the portable rigs, as there will be several operating and anxious for contacts. Doug 7AB should be heard from New Norfolk by the time this is in print. Jack 7JB has come to the conclusion that he will have to limit his phone power to 80w. until he obtains a new and bigger modulation transformer, as the present tranny is being saturated.

Nominations for the next Council of the Institute will soon be called for. Consider deeply whether you can serve our Institute as a member of Council. It is a rewarding service.

Very 73 to you all for the holiday season, from Ian 7ZZ.

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enough I would eventually get the low-down on this s.s.b., but I never thought that it would be on the W.I.A. session. When Keith was in contact with Comps 5EF on the call-back, he said, "There is no doubt about your s.s.b. sigs, Comps, I just turned up the volume and the signals trickled out like water." Well, who would have thought of that, I have been trying to receive these s.s.b. signals from the wrong room in the house. Without further ado I rang up the plumbers and my receiving point has been moved to the suitable room in the house for s.s.b. Now I will be able to hear what they say, although I must admit that it is a bit annoying with everybody knocking at the door and saying in an embarrassed voice, "I beg your pardon." My mother-in-law, who has dropped in for a short visit of a couple of years, told my grandson, with a tinge of malice in her voice, that at least I was in my right place, and should have been there before, so apparently she has the low-down on s.s.b., but so far I have only heard the trickles, trickles, and no s.s.b. Never mind, I will beat this s.s.b. yet.

Well, here we are again, another New Year, another set of new resolutions to be broken, and our grand old hobby still as strong as ever. Apparently I am still going to be writing these notes in 1961, although only supposed to be filling in for one month, until a substitute is found. Therefore, on behalf of the VK5 members and Council, I extend to all, sincere wishes for a happy and contented New Year. May you all secure that which you are looking for and may it turn out to be as good as you hope it will be. Try and do some small thing for our hobby during 1961, and if you cannot manage to do that, then don't do anything that will react against it. It's been a pleasure writing the notes, and if you can still put up with them in their present form, then I will continue to try and amuse and interest you. Oh, I nearly forgot the Editor! Here's to Editors of the magazine, past and present, may their red pencils grow shorter and shorter, and their patience longer and longer, and let the motto for 1961 be more space for VK5. Gerchall

Am told the Editor is contemplating a trip to VK8 in January to give all Z calls their chance for W.A.S. Hope he has a hot time up there. I warned him, but he said he would like to go. Regretably did not say where.

WESTERN AUSTRALIA

Here we are again at the start of another twelve months of Amateur Radio. I trust we can all look back and say we had a nice Xmas and New Year, but can we look back at 1960 and see what part we played in making the hobby of Amateur Radio more interesting to newcomers and in making the W.I.A. stronger, by our individual support. Let's make 1961 a bumper year in the attendance book at the meetings and at social activity.

1960 came to a close with quite a lot of activity. What with portables, mobiles and not to forget the 40 mx scramble, which went off to a flying start on 19th Nov. The first to be heard calling CQ was Jim 6RU. Other strong stations were 6AD, 6BU, 6CP, 6CW, 6CO, and 6KW just to mention a few of the stronger ones. Altogether 25 stations were logged which filled the band to capacity and was quite a good roll up. All logs were to be in the box by 29th Nov. It was disappointing to see that only eight logs had been submitted plus two late arrivals. Jack 6BU and Joe 6CO were disqualified for transmitting during the five minute silence period, bad luck Jack because you stood to win the mobile section as you were the only one mobile. Harry 6ZZ and Francis 6WD were the only portable stations and Francis did not submit a log. The only station heard on c.w. was Mal 6SM and he never submitted a log; he lost his mike, then his pen, what happened Mal? The three top scores out of the logs received were Jim 6RU, 91 points; Les 5WL, 82 pts., and Pat 6PH, 71 pts., so congratulations go to Jim on winning the 40 mx scramble, which he deserves for he certainly tries hard and leaves nothing to chance. In the first three minutes of the second hour, Jim had seven contacts; how about that

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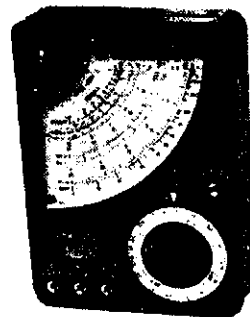
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AMATEUR RADIO

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EDITORIAL

★

The Use of Foreign Languages

FROM the inception of Amateur communication — particularly phone communication—Amateurs the world over, as a matter of normal habit, learned simple phrases and sentences of the other man's language which enabled him to converse more readily, at least to the extent of having an intelligent, even if short, QSO.

Thus it was until a few years ago when a Queensland Amateur was told he must cease speaking in French to a French Amateur who himself was permitted to speak in English. Both the Amateur and the French Amateur Society (R.E.F.) concerned represented the case to the Wireless Institute of Australia.

The Institute insisted that this was an incorrect interpretation of the Regulation and the Postmaster-General's Department rescinded its "you must speak English" attitude and gave notice that Australian Amateurs would be permitted to speak "plain language messages in any recognised foreign language."

For several years afterwards freedom of speech in respect of the Regulation was carried on by Australian Amateurs without any known case arising involving an Amateur in

doing other than conduct an over-seas contact in conformity with the conditions laid down for the operation of an Amateur Station.

Then for reasons of "security" and the "international situation" Amateurs were again banned from speaking in other than the English language, whilst broadcasting services and small ships transmissions continued using foreign languages without restriction.

Amateurs in Australia, as British subjects, and virtually "screened" before being issued with a license to transmit, should be beyond reproach when it concerns the security of our fair land, and the Institute was perturbed by the bad and erroneous reports coming from overseas—from the very countries from which the international goodwill of the Amateur Service derives its status.

The Postmaster-General has now seen our point of view, so once again freedom to speak in the language of the other man is available to the Australian Amateur. May the Amateur Service continue to function as the greatest exponent of international goodwill. The Amateurs of Australia thank you, Mr. Davidson.

FEDERAL EXECUTIVE.

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Amateur Radio, February, 1961

A.M. Without Splatter

R. G. ROPER,* VK5PU

● This interesting article is a summary of a lecture given to the VK5 Division at one of their monthly meetings.

IN these days of s.s.b., d.s.b., f.m., and t.v.i. it is considered definitely "non-U" to even mention a.m., let alone devote a lecture to the subject. However, ancient (sorry, amplitude) modulation is used by over 90% of active Amateurs, and remains a most useful method of communication.

To the conscientious newcomer to Amateur Radio, one fact becomes quickly obvious. If he sets up his rig so that it is modulated 100% on voice peaks, he is immediately informed by any station he contacts that his signal lacks audio. He then applies the usual remedy, namely, the wick is wound up until the report from the other end is "loud and clear". The "and clear" is covered by a proviso; the modulator must be able to produce the required audio with tolerable distortion, and the final must have a reasonably high modulation capability. The only troubles arising from this procedure, as our new Amateur soon discovers, are an increase in interference problems. Neighbours complain that their favourite t.v. programmes are being torn up at odd intervals and local Amateurs mutter that the bands are rendered useless whenever that new young so-and-so is on. "Mutter" is used purposely; outright condemnation is seldom forthcoming since most Amateurs have come to accept splatter as a natural outcome of a.m., mainly because they have all adopted the same "winding up the wick" technique to "fill up their carrier" with more audio.

CAUSES OF SPLATTER

There are several factors which can cause splatter. Such things as over-driving an already over-rated modulator or piling audio onto a final with low modulation capability will produce splatter, and the remedies are obvious. However, by far the worst source of splatter is negative-peak clipping by the final, i.e. exceeding 100% modulation in the downward or negative direction. This is akin to a rapid switching on and off of the final h.t. and produces a series of splashes similar to those produced by a c.w. transmitter with no key-click filter. The modulator also contributes to this splatter, and this source will be treated in detail later.

VOICE POWER

In considering methods of increasing the amount of voice power which can be transmitted, it is necessary to first consider the nature of the speech waveform. One factor which is not always appreciated is that the predominantly unidirectional flow of air past the vocal chords produces an asymmetry in the compressions and rarefactions making up the vocal sounds. This asymmetry is preserved by the microphone, which produces an output voltage waveform having voltage peaks in one direction anything up to three times those in the opposite direction.

* 27 Leslie Street, Woodville, S.A.

If the number of stages in the speech amplifier and modulator is such that these higher voltage peaks modulate the final in the upward direction, considerably more audio can be applied to the final before negative-peak clipping occurs than if these peaks modulate the final in the downward direction.

Try reversing the connections to the modulation transformer primary (or secondary, but not both at once!) and determine which connection enables the wick to be turned up the furthest before negative-peak clipping commences. A c.r.o. should really be used to make this test, but the connection which produces the least modulation transformer talk-back for a given gain setting is the one to use.

A further investigation of the speech waveform reveals that its average power is only some 25% of its peak power. The usual method of raising the average power is clipping and filtering, and this can be done most efficiently at low levels. Good clipper/filter circuits have been described in overseas publications, and also in an Australian magazine.

The incorporation of a.g.c. in the speech amplifier is well worth while, since this keeps the voice level constant and applies full clipping at all times. The one disadvantage of such a system is the fact that background can become objectionable, but this is so in very few locations.

For intelligibility, while retaining voice individuality, a bandwidth of from 300 cycles to 3 kc. is adequate. Most of the power of the male voice is concentrated in frequencies below 500 cycles; these contribute little to intelligibility, and are, indeed, a liability, since, if not attenuated, they can cause ringing of the low-pass filter inherent in a clipper filter design, markedly reducing readability. Low frequency de-emphasis should therefore be applied before clipping. This is most easily achieved by the use of 470 pF. coupling capacitors between stages before the clipper.

Once the speech waveform has been clipped and then filtered to restrict the upper frequency limit of the distortion products generated by the clipping process, subsequent amplification can produce phase shifts which will result in peaking of the clipped waveform. This is undesirable, since it reduces the average to peak power ratio, and hence reduces the average power able to be applied to the final before overmodulation occurs. To minimise this undesirable phase shift, the low frequency response of the stages following the clipper/filter should be as good as possible. This includes the low frequency

response of the modulation transformer, which is improved by the capacitor/choke coupling described later.

AMOUNT OF AUDIO

The performance of the modulator has now been considerably improved, but one factor has been overlooked. To plate modulate a final amplifier 100%, an amount of audio equal to 50% of the final input is required. This statement appears in most text books, and is accepted as gospel by most Amateurs. However, the statement is true only if the modulating waveform is a pure sine wave, which is far from being the case with clipped speech. If the modulating waveform is a square wave, then the audio power required for 100% modulation is equal to the final input power.

The clipped speech wave lies somewhere between these extremes, and the modulator must be capable of producing this power if clipping and filtering is not to be wasted, i.e. if the final input is 100 watts, then the modulator should be capable of producing an average 100 watts of audio.

Previously, without clipping, the modulator was required to produce 50 watts on voice peaks, the average power requirements being considerably lower than this. This kind of power can be obtained from modulator tubes using cathode bias, but these types are definitely out for the new requirements unless the final input is reduced to 50 watts.

Possibly the best modulator for running the legal limit is a pair of zero-bias 807s, but the 811A should not be overlooked. With 750 volts on the plates, a pair of 811As will produce over 200 watts of audio, and are ideal if high-level clipping is to be used also.

Most readers will, at this stage, be thinking, "Well, that fixes me. I've only got a 50 watt mod. tranny, and I can't expect to get 150 watts out of it without blowing it up!" Have courage, men! There is very little chance of "blowing up" a 50 watt mod. transformer by trying to make it take more than its rated power. In most cases, it just won't pass the extra, not because of current or voltage limitations, but because of core saturation. With the d.c. current of the final flowing through the secondary, the core has a considerable magnetic bias. One tube of the class B modulator will draw current for one half-cycle of the modulating frequency which will tend to cancel this bias. Unfortunately, this is the half cycle which is reducing the final plate voltage, i.e. the negative modulation cycle. The other class B tube will provide a pulse (on the other half cycle) which increases the core bias and, if large enough, produces core saturation and peak clipping on the positive modulation cycle.

If, however, the final d.c. current is removed from the secondary, the positive modulation half cycle may be increased to twice the previous value

before core saturation occurs. This corresponds to an increase of four times in power handling capability. What was a 50 watt transformer with d.c. in the secondary, is a 200 watt transformer with the d.c. removed.

The easiest way to effect this removal is to feed the final h.t. through an audio choke, earth one end of the mod. transformer secondary, and connect the other end to the top of the choke via a capacitor (see Fig. 1). The choke should have a minimum inductance of 10H. and be capable of passing the final plate current. Insulation requirements are fairly stringent; the choke must be able to stand an audio voltage equal to the h.t. across it, and twice (preferably three times) this voltage from winding to core. The latter is the most difficult to satisfy; the difficulty can usually be overcome by isolating the core from ground by mounting the choke on stand-off insulators. Never touch this choke while the h.t. is on; a core-to-winding short will bring the body of the choke to h.t. potential. [For safety, place an earthed shield over the choke.—Ed.] The capacitor should be 2 μ F. or greater and have a working voltage rating at least equal to the final h.t. A lower voltage capacitor can be used if the other end of the mod. transformer secondary is connected to the power supply end of the plate feed audio choke, instead of to ground.

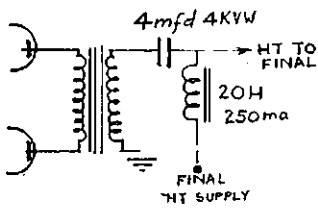


Fig. 1.

Removing the secondary d.c. also increases the low-frequency response of the transformer, which is to the good if a clipped waveform is being handled.

Even when all the above modifications have been made, splatter is still possible, due either to distortion introduced by the modulator, or by once again winding up the wick after the clipper. This can be prevented by the use of a high level clipper and filter.

High level clipping introduces higher order harmonics just as does low-level clipping and these, without a subsequent filter, will produce splatter. The clipper usually used consists of a diode capable of carrying the final current, in series with the modulated h.t. to the final. This series limiter suppresses negative peak clipping in the modulated r.f. amplifier which results from large amplitude negative peak modulating signals. The high level filter removes not only the transients due to the limiting action of the series diode, but also high order harmonics due to modulator distortion.

THE MODULATOR

As mentioned previously, there is another source of splatter in overmodulation of a final; this splatter originates in the modulator and has received very little attention in the past. Provided the final is operating in class C, its plate voltage/plate current char-

acteristic is linear, i.e. it presents the same resistive impedance throughout the modulating cycle for modulation percentages up to 100. However, once the plate voltage on the final becomes negative when overmodulated, the impedance offered to the modulator is infinite. (Actually it is the sum total of the series impedance offered by the modulation transformer leakage reactances, the last filter condenser in the final supply, and the final plate by-pass capacitor, which total is large at audio frequencies.)

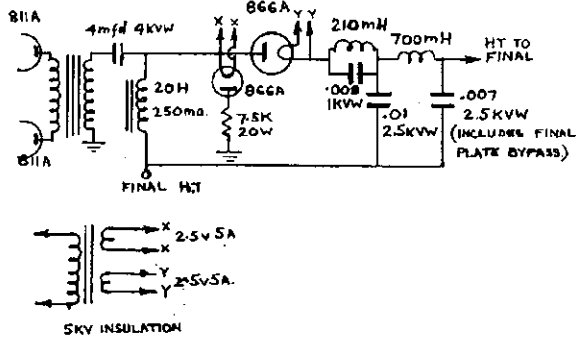


Fig. 2.

The disastrous consequences of operating a class B modulator without load are well known. Extremely high voltages are developed across the windings of the mod. transformer, which can lead to insulation breakdown and subsequent destruction of the transformer or class B tubes. Fortunately, most transformer manufacturers have included in their products a spark gap which arcs over before insulation is punctured.

Contrary to popular belief, transformer talk-back is not always due to lamination rattle, but is usually due to arcover, producing an arc which sings at the modulating frequency. The transients associated with this arcing are coupled to the final tuned circuit via the h.t. line, producing damped oscillations peaking at the tank resonant frequency. In the author's opinion, this, rather than the negative peak clipping by the final, is the main source of splatter. The use of a high level clipper filter will remove these transients, but the dangers of tube or transformer breakdown in the modulator still remain, and talk-back can produce annoying feedback if a high gain speech amplifier is in use.

The incorporation of a diode and series resistor between final h.t. and earth after the modulator, but before the clipper filter will provide a load for the modulator when the top of the mod. transformer secondary becomes negative with respect to earth. Note that this is not the so-called negative cycle loading which is assuming some popularity in this country. Negative cycle loading works because it minimises the possibility of the application of negative pulses to the final, and prevents open circuit of the mod. transformer secondary, which are the main causes of splatter, but it does introduce distortion and should be used in conjunction with a high level filter if these distortion products are not to widen the signal spectrum. Negative cycle loading is also a power waster, since

modulator output power is dissipated in the loading resistor as soon as the final voltage falls below the quiescent carrier condition, whereas in the circuit of Fig. 2 the modulator load diode and resistor dissipate only power which cannot be applied to the final anyway.

HIGH LEVEL CLIPPER FILTER

Fig. 2 is the circuit of a high level clipper filter incorporating all the above mentioned facilities. Provided the modulation capability of the final is high (preferably triodes with plenty of

drive, but watch out for harmonic output from any hard-driven final), and the modulator can deliver the power, up to three times the amount of audio required for 100% modulation can be applied without splatter. If a low level clipper and filter is used also, this means 300 watts of audio on 150 watts of carrier input. Some loss of voice individuality is, of course, inherent in this practice.

A word of warning. Because of the asymetry about the carrier level of the resultant final plate voltage after high level clipping and filtering, the average plate input will rise with modulation. If 100 watts of audio is applied to what is nominally 100 watts input without modulation, the average input will rise to 116 watts. To comply with regulations, a station running the legal limit will have to proportionately reduce the final input as more audio is applied.

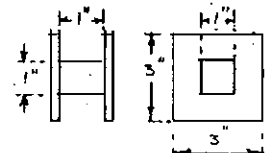


Fig. 3.—Details of inductance bobbin. 700 mH., 3,650 turns of No. 30 S.W.G. enam. 210 mH., 915 turns of No. 24 S.W.G. enam.

If the modulation transformer is set up to match the modulator tubes with the secondary at 7,500 ohms, then the filter network shown will work satisfactorily for any final whose impedance lies in the range from 5,000 to 10,000 ohms. The two filter inductances are air cored and wound on similar wooden formers, and should be mounted with their axes at right angles to minimise inductive feedthrough. Glue the ends to the formers, and mount on wooden blocks. Do not use any bolts or nails (brass or otherwise) since these can considerably reduce the effective Q of the coils and adversely affect the filter characteristics.

A V.F.O. FOR 9 Mc. S.S.B.— BY A BC458 CONVERSION

J. K. HERD,* VK3JK

PROBABLY the most stable oscillator available at present for use with 9 Mc. type s.s.b. exciters is the versatile Command transmitter. Preferably, the 5.3 to 7 Mc. BC458 is more easily converted, or next in favor is the 4 to 5.3 Mc., but this one needs some three turns removed from the top of the oscillator coil.

I will not go into the matter of general alteration, but briefly it amounts to putting all filaments in parallel for 12 volt operation and removal of all superfluous wiring, as well as removal of the two relays and neutralising condenser. [All wiring associated with the m.o. (1626) is left untouched and the conversion commences from T53 coil C—refer to original circuit of BC458 shown. The "magic eye" wiring may be removed if required.—Ed.]

The rotary ceramic antenna coil and all its hardware, likewise, comes out to make room for a switch and condenser on the front panel.

The one here has a piece of aluminum bolted inside the front panel above the chassis and, in the space which previously held the graduated window, a 0-100 pF. air trimmer (0-50 pF. will do) and a switch—single bank 2-pole 5-position, either bakelite or ceramic, preferably the latter—has been located.

The second 1625 tube, V2, is retained and performs as a frequency multiplier and simplifies the production of correct injection frequencies for the various bands, which are as follows:—

- 3.5 Mc. = 9 Mc. — 5.5 Mc.
- 7 Mc. = 9 Mc. from 16 Mc.
(3 × 5.3 Mc.)
- 14 Mc. = 9 Mc. + 5 Mc.
- 21 Mc. = 9 Mc. + 12 Mc.
(2 × 6 Mc.)
- 26 Mc. = 9 Mc. + 19 Mc.
(3 × 6.3 Mc.)

The metal can condenser (3 × 0.05 μF.) should be removed and either ceramic disc or mica used in place thereof, as indicated in the sketch.

The best operation will be had if a regulated voltage (105v.) is applied to all plates and screens.

Referring to the sketch, the grid condenser of the second 1625 (V2) is soldered to the fourth turn from the top of the ceramic coil which is the existing plate coil of V1, a small hole being drilled in the chassis between that coil and the tube recesses to carry an insulated wire to grid of V2.

Check all earth connections and finally remove the original screen bypass and replace with a 0.01 μF. ceramic disc and by-pass the 1625 filaments at the socket!

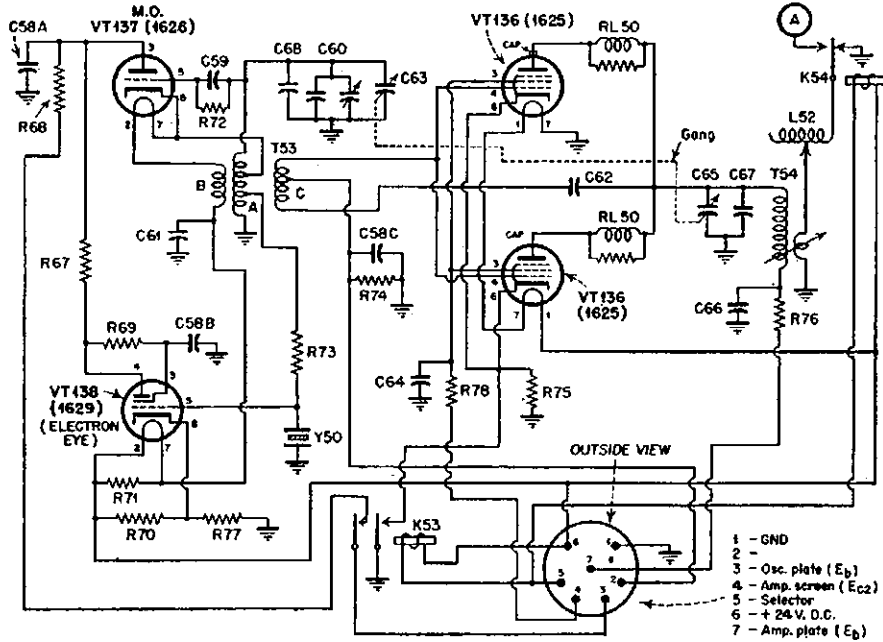
The output coils in the switched section are resonated to the required frequencies after the co-ax lead is attached to S1 by means of a g.d.o., and

C1 is used to peak them up. They should be about ¼ inch diameter and connect to a buswire which connects two screws at the front of the chassis, one each side.

The rest is self explanatory, but if troubles occur, a letter to the writer will be replied to.

The 1629 magic eye tube is a direct replacement as an oscillator for the 1626 and seems to do the job better!

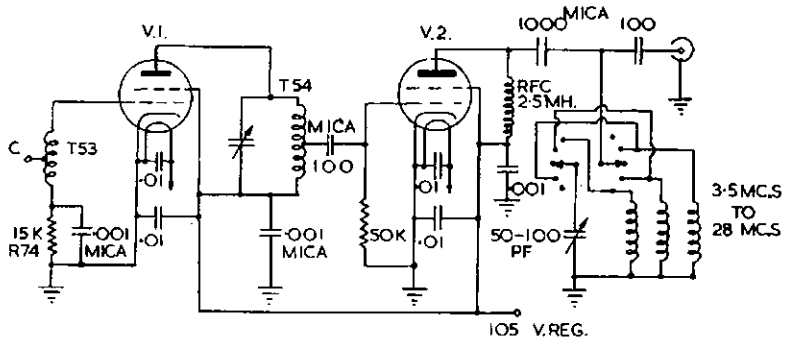
VK3TW now uses the one described herein, and a 90-minute QSO a few days ago did not necessitate retuning the receiver during the contact, while talking to him.



Original circuit diagram of BC458.

- C58A, C58B, C58C—0.05 μF.
- C59—0.00018 μF.
- C60—Master oscillator padding.
- C61—0.006 μF.
- C62—Fixed neutralising.
- C63—Master oscillator tuning, 230 pF.
- C64—0.002 μF.
- C65—Power amplifier tuning.
- C66—0.01 μF.
- C67—Power amplifier padding.
- C68—3.0 pF.
- C69—50 pF.
- K53—Transmitter selector relay.
- K54—Transmitter output relay.

- L52—Antenna loading coil.
- R67, R72, R75—31,000 ohms.
- R68, R76—20 ohms.
- R69—1 megohm.
- R70—1,000 ohms.
- R71—120 ohms.
- R73, R74—15,000 ohms.
- R77—390 ohms.
- R78—61 ohms.
- RL50—Parasitic suppressors.
- T53—oscillator coils.
- T54—Amplifier coils.
- Y50—Crystal unit.
- 7-prong female plug, outside view.



T53—Existing oscillator coil of 1626. (See the original circuit diagram of BC458.)

T54—Existing ceramic plate coil of V1. Condensers not indicated are ceramic disc.

*Shelbourne Court, Mornington, Vic.

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A HIGH EFFICIENCY PLATE MODULATED CLASS C AMPLIFIER

FOR nearly three decades the power output from a good quality plate modulated Class C amplifier has run between 66% and 70% of the d.c. input—the Australian Broadcast Control Board, in its Standards, taking 66% when using the indirect method of rating the power of a broadcast station.

Now comes a revolution, for the new R.C.A. BTA-5T, 5kw. broadcast transmitter operate its Class C amplifier at 90% plate efficiency.

Details were given by I. R. Skarbec in the March 1960 issue of R.C.A.'s "Broadcast News."

The method of achieving this great increase in efficiency is just about as simple as falling off a log.

The circuit arrangement is very similar to a standard plate modulated Class C amplifier except for a parallel tuned circuit in series with the plate and another similar resonant circuit in the cathode circuit.

Both these resonant circuits are tuned to the third harmonic of the fundamental r.f. frequency.

★ A recent development in the Broadcast field increases the output from a Class C amplifier to 90% of the total d.c. plate input.

When these circuits are properly adjusted, the r.f. output wave-shape is no longer sinusoidal, but becomes relatively flat near the peak, and results in a plate efficiency of 90 to 92%.

When the Class C amplifier is driven, the harmonic content of the grid input power sets up and maintains circulating current in each of the parallel tuned third harmonic resonators. The resonators are designed to store high kva., therefore the total voltage supply at the anode is composed of the normal d.c. plate supply and the super-imposed oscillatory potential equal to that built up across the plate resonator.

This oscillatory voltage, being at the third harmonic, vectorially adds twice to, and subtracts once, from the fundamental, thus producing a flat-topped wave form.

When the cathode resonator is adjusted to the third harmonic, the instantaneous grid to cathode potential modifies the cathode emission to approximate a rectangular pulse.

An improvement of six to seven per cent. is obtained from the anode resonator and the balance from the cathode resonator.

All this adds up to a reduction in anode dissipation.

Should the resonators be mis-tuned, the amplifier returns automatically to the usual type.

Tuning up is similar to the conventional amplifier tuning but the dip is much broader.

Life tests on a number of valves showed no deterioration due to the new system, whilst the frequency response and distortion meet broadcasting standards, plus or minus 1 db. 30 c.p.s. to 10 Kc.

Three per cent. distortion at 95% modulation with better than 2% over most of the audio range.

It is understood that the new 50 kw. transmitter for 3WV Horsham is using this system, but with fifth harmonic. This is an S.T.C. job.

—VK3AXU.

SIMPLIFIED SKYWIRE SYSTEM

HAVING devoted lots of time, care and study to design of the new transmitter, we proceed to use lots more hard work to building it. Finally it's just the way we want it and generating the proper amount and quality of r.f. energy which we now proceed to feed to antennae.

At this point troubles seem to crop up, if observation of various antenna set-ups, and remarks on the air, are any guide.

We all know that the feedline impedance shall match that of the antenna feedpoint or lots of that precious r.f., so laboriously generated, will be dissipated in the wrong manner!

A popular and simple approach to the antenna problem is a dipole, centre fed with a line of 72 ohms characteristic impedance. It seems to matter little whether it be twin-lead or co-ax. from the practical standpoint, notwithstanding contentions of the theorists that the feeder must be a balanced line, e.g. "twin-lead."

One well known firm, for instance, make a centre connector for feeding dipoles with 50 or 72 ohm co-ax. and what is more, it works!

At this location the frequencies for which a wire antenna is required, are 80, 40, 20 and 15 metres and is in the form of three dipoles with a common feedpoint and 50 ohm co-ax. feed line.

The triband beam here is atop a 50 ft. telephone pole and this latter is the support for the above mentioned dipoles, the lengths of which were determined from formula $468 \div \text{freq. in}$

Mc. to suit the portion of the spectrum desired, viz. 3.7 Mc., 126 ft. 6 in.; 7.1 Mc., 66 ft.; 14.25 Mc., 32 ft. 9 in., and of course 7.1 Mc. is also $3/2$ waves for 21.3 Mc.

The low-frequency (80 metres) wire happens to be bare hard-drawn 16 gauge copper, but 7/20 would do. A 3-inch Pyrex insulator can be used at the centre if no special type is available and each arm of the low-frequency dipole is then 63 ft. 3 in.

The other two dipoles are made up using sections of open 300 ohm t.v. feeder (not the pythene tape variety), so that there is 16 ft. 4 in. each side of the centre insulator; to one wire of each arm is added sufficient wire of similar gauge (about 18 gauge) to increase the length to 33 feet each side of centre. This one is the dipole for 7 Mc. and the $3/2$ wave for 21 Mc. The remaining dipole of 16 ft. 4 in. is for 20 metres. If one wishes a further dipole can be hung on for 10 metres and would be approximately 16 feet long or 8 feet each side of centre.

The easiest method of support is to use a single pole and to let the outer ends droop on each side to fences or what have you.

Some few years ago, "QST" had an article on "drooping-dipole" antenna and work on them suggested a feedpoint impedance of 50 ohms or thereabouts and I found that a "Monimatch" agreed with that, for there was mighty little reflected power using 50 ohms co-ax. (RG8/U).

RG58/U, the small diameter co-ax. is splendid for this use, at powers in

use in VK and "Telcon" market it as PT45/M and is reasonably priced, new.

At some locations three and more dipoles are to be seen fed in many ways, even including P.V.C. lighting flex as feedline!

With a well designed antenna coupler, of course, one dipole will do—the low-frequency one—and some t.v. open wire 300 ohm feeder will serve perfectly to feed it, but the multiple dipoles are easy to make, give a near-perfect match of feeder to antennae, and require simple support. There's no need to be anxious about erecting this array, for I use it and it does work!

The use of 50 ohm co-ax. permits working of a pi-network into the line and it seems that this type of coupler is now pretty commonly used, in final amplifiers.

The array could be fed with 72 ohm twin-lead—"Telcon K20"—but this may give a small mismatch and poses the problem of making baluns to work into a pi-network.

The small booklet "S9 Signals," by Wm. Orr, W6SAI, could be of great value to many of us.

The construction of the drooping dipoles is a matter of individual choice and supports offering, and there can be several variations, of course. The main thing is that they have a common feeder and feed point and we do not need five separate dipoles and separate feeders around the house, to enable the use of the five bands from 80 to 10 metres—with a single pole to support the array!

—VK3JK

THE SCR522/542-A V.H.F. EQUIPMENT

PART ONE

THE SCR522 series v.h.f. transceivers have, of recent years, been perhaps the most readily available item of disposals equipment.

It is proposed in this article to deal with some of the conversion possibilities of the equipment, and its ancillaries, and to briefly outline the theory of operation of the unmodified equipment.

The SCR522 was designed to provide two-way communication, on four channels, within the range 100 to 156 Mc., with a power output of 8 to 9 watts. The associated receiver has a sensitivity of 3 to 4 microvolts input for 10 milliwatts output at 10 to 1 signal to noise ratio.

TRANSMITTER—BC625

The transmitter operates on any one of four crystal controlled channels in the range 100-156 Mc.

The crystal controlled oscillator's plate circuit is tuned to twice the crystal frequency which is 5,560 Kc. at 100.08 Mc., and 8660 Kc. at 155.88 Mc. (The 2 metre band crystals lie between 8 Mc. at 144 Mc. and 8220 Kc. at 147.96 Mc.)

The 6G6 oscillator output is then fed into two tripler stages (a 12A6 and 832) to emerge at 18 times the crystal frequency to drive the 832 p.a. stage.

Two 12A6 tubes in push-pull are used to amplitude modulate the carrier, whilst a 6SS7 tube serves as an a.f. speech amplifier when relay 131 is released or as an audio oscillator when relay 131 is energised by an external "contactor". This facility would be of use if m.c.w. on 2 metres is required.

The only other tube on the transmitter chassis is a 6SS7 tube connected as a diode and used to detect the presence of r.f. at the p.a. plate tank coil. The rectified r.f. thus obtained is filtered and may be read on position 4 of the transmitter metering switch.

R.f. output is taken via an adjustable link, coupled to the p.a. tank coil, and feeds via the aerial change-over relay to the co-axial socket on the FT244A type rack. This facility was omitted in some models.

RACK—FT244A

The FT244A serves as an inter-connecting medium for the transmitter, receiver, antenna, power unit and remote controller. The rack secures to the transmitter and receiver units per eight screws (painted red) and provides inter-connection wiring, channel change motor mounting, antenna relay facility and external cabling connecting sockets. Note that the antenna relay is actuated in the receive position—de-energisation of this relay places the antenna to the transmitter.

The larger multi-pin connector connects to the controller, whilst the smaller connects to the PE-94 or PE-98 power unit.

● A new series upon popular disposals items which, by the kind co-operation of the author, will feature different units from time to time.

RECEIVER—BC624

Three principle variants of the receiver are available, these are the BC624A, AM or C. All receivers operate on any one of four pretuned crystal controlled channels in the 100 to 156 Mc. range. I.f. is 12 Mc. The local oscillator operates below the signal frequency and is 11 times the oscillator crystal frequency from 100 to 108 Mc.—12 times from 108 to 116 Mc., 13 times from 116 to 124 Mc., 14 times from 124 to 132 Mc., 15 times from 132 to 140 Mc., 16 times from 140 to 148 Mc., and 17 times from 148 to 156 Mc. Receiver oscillator crystals for any channel fall within the range 8 to 8.72 Mc., the appropriate harmonic being selected for injection to the mixer by correct setting of the receiver oscillator tuning head.

All receivers employ one stage of r.f. amplification feeding a mixer stage. Local oscillator injection is inductively coupled to the mixer. The local oscillator train consists of half a 12AH7GT with a selected crystal between grid and ground and having a resonating inductor in its plate circuit. The oscillator feeds a harmonic generator which, in turn, drives a harmonic amplifier—both these latter stages are tuned by a two-gang differential capacitor coupled to the oscillator tuning head knob.

Three stages of i.f. amplification at 12 Mc. are employed.

From the detector stage onwards the various receiver models differ somewhat. The BC624A employs a 12C8 det., a.v.c., 1st audio; half of the 12AH7 plus relay 246 for squelch, and a 12J5GT for audio output.

The BC624AM employs a 12H6 tube for noise limiting and a.v.c. delay functions, but is otherwise similar in its audio circuitry to the BC624A.

The BC624C differs considerably from the A and AM versions. The tube lineup from the detector onwards is: Detector and noise limiter, 12H6; a.v.c. delay and 1st audio, 12AH7GT; a.v.c. detector and 2nd audio, 12C8; audio output, 12A6. The second 12AH7GT valve, which serves as the crystal controlled fundamental oscillator, has its second triode employed in an electronic squelch circuit, the threshold point of which may be set by adjusting potentiometer 238A.

The audio output impedances available are 8,000 ohms at terminal 5 of transformer, 200 and 600 ohms at terminal 4.

A metering point is provided on all receivers, for A and AM units the r.f. amp. plate current is metered, whilst

A. G. MULCAHY,* VK2ACV

in the C series the i.f. 1 cathode current is metered. The idea was to observe a.v.c. control on plate current as an indication of equipment operation.

POWER UNITS—PE-94 and 98

These units provide all h.t., bias and l.t. voltages required by the equipment. Outputs available are 14.5v. 4.9a., 150v. negative at 10 mA., and 300v. at 260 mA. The dynamotor has both series and shunt fields and a regulated shunt field for voltage stabilisation. Current consumption (28v.), on transmit, is 11.5a., and 11.1a. on receive. Current drawn in 14v. installations is double that on 28v.

Circuit diagram of the transmitter, BC625, is shown on the opposite page. Some suggested modifications will be given in Part Two to appear next issue.

★

NATIONAL FIELD DAY CONTEST

Contestants in the above contest are reminded that their logs should be set out as indicated in the Rules published in "Amateur Radio" for January 1960.

All entries must be post-marked not later than Saturday, 4th March, 1961, and addressed to the Federal Contest Committee, W.I.A., Box 851J, G.P.O., Hobart, Tas.

PHOTOGRAPHS

The Editor requests all contestants in the National Field Day Contest to send in photographs of on-site shots for publication in "Amateur Radio." Each photograph received will be returned to the sender, and a prize is offered for the best photograph submitted.

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VK3BH Calling

Benalla High School (Vic.) has been allocated the call sign VK3BH and will soon be operating the State's newest Amateur Radio station.

The licence granted the school to operate Station VK3BH has old Benalla significance, for it was that call which was used there 30 years ago by the late Mr. Charlie Whitelaw.

Mr. Gazzard, headmaster, said that the ultimate aim was the establishing of night classes. The Advisory Council gave the proposal full approval and pledged all possible support.

"We know where we are going and what we are going to do," Mr. Gazzard said. "The idea came to us from Mr. Ken Rankin (VK3KR). It was his suggestion and he has done a tremendous amount of the spadework. He approached the P.M.G.'s Department and so on, and has had the full support of Amateur Radio enthusiasts."

An application has now been made to the Education Department for permission to establish a radio club in the school. The aims and objects of the club are:

- To stimulate interest in and knowledge of radio in the town, and particularly in those aspects relating to the setting up and operation of Amateur Wireless Stations.
- To provide members with a hobby to enable them to make interesting use of their leisure time.
- Instruction and training of young people in the setting up and operation of an Amateur Wireless Transmitting Station.

It is hoped that such instruction will lead to other things, such as the provision of personnel capable of giving valuable help as trained operators in rural fire brigade units and generally to help in any emergency.

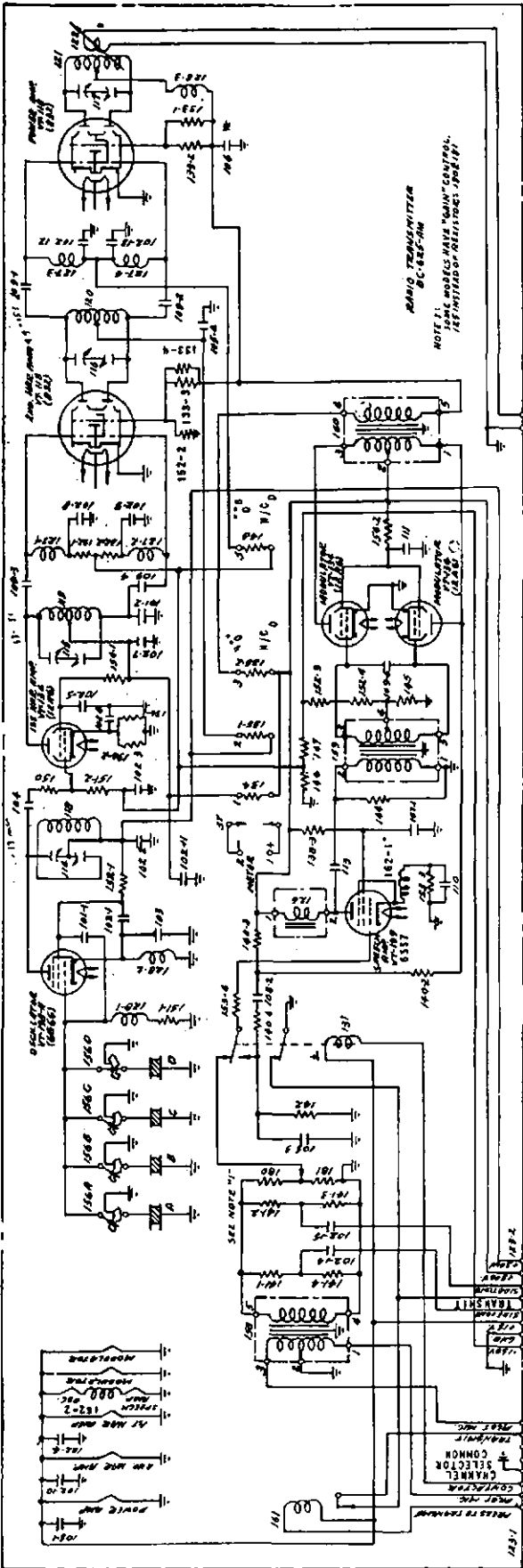
Mr. Gazzard said that assurances of assistance had been given by the District Manager of State Electricity Commission (Mr. Archer), the Postmaster (Mr. Dnunachie), by Mr. Simmonds (of the P.M.G. Dept.), and by other interested persons.

"Everyone is keen about the whole thing," Mr. Gazzard said. "I gather from what Mr. Pedler of the technical staff at the school that there will be a favourable response from the students.

"There are many with a keen interest in Amateur Radio in this district. Off-hand I can mention the Shire Engineer, Mr. Carlyle, and Mr. Campbell, of the P.M.G. Department."

SUBSCRIPTIONS

● Please pay your Subscriptions PROMPTLY when due. Failure to do so may result in the loss of valuable issues of "Amateur Radio." High costs of production make it necessary to limit the number of extra copies printed each month.



- Transmitter-BC625**
- 100-15 pF. ± 1 pF.
 - 101-10 pF. ± 0.5 pF. N.P.O.K.
 - 102-0.006 μ F. $\pm 20\%$.
 - 103-50 pF. $\pm 1\%$ sil. mica.
 - 104-100 pF. $\pm 5\%$ N.P.O.D.
 - 105-0.001 μ F. $\pm 10\%$ mica.
 - 106-0.002 μ F. $\pm 5\%$, 800v. mica.
 - 107-0.1 μ F. $\pm 10\%$, 400v. mica.
 - 108-0.001 μ F. $\pm 5\%$, 500v. mica.
 - 109-20 pF. ± 1 pF. N.P.O.L.
 - 110-1 μ F. $\pm 15\%$, 100v.
 - 111-0.5 μ F. 400v.
 - 113-0.0003 μ F.
 - 114-11 pF. ± 1 pF. min. and 65.5 pF. ± 1.5 pF. max. in parallel.
 - 115-3.5 pF. ± 1 pF. min. and 27 pF. ± 1 pF. max. in series.
 - 116-3 pF. ± 1 pF. max. and 16.5 pF. ± 1 pF. max. in series.
 - 117-2.8 pF. ± 1 pF. min. and 11 pF. ± 1 pF. max. in series.
 - 118-9 1/2 turns, 28 g. enamel.
 - 119-5 turns, 10 g., tapped 7 turns.
 - 120-10 gauge.
 - 121-2-0-2 turns, 10 g.
 - 122-3 turns, 10 g.
 - 125-1 meg., C taper.
 - 126-430H., 5,000 ohms, 1 mA. max.
 - 127-1 amp. 2 1/2 M. r.f. choke.
 - 128-2.5 mH., 125 mA., 500 ohms, 1 pF.
 - 130-Relay, 12v., 200 ohms, 0.2 μ S.
 - 131-200 ohms, 12v.
 - 132-25,000 ohms, 1w.
 - 133-40,000 ohms, 1w.
 - 134-1.53 ohms, 5w.
 - 135-0.76 ohm.
 - 138-1 meg., 5%, 1w.
 - 140-1/2 meg., 5%, 1w.
 - 141-1 meg., 5%, 1w.
 - 143-32 ohms, 5%, 1w.
 - 144-1 meg., 5%, 1w.
 - 145-15,000 ohms, 5%, 1w.
 - 146-6,000 ohms, 5%, 1w.
 - 147-18,000 ohms, 5%, 1w.
 - 148-75 ohms, 5%, 1w.
 - 150-50 ohms, 5%, 1w.
 - 151-50,000 ohms, 5%, 1w.
 - 152-50,000 ohms, 5%, 1w.
 - 153-2,000 ohms, 5%, 1w.
 - 154-5,000 ohms.
 - 158-1:45.7 ratio.
 - 159-1:2 ratio.
 - 160-2:1 ratio.
 - 162-38 turns, 28 g. enamel.

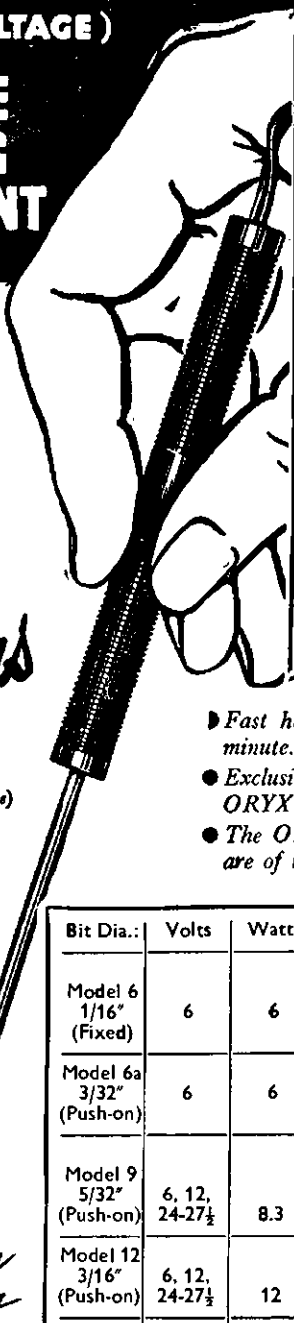
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- The ORYX long life element will outlast several bits which are of tight push-on fit.

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Model 6a 3/32" (Push-on)	6	6	0.25 oz.	6"	As for Model 6 (for extremely delicate work only).
Model 9 5/32" (Push-on)	6, 12, 24-27½	8.3	0.25 oz.	6"	Hearing Aids, Radio and TV Sub-assemblies, Coils, Electronic Instruments, Model Construction, Electro-Medical, etc.
Model 12 3/16" (Push-on)	6, 12, 24-27½	12	0.5 oz.	6.25"	Radio, Television, and Telecommunications assemblies.
Model 18 3/16" (Push-on)	6	18	0.75 oz.	7¼"	For heavier work, heat capacity equivalent to that of most 80 watt soldering irons.

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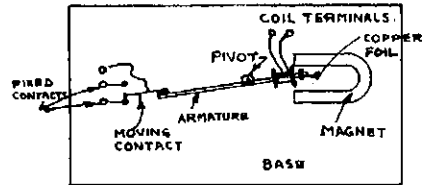
MSP3.58

A POLARITY SENSITIVE IMPULSE SWITCH

B. M. OLIVER,* VK2ZLM

THIS unusual type of switch is really an elementary form of relay, but "latches" into position after each pulse until another pulse of opposite polarity moves the armature. It could possibly be referred to as a bistable switch.

Construction is simple as only two essential components are needed. One headphone bobbin (preferably high impedance) and one small fairly powerful horseshoe permanent magnet. The remainder is odds and ends.

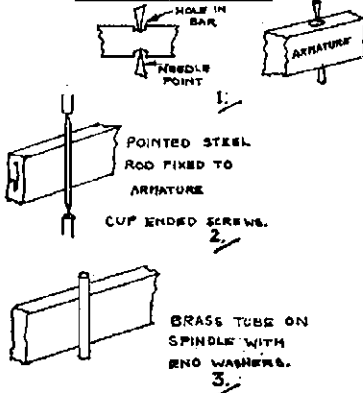


Components can be mounted on any non-magnetic base including wood and plastic materials.

A strip of mild steel of the same cross section as the pole piece of the headphone bobbin is needed (or can be cut and filed up) 6 inches long. The bobbin is placed as shown and the pivot arranged at the balance point to avoid undue wear. Fasten magnet securely. Old relay contacts provide the working contacts to any desired arrangement.



PIVOT SUGGESTIONS



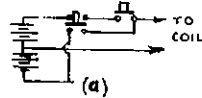
See sketches for details, rest is ingenuity. Ideal for battery transmitters as drain is nil and can be made much smaller if required with miniature coil; the miniature magnets can be obtained from old M/C meters.

Don't forget the residual gap or the armature will stick. Thin copper foil strip, copper rivet (or go de luxe and fit adjustable screws to the pole pieces). If the armature coil is light, armature mass small, and properly balanced with short travel and a powerful magnet, this operates in any position, otherwise horizontal please.

OPERATION

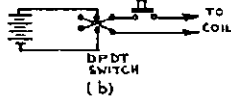
Spring return push button:—

(a) Two battery source (or tapped battery).



Note.—Double contact button to prevent damage if both buttons pressed together.

(b) Single battery.



Only a short pulse should be needed if properly made.

This is not a high speed relay, however.

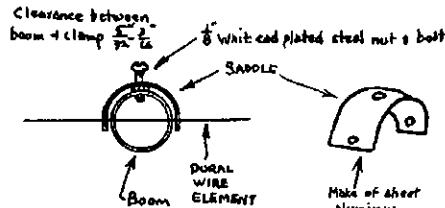


"Don't worry about the rope breaking. I've got more at home!"

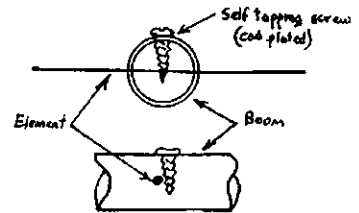
SOME ANTENIDEAS

IAN MACMILLAN VK3ZDG

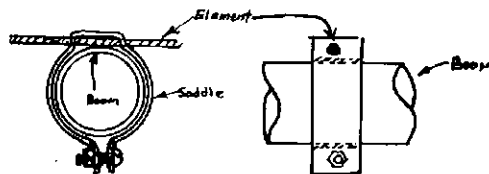
NEVER (SHUDDER!) HAVE BRASS OR COPPER IN CONTACT WITH ALUMINIUM OR DURAL.



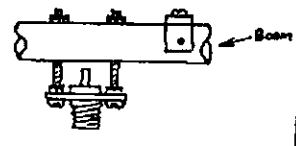
THIS METHOD BEST FOR WIRE ELEMENTS



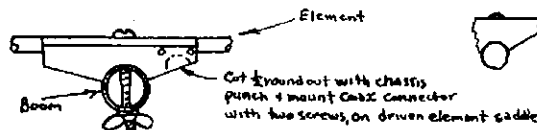
ANOTHER WIRE ELEMENT TYPE



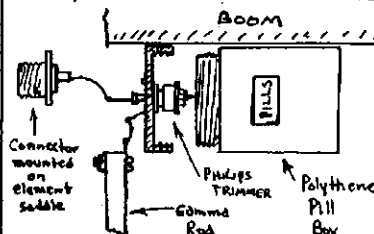
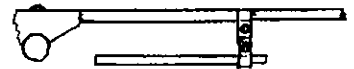
THIS METHOD DUE TO VK3ZC2—ELEMENTS UP TO 3/8" DIA.



MOUNTING A CONNECTOR ON A SMALL BOOM—DUE TO VK3ZBP



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Punch three holes in the pill box lid + mount the condenser + wire it up. When it is adjusted screw the box on the lid, and tape the lot to the boom.

A WATERPROOF GAMMA CONDENSER BOX

* 8 Edward Street, Oatley, Sydney, N.S.W.

A VK's Comments upon other Countries and their Hams

MOST of us I am sure have a desire to visit overseas lands and meet different people. I have just returned from a most wonderful six months tour of Europe, Scandinavia and the U.S.S.R. As most of my time was spent visiting various DX Hams, I am writing this article for "A.R."

Unfortunately, I am not an author and my words will fail to express what a tremendous and spontaneous welcome I was given. After many years as a DX phone chaser, last April I decided to go and take a look at some of the people whose voices I had heard so many times.

My first encounter with a Ham overseas was with Folke SM5BFA in Stockholm. I had his telephone number and as soon as my train pulled into Stockholm, early on a Sunday morning, I went to a public telephone and called his number. All was not simple when his XYL came on speaking the SM language. After two minutes the call cuts out (a good idea for our public telephones) and as I had no more coins, Mrs. SM5BFA was still in the dark as to VK3TG being in Stockholm. After much trouble I got a further call and this time the OM answered it.

Many of these DX Hams can only talk "Radio English" and find it next to impossible to carry out a normal English conversation. After further trouble I finally made the QTH of Folke.

A king could not have been given a better reception. Folke's two harmonics thought I was a man from the moon, coming from VK. I was taken to meet many SM5s and as it was cold and I had no overcoat, my host came to the rescue. Even in Stockholm one cannot buy overcoats on Sunday (mine had been previously stolen). This overcoat I still wore as my boat left for OH that evening.

My very good friend, Axel OH5NW, was to meet me in Helsinki but we had trouble as neither of us knew each other's face. Axel solved the problem by using a large p.a. system. "This is OH5NW calling VK3TG." This brought about our meeting. Later at his QTH, 70 miles from Helsinki, I was introduced to Carol, his XYL, OH5SM. Finland proved a most delightful country and altogether I spent about three months there.

For many weeks I stayed with Axel and Carol, and most of my time was spent in the Ham shack. Conditions to VK were not good, and I only managed

one QSO with VK3UW. Never again shall I complain of QRM here. That European QRM has to be heard to be believed. On my fourth day I visited an OH5 club, and the local press was present. The boy from Australia made front page news next day in the OH5 area. I made many visits to the club in Helsinki. This club exchanges its monthly magazine with "A.R." and I still wonder how the boys in Melbourne understand that Finnish language. A Ham is employed full time to run the club and organise activities. There is a smaller club called the "Columbia Radio Club" (C.R.C.). Each week day the Helsinki Hams gather at the Col-

perusing war surplus shops in London. Ham gear is very cheap there and I could have filled the ship's hold with bits and pieces if I had the db. and had known a nice custom man in VK. My time in G was all too short and the only DX man I met was G2PU.

In Paris I missed seeing Hams, but my night at the Folies and the walk home after have been censored.

My next host was DJ1CS in Solingen. Verner had a popular make of DJ car and he took me to see the sights and also on a shopping spree—the prices of electrical goods and cameras, etc., are just ridiculous in West Germany. They are one-third the price we pay here.



Members of Lynton and District Radio Club. Front Row (l. to r.): John, Club Sec. and S.w.l.; Jack, VS6CL/G3ODJ; Art, G3JAF. Second Row: Derek, S.w.l.; John, G3LLW; Nick, G3NRH. Back Row: Phillip, S.w.l.; Anthony, S.w.l., 1st harmonic of G3JAF; Ray, S.w.l.

umbia cafe for lunch, here everything is discussed except Amateur Radio. I was the first VK to visit there and I enjoyed many free meals and received a gift from the C.R.C. of a technical book.

My journey into U.S.S.R. was most interesting, but I could not see any Hams there. Special permission must be obtained from Box 88 in Moscow before one can meet these boys. I had had enough red tape getting my passport and visa, etc.

In Oslo I was met by Chris LA5KG, his fiancée and her girl friend made charming companions as we saw the sights on two motor scooters. The two days in LA land were far too short.

Next came England where I met my good friend Art G3JAF (he is called "the man with a tin"). Art got quite a shock when he saw my face after having over fifty QSOs with me. Jack VS6CL was in the area and we all had a night at the local club. Many hours were put in with Art and his friends,

Other Hams whom I contacted and whose call signs I can remember were: SM5CO, OH2MK, OH2XA, OH2YK, OHY2SZ, OH2TM, OH2RJ, OH2GR, OH6TM, OH2OK, OH8QE, OH2MA, OH5QN, OH5SL, OH5NG, LA3TF, G3LLW, and G3NRH.

In Denmark, Italy and Switzerland I did not make contact with any Hams. Of course I had many weird, wonderful and sometimes frightening experiences. The day in VSI was most exciting. Being my first look outside Aussie, it brought about many surprises. Five of us from the boat hailed a taxi to take us from the harbour to the heart of Singapore. The Oriental driver drove like a maniac, through the most crazy traffic I had ever seen. Every time we passed a cop he pushed one of the YLs on board out of sight because four is the maximum number of passengers allowed. On arrival at our destination, he asked for fifteen dollars. We all argued with him and were pleased to beat him down to five dol-



Chris. LA5KG.

lars. Later we found that the correct fare for the trip was one dollar fifty cents.

Another day whilst in UA land, I set out to try and find a shop to buy some post cards. The people in U.S.S.R. are badly off as regards clothes and as I walked along dozens approached me wanting to buy mine. Finally I struck a bargain with one who spoke a little English. If he would show me where to buy post cards, I promised to sell him a few articles cheap. He took me round many streets and lanes and finally ended up in a toilet—this was the post card! A little language trouble again.

As far as the equipment used overseas, I found most tx's to be much the same as ours—home-built with the conventional 807s in nine places out of ten. On the Continent and Scandinavia, commercial rx's seem to take preference. The DLs put out some delightful jobs for about £A70. In G, the disposal rx's such as AR88 and HRO seem to be the order of the day still. Also a

great many use commercial beams, whereas on the Continent most are home-built.

Most of the Hams visited complain of the lack of signals from VK over the past few years. My explanation for this was the advent of t.v. here. Also a great many complained about the lack of modulation on VK signals. I also noticed this on the few signals I heard from Aussie, this was very noticeable when compared with that of the ZL chaps.

At the Columbia Club in Helsinki many young Hams used to gather about me and asked about conditions and wages in Australia. It is surprising how many people in those war-torn countries look forward to this land for a brighter future.

Back home after seeing fourteen countries, I am convinced that we down under have a better standard of living than anywhere else and referring to Finland once more in conclusion—Cupid finally landed me a blow there and the OH XYL landed here for Xmas. —VK3TG.

Addresses of I.A.R.U. Member-Societies

Angola: Liga dos Amadores de Radio de Angola, Henrique Nunes da Costa, Post Office Box 484, Luanda, Angola.

Argentina: Radio Club Argentino, Oscar A. Hermda, Carlos Calvo No. 1424, Buenos Aires, Argentina.

Australia: Wireless Institute of Australia, William T. S. Mitchell, Business Manager, Box 2611W, G.P.O., Melbourne, C.I, Victoria, Australia.

Austria: Oesterreichischer Versuchsenderverband, Dr. Alexander Pachter, Foreign Correspondent, P.O. Box 500, Vienna 50, Austria.

Belgium: Union Belge des Amateurs-Emetteurs, P.O. Box 634, Brussels, Belgium.

Bermuda: Radio Society of Bermuda, A. N. Jones, P.O. Box 273, Hamilton, Bermuda.

Bolivia: Radio Club Boliviano, Imar Mealla Benitez, Secretary, Plaza Venezuela No. 21, Box 2111, La Paz, Bolivia.

Brazil: Liga de Amadores Brasileiros de Radio Emisao, Murilo Constant de Andrade Fraenkel, First Secretary, Caixa Postal 2353, Rio de Janeiro, Brazil.

Burma: Burma Amateur Radio Society, Tara Singh, Secretary, 187 Eden St., Rangoon, Burma.

Canadian Section, A.E.L.: Noel B. Eaton, Canadian Director, R.R.3, Burlington, Ontario, Canada.

Chile: Radio Club de Chile, Luiz M. Desmarez, Secretary, External Relations, Casilla 761, Santiago de Chile.

Colombia: Liga Colombiana de Radio-Aficionados, Alvaro Faccini G., Apartado Postal 584, Bogota, Colombia, S.A.

Congo: Union Congolaise des Amateurs de Radio, N. Legrand, P.O. Box 3748, Elizabethville, Congo.

Costa Rica: Radio Club de Costa Rica, Victor M. Benavides, Jr., Apartado 2412, San Jose, Costa Rica.

Cuba: Radio Club de Cuba, Jorge Smith Deschappelles, Ayearatan No. 629, 20 Plasco, Cerro, La Habana, Cuba.

Denmark: Experimenterende Danske Radioamatører, Borge Petersen, International Secretary, P.O. Box 335, Aalborg, Denmark.

Dominican Republic: Radio Club Dominicano, Dr. C. E. Regus, Calle Dr. Baez No. 25, Ciudad Trujillo, Dominican Republic.

Ecuador: Guayaquil Radio Club, Oswaldo Trujillo, Secretary, P.O. Box 3757, Guayaquil, Ecuador.

Finland: Suomen Radioamatööriliitto r.y., Valto Mantysalo, Secretary, P.O. Box 306, Helsinki, Finland.

France: Reseau des Emetteurs Francais, Jean-Claude Fouret, Boite Postale 4201, Paris, RP, France.

Germany: Deutscher Amateur Radio Club, Hans Hansen, Secretary, Beseleralle 10, Kiel, Germany.

Guatemala: Club de Radioaficionados de Guatemala, Rodolfo Rosenberg, P.O. Box 115, Guatemala, C.A.

Hong Kong: Hong Kong Amateur Radio Transmitting Society, Maurice H. Duke, Box 541, Hong Kong.

Iceland: Islenskir Radio Amatorar, Sveinn Gudmundsson, Secretary, P.O. Box 1056, Reykjavik, Iceland.

India: The Amateur Radio Society of India, M. G. Karnik, Secretary, P.O. Box 534, New Delhi, India.

Ireland: Irish Radio Transmitters Society, T. M. O'Connor, Hon. Secretary, 280 Collins Avenue, Whitehall, Dublin, Ireland.

Israel: Israel Amateur Radio Club, J. Itzhaki, Secretary, P.O. Box 4089, Tel-Aviv, Israel.

Italy: Associazione Radiotecnica Italiana, Sergio Peace, General Secretary, Viale Vittorino Veneto 12, Milano, Italy.

Japan: Japan Amateur Radio League, Takeo Kuwahara, Director Overseas Comm., Box 377, Tokyo, Japan.

Luxembourg: Reseau Luxembourgeois des Amateurs d'Ondes Courtes, Jos. Kessler, Secretary, 27, rue d'Amsterdam, Luxembourg.

Malaya: Malayan Amateur Radio Transmitters Society, S. A. Faulkner, Secretary, P.O. Box 777, Kuala Lumpur, Malaya.

Mexico: Liga Mexicana de Radio Experimentadores A.C., Ing. Carlos Arciniega Castaneda, Secretary, Liverpool 195-A, Mexico 6, D.F.

Morocco: Association des Amateurs-Emetteurs du Maroc, Robert Stevens, Hon. Secretary, P.O. Box 2060, Casablanca, Morocco.

Mozambique: Liga dos Radio Emissores de Mozambique, Joao Lapa Valente, General Secretary, P.O. Box 812, Lourenco Marques, Mozambique.

Netherlands: V.E.R.O.N., J. Muls, Hon. Secretary, P.O. Box 9, Amsterdam-C, The Netherlands.

Netherlands Antilles: V.E.R.O.N.A., D. Boon, Secretary, P.O. Box 383, Willemstad, Curacao, Netherlands Antilles.

New Zealand: New Zealand Association of Radio Transmitters, N. F. Leese, General Secretary, P.O. Box 9138, Newmarket, Auckland, S.E.1, New Zealand.

Norway: Norsk Radio Relae Liga, Alfred Maehle, Hon. Secretary, P.O. Box 898, Oslo, Norway.

Panama: Liga Panamena de Radio Aficionados, Rodolfo Delgado, Secretary/Treasurer, Box 1622, Panama, R.P.

Paraguay: Radio Club Paraguayo, Dr. Don Federico Donna, Secretary, Casilla de Correo, 512, Asuncion, Paraguay.

Peru: Radio Club Peruano, Alfredo Correa S., General Secretary, Casilla No. 538, Lima, Peru.

Philippine Islands: Philippine Association for Radio Advancement, Romeo F. Castaneda, Secretary, 67 Espana Extension St., Quezon City, Philippines.

Poland: Polski Zwiasek Krotkofalowcow, Eugeniusz Raczek, Secretary, P.O. Box 320, Warsaw 10, Poland.

Portugal: Rede dos Emissores Portugueses, Sergio Marques, First Secretary, rua de D. Pedro V., No. 7-48, Lisboa, Portugal.

South Africa: South African Radio League, C. C. Ingle, Hon. Secretary, P.O. Box 3911, Capetown, Union of South Africa.

Southern Rhodesia: Radio Society of Southern Rhodesia, Chairman of Council, Box 2377, Causeway, Salisbury, Southern Rhodesia.

Spain: Union de Radioaficionados Espanoles, Miguel Fabregues, General Secretary, Apartado 220, Madrid, Spain.

Sweden: Sveriges Sandare Amatorer, Martin Hoglund, Secretary, Enskede 7, Sweden.

Switzerland: Union Schweiz, Kurzwellen-Amateurde, Serge Perret, International Relations Officer, 26 av. Victor Ruffy, Lausanne, Switzerland.

Syria: Technical Institute of Radio, Gabriel Khouri, Secretary, P.O. Box 35, Damascus, Syria.

United Kingdom: Radio Society of Great Britain, General Secretary, John Claricoats, New Ruskin House, 28/30 Little Russell St., London, W.C.1, England.

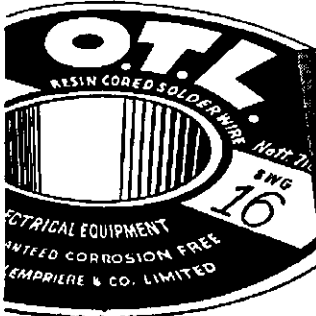
United States: American Radio Relay League, Inc., A. L. Budlong, 38 La Salle Road, West Hartford 7, Connecticut, U.S.A.

Uruguay: Radio Club Uruguayo, Ing. Horacio Acosta y Lara, Secretary, Casilla de Correo, No. 37, Montevideo, Uruguay.

Venezuela: Radio Club Venezolano, Ramon Sahnkow Bustillos, Secretary, P.O. Box 2283, Caracas, Venezuela.

Yugoslavia: Savez Radioamatera Jugoavlije, Svetozar Ribar, Secretary, P.O. Box 324, Belgrade, Yugoslavia.

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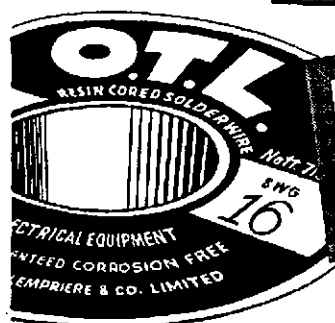


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AWARDS ISSUED BY N.Z.A.R.T.

The New Zealand Association of Radio Transmitters issues the following awards, the rules for which follow the usual pattern for such awards. Applicants must enclose a checking list of the cards forwarded and sufficient currency or I.R.C. for their return postage. Applications should be posted to N.Z.A.R.T., Box 480, Wellington, N.Z., or direct to the Contest and Awards Manager, ZL2GX, 86 Lytton Road, Gisborne, New Zealand.

W.A.P.—"WORKED ALL PACIFIC"

This award is available in Phone/C.w. and Phone only categories. Requires 30 confirmations from—

- | | |
|--------------------------|---------------------|
| CR10—Port. Timor | VK4—Willis Is. |
| DU—Philippines | VK0—Macquarie Is. |
| FB8—Adelie Land | VK3—New Guinea |
| FK6—New Caledonia | VK9—Norfolk Is. |
| FOB—Fr. Oceania | VK9—Papua |
| FW8—Walls Island | VK9—Nauru |
| FU8/YJ—New Hebr. | VK9—Christmas Is. |
| KB6—Baker, Howland, etc. | VK9—Cocos Is. |
| KC6—Carollines | VR1—Gilbert Is. |
| KC6—Palau (West Car.) | VR1—Ellice Is. |
| KG8—Marianas | VR1—Fr. Phoenix Is. |
| KG6I—Iwo Jima | VR2—Fiji |
| KG6—Marcus Is. | VR3—Fanning Is. |
| KH6—Hawaiian Is. | VR4—Solomon Is. |
| KJ6—Johnston Is. | VR5—Tonga |
| KM6—Midway Is. | VR8—Pitcairn Is. |
| KP6—Palmyra Is. | VS4—Sarawak |
| KS6—Samoa | VSS—Brunel |
| KW6—Wake Is. | ZC5—Br. N. Borneo |
| KX6—Marshall Is. | ZK1—Nth. Cook Is. |
| PK1, 2, 3—Java | ZK1—Sth. Cook Is. |
| PK4—Sumatra | ZK2—Niue |
| PK5—Borneo | ZL—New Zealand |
| PK6—Celebes, etc. | ZL1—Kermadec Is. |
| JZ0—Neth. New Guinea | ZL3—Chatham Is. |
| VK—Australia | ZL4—Auckland Is. |
| VK2—Lord Howe Is. | ZL5—N.Z. Antarctica |
| | ZM6—British Samoa |
| | ZM7—Tokelau Is. |

W.A.Z.L.—"WORKED ALL NEW ZEALAND"

Requires 35 different Branches of N.Z.A.R.T. from the following:—

- | | |
|-------------------|--------------------|
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| 02—Auckland | 34—Sth. Canterbury |
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| 04—Cairbridge | 38—South Westland |
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| 06—Dannevirke | 36—Taumarunui |
| 07—Dunedin West | 39—Tauranga |
| 08—East Southland | 40—Te Awamutu |
| 09—Egmont | 41—Thames Valley |
| 10—Franklin | 42—Titahi Bay |
| 11—Gisborne | 43—Waihi |
| 12—Hamilton | 44—Waikato East |
| 13—Hastings | 45—Waimarino |
| 14—Hawera | 46—Wairarapa |
| 15—Central H.B. | 47—Waitara |
| 16—Horowhenua | 48—Wanganui |
| 17—Huntly | 49—Westland |
| 18—Hutt Valley | 50—Wellington |
| 19—Inglewood | 51—Whakatane |
| 20—Manawatu | 52—Walroa |
| 21—Manukau | 53—Te Puke |
| 22—Marlborough | 64—Fatea |
| 23—Marton | 55—Waitomo |
| 24—Motueka | 56—Hornby |
| 25—Napier | 57—Tokoroa |
| 26—Nelson | 58—Helensville |
| 27—New Plymouth | 59—Mangakino |
| 28—Northland | 60—Taupo |
| 29—North Shore | 61—Central Otago |
| 30—Otago | 62—Reefton |
| 31—Pahiatua | 63—Upper Hutt |
| 32—Rahotu Coastal | |

Special endorsement if all contacts were made on 80 metres.

W.A.D.—"WORKED ALL DISTRICTS—ZL"

A v.h.f. award requiring confirmation of QSO with ZL1, ZL2, ZL3 and ZL4 on a v.h.f. band—50 Mc. or higher.

N.Z.A.—"NEW ZEALAND AWARD"

Requires the following:—

- 35 confirmations from ZL1.
 - Plus 35 confirmations from ZL2.
 - " 20 confirmations from ZL3.
 - " 10 confirmations from ZL4.
 - " 1 confirmation from a ZL territory (from N.Z. Antarctica or Chatham Is. or Kermadec Is. or Campbell Is.).
- This one confirmation may be substituted by 20 extra ordinary ZL confirmations if desired.

Making a total of 101 confirmations.

Special endorsement if all contacts on 80 metres.

24th B.E.R.U. CONTEST

Radio Amateurs throughout the British Commonwealth and Empire are invited to take part in the Twenty-Fourth B.E.R.U. Contest to be held on 11th and 12th March, 1961.

The Contest Committee is again arranging to secure the maximum amount of overseas publicity but solicits the assistance of members in bringing the dates and rules to the notice of all operators.

RULES

1. **Sections.**—The Contest is divided into two sections: (a) High Power—maximum licensed power; (b) Low Power—maximum input 25 watts.

1. **Duration.**—The Contest (both Sections) will start at 0001 G.M.T. on Saturday, March 11, and end at 2359 G.M.T. on Sunday, March 12, 1961.

3. **Eligible Entrants.**—The Contest is open to all fully paid-up corporate members of the R.S.G.B. resident within the United Kingdom and to all British subjects outside the U.K. but within the British Commonwealth and British Mandated Territories. All entrants agree to be bound by the rules of the Contest.

4. **Operator.**—Only the entrant will be permitted to operate his station for the duration of the Contest.

5. **Entries** must be set out as follows: Date, Band (Mc.), Time (G.M.T.), Call Sign of Station Worked, My Report on His Signals, His Report on My Signals, Leave Blank Column, Bonus Points, Points claimed; Total is obtained by adding Points Claimed to Bonus Points. Entries must be on one side only of foolscap paper and must be postmarked not later than April 1, 1961, and must be addressed to the Contest Committee, Radio Society of Great Britain, 28/30 Little Russell St., London, W.C.1, England.

On the first sheet should be shown: Claimed Score, Section (high or low power), Name, Call Sign, Address, the transmitter, power input, receiver, and Aerial(s). Also the usual declaration, date and signature.

6. **Bands.**—Operation is restricted to the following bands: 3.5, 7, 14, 21 and 28 Mc. Transmission must be of Type A1 (pure c.w.) only, and frequent tone reports of T8 or less may result in disqualification.

7. **Licence Conditions and Power Input.**—Entrants must operate within the terms of their licences. The input to the valve, or valves, delivering power to the aerial must not exceed 25 watts in the low power section.

8. **Contacts** may be made with any station using a British Commonwealth call sign except within the extrant's own call area. British Isles stations may not work each other for points. Contacts with unlicensed stations will not count for points. The decision as to whether or not a contact is valid will rest with the R.S.G.B. Contest Committee. Only one contact on each band with a specific station will count for points. Duplicate contacts should be logged, but no points claimed.

9. **Scoring.**—Each completed contact will score 5 points. In addition, a bonus of 20 may be claimed for the first con-

tact with each new Commonwealth call area on each band. All British Isles stations (G, GC, GD, GI, GM and GW) count as only one call area.

10. **Contest Exchanges.**—Serial numbers must be exchanged and acknowledged before a contact can count for points. The serial number of six figures will be made up of the RST report plus three figures starting with 001 for the first contact and increasing by one for each successive contact.

11. **Awards.**—At the discretion of the Council, a trophy or miniature will be awarded to the winner of each Section, and certificates will be awarded to the first three entrants in each Section. In addition a certificate will be awarded to the leading entrant in each call area regardless of the number of entrants in his call area provided that his score exceeds 1,500 points in the High Power Section or 750 points in the Low Power Section. A certificate will be awarded in each call area in which there are ten or more entrants to the runner-up, provided his score exceeds 1,500 points in the High Power Section or 750 points in the Low Power Section.

RECEIVING SECTION

A Receiving Section is to be held in conjunction with the Transmitting Sections. Similar rules apply for the Receiving Section. Logs to contain the following columns: Date/Time (in G.M.T.), Call Sign of Station Heard, Report and Serial Number sent by Station Heard, Call Sign of the Station being Worked, Band in Mc., Bonus Points Claimed, Points Claimed. CQ or Test calls will not count for points.

Scoring: Each complete log entry will score 5 points, in addition a bonus of 20 may be claimed for the first station heard in each new Commonwealth call area on each band. A station may be logged only once on each band for the purpose of scoring. Where both stations in a contact are heard, they should be logged separately; points may be claimed for both entries.

★

VK9 QSL SERVICE

The official W.I.A. QSL Service for Papua-New Guinea terminated with the closure of the Division early in 1960. However, a large volume of incoming cards is still being received at Box 204, Port Moresby and it has been decided to retain the post box for a further period.

The Rabaul Amateur Radio Club is also handling incoming QSLs and it is suggested that all cards for the Rabaul area be forwarded direct to that Club care of Post Office, Rabaul.

A carry-over of cards from the W.I.A. Bureau includes QSO confirmations for the following stations:

VKs 9SK, 9MP, 9PK, 9MT, 9BI, 9CT, 9TJ, 9AM, 9PC, 9AO, 9XR, 9CS, 9BF, 9VJ, 9NQ, 9PZ, 9VK, 9RW, 9DC, 9CT, 9RA, 9BT, 9LA, 9RB, 9AF, 9BV, 9GT, 9EJ, 9CD, 9VW, 9PH, 9CC, 9SM.

All claims for the above cards should be addressed to Box 204, Port Moresby, and should include one Reply Coupon. Cards not claimed within three months will be destroyed.—VK9XK.

CQ DX, CQ DX, CQ DX

This call goes forth night after night and is off-times of no avail, there being no reply, so what are the chances of receiving a reply? The following countries have less than fifty Amateur stations and they have to serve the quarter of a million Amateurs in the leading eleven Amateur nations. Remember that when you may laugh at those who seek DXCC. (Perhaps you cannot work a hundred countries, but you must admit it does take a lot of effort and patience.)

These countries are members of the fifty and under group: AC3, 4, 5; AP, CEB, CEO, CN2, CR4, 5, 6, 8, 9 and 10; CSS, CT2, 3; EA6, 8, 9, 0; ET2, 3; FBS, FD4, FEB, FFS, FG7, PK3, FIS, FM8, IS, 15, JY, KBS, KC4, 6; KG1, 4, 6; KJ6, KMS, KP6, KS6, KV4, KW6, KX6, LX, LZ, MI, MP4, ODS, OH0, OX, OY, PJ, PJ2M, PK, PZ, ST, SU, SV, TA, TF, TIS, VK9, VK0, VP1, 2, 3, 4, 5, 6, 7, 8, 9; VQ1, 8, 5, 6, 8; VRI, 2, 3, 6; VSI, 4, 5, 6, 9; XV, XWS, XZ, YI, YJ, YK, YO, YS, ZB1, 2; ZC5, ZD1, 2, 3, 6, 7, 8; ZK1, 2; ZM, ZMS, ZS7, 8, 9; 3A2, 3V8, 8J, 9G1, 9K2, and 9M2.

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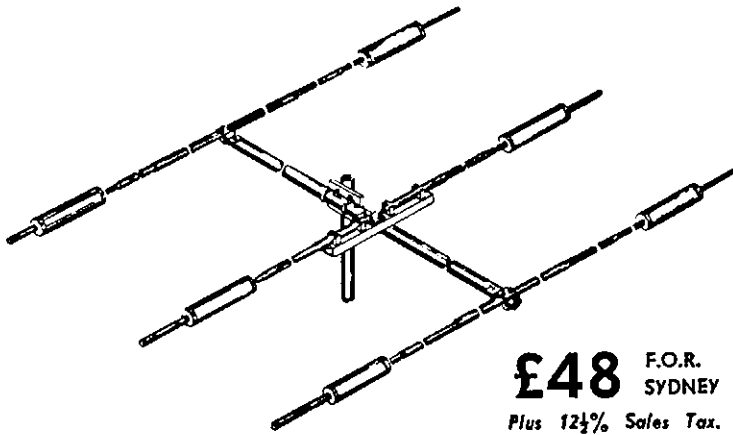
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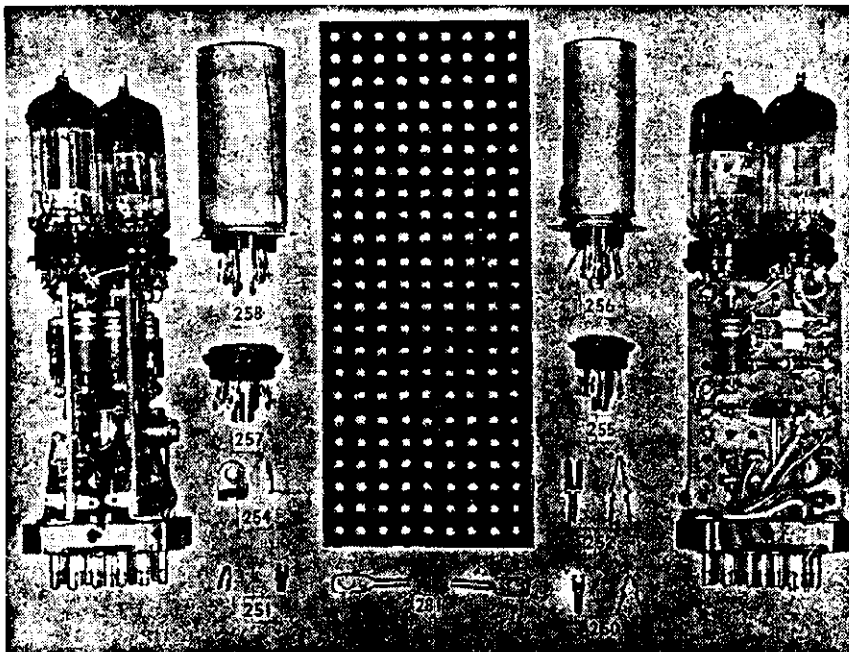
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VHF

David Tanner, VK3ZAT
C/o. British Nylon Spinners,
Bayswater, Victoria.

Once again Christmas has come and gone, and brought the usual increase in v.h.f. activity. One of the most unusual highlights was a cross-band contact on 6 and 2 mx between 6ZCB and 5KK which took place on the evening of Jan. 3. Six metres was open to the Eastern States from the West and at the same time, the Melbourne gang were working VK5 on 2 mx. A look at the weather map seems to indicate that the VK5-VK6 2 mx path was caused by atmospheric ducting across the Bight, not by Sporadic E.

George KR6CR states that he will be active on 6 mx from mid Jan., whilst KR6RB and KR6IF are currently operating in Okinawa.

Kel 3ZFQ at present portable at Alice Springs is having a very thin time of it, as 6 mx openings have been practically non-existent all over VK since the first couple of days of Jan. This has been the poorest season we have had on 6 mx for some years, quite a few instances of fairly short skip have indicated good E layer ionisation.—SZAT.

NEW SOUTH WALES

General.—Firstly, an apology for last month. The absence of notes was entirely due to your scribe, who forgot that December was the month for the copy to be in early, and only woke up to this fact when it was too late.

This month has been quiet as far as organised activity is concerned. However, 50 Mc. DX has been quite good. Recent openings included VK5 and VK7 on New Year's Day. The previous month was filled to capacity. It started with the annual auction night of the V.h.f. and T.v. Group, this being a particularly well attended event. Jim 2PM, as auctioneer, did a worth job and sold almost everything—value of goods ran into three figures. One man's food is another man's poison—it's amazing what is useless to one is just the thing someone else has been wanting and could not obtain.

The night fox hunt on 17th Dec. was also the Christmas party, with supper at the home of Chairman 20A. As usual, Bob really turned it on. The Merry Christmas Scramble on the following evening drew over 30 stations, including John 2WJ who has not been heard from this QTH for years.

The most recent event was a points per mile field day on New Year's Day, when 20 station took part. No good DX was reported, and it is too early to give results yet. The longest contact was 120 miles (2HL to 2ZAV at Mt. Panorama).

Three reports have come in lately. The first is from Darrell 2ZLF at Armidale, who is running 40w, to an 62B on 50 Mc. with a 3 el. yagi. Darrell has worked KH6, JAS by the dozen, also VK3, 4, 5, and 7—all in the last few months. He sent along an interesting cutting from his local newspaper reporting 7K Mc. interference to local f.m. services from VK7 on Nov. 14.

The second report is from Stuart 2ZDF in Newcastle, who listed Channel 2 interference from VK3, 5 and 7, also on Nov. 14. This must have been quite a night.

The third note came from Ron 2ZRF on Lord Howe Island. Ron is well on the way to putting out sigs. on 50 Mc. However, he has been delayed by an addition to the family.

50 Mc.: No JAs reported lately in Sydney, but Dick 2ZCF worked two ZLI stations on Dec. 31. Jan. 1 gave an opening to VK5 and VK7, with quite a few Sydney boys sharing in the fun. As this was also the 144 Mc. F.D. several who had 50 Mc. gear with them made contacts from field locations. The Ross Hull Contest has helped activity on this band, and the top score to date is over the century.

A visit to Sydney by 4ZBE a short while ago was an eye opener to those who talked with him. Bill lives in a DX paradise and has worked stations all over the Pacific area!

144 Mc.: Activity has been much as usual as reported elsewhere. An interesting trend is the use of portable long yagis for field work. They certainly pay off in signal strength. A visit by your scribe to Jock 3CS, ex-3ZDG, revealed s.s.b. equipment for v.h.f. How about some takers in VK2? The gear is not complex and the advantages are well known. Jock has

written several articles on the subject to clarify the situation and rouse up some enthusiasm.—ZAG.

VICTORIA

50 Mc.: The level of activity has been quite high on this band over the holiday period with plenty of Interstate break-throughs. 3ZCG had VK2, 4 and 6ZBY around midday on Dec. 20, whilst general openings to VK2 and VK4 occurred on 26th and 27th. Russ 9XK popped in on Dec. 27 about 1130 E.A.S.T. when 3CI, 3QV, 3ZHF caught him. Jock 3CS worked him later at about 1400.

Apparently the temperature inversion on Dec. 25 that brought VK7 to Melbourne on 144 Mc. was responsible for 3ZL being 5 x 9 plus at 3ZKJ and the fine signal from Bill 3ZFG Warrnambool coming into Melbourne also on 50 Mc.

Conditions were patchy between Christmas and New Year, but Jan. 1 produced VK2, 4, 5 and 6 with some VK3 back scatter between 3CS and 3ZCW. Weak signals were heard on Jan. 2 but Jan. 3 was again lively with VK2, 4 and 6. New calls about the band include 3ZIL, 3ZJV, 3ZKK and 3ZKW, whilst Ted 3ZJF has started up from his new QTH at Chadstone. 3ZEO is a bit quiet; apparently working a VVW—new one on me, can't find it in the "A.R." countries list. Peter 3ZDO and others do modulate, try slope detection.

144 Mc.: Things started out well for Dec. when Howard 3ZJY heard 2DU at Dentiliquin at 1805 hrs. on the 1st. Unfortunately no contact was made and Noel's sig. has not been reported since. Conditions fair on Dec. 8 when 3QV (Melbourne) worked 3ASS at East Sale. 3QV found copy much better on c.w., there should be more use made of it.

3ZER, both at home in Ballarat and portable at Mt. Buninyong, did well with 3NN, 3ZEA, 5AW and 5ZCR on Dec. 22, whilst he worked 7PF and 7LZ on 25th and 7PF again on 26th. 7LZ was worked by 3RK and 3YR on 25th and by 3ABK on 28th. To date though VK7 do not appear to be as good as previous years. (The gear in Melbourne is not what it used to be.—SZAT.)

Bill 3ARZ, who has over 400 contacts in the Ross Hull Contest, has worked 5AW several times both in evenings and early morning. He has also QSO'd 3ASW and 3ZDP at Sale on Dec. 22. 3ZCG made the grade with 5AW as well as 3ANQ, 3ZER and 3DY at Maffra on Dec. 23. George also worked 7LZ whilst portable at Bass Hill on Dec. 25.

The scramble on Dec. 11 attracted 20 starters and Michael 3ZEO was the winner with 14 points with Tom 3ZHT second with 13 pts.

New stations on include Ron 3OM, Peter 3AWA, Ron 3ZBF, Ian 3ZFU and Matt 3ZKR. Welcome to 2 metres chaps.

288 Mc.: Perhaps one of the unluckiest persons about is Ron 3ZER. Operating portable from Mt. Buninyong on Dec. 25, he heard 7LZ at 5 x 5. However, Col, whilst hearing the signal, could not read the audio. If the QSO had been made it would have broken the 7LZ-3ALZ Australian record by some 30 miles. There was some consolation for Ron as early on the morning of Dec. 26 he worked 5AW at Penola 5 x 9 both ways for a new VK5 record of 185 miles. David and Ron are now thinking of trying 576 Mc.

George 3ZCG has his 15 el. yagis up but bemoans the lack of activity. Jock 3CS with a new 50 ft. tower is also putting the 1 mx gear to work again.

V.h.f. Group: The last meeting for 1960 was not particularly well attended but much general discussion took place with our temporary admin. sec. Peter 3ZDO (boy, can she—sorry—he type) talking on n.b.f.m. using a 1N1763 of all things. John 3ZLO described some of his station equipment which was on display and David 3QV confused everyone including himself with problems involving reception of upper and lower sideband.—3QV.

SOUTH AUSTRALIA

50 Mc.: The band really came to life in Dec. when openings occurred nearly every day. In fact the VK6 beacon, VK6VF, was audible on several occasions when no contacts were made because of inactivity.

The Ross Hull Contest is now in full swing but activity in most States seems to be down compared with last year. On Dec. 3, the band was open to VK2 (1100 hrs. S.A.T.), VK6 (1300 hrs.), ZL (1800 hrs.), VK7 (2000 hrs.). This was the only ZL opening and compared with last year was very poor.

JAs have been very scarce during the month, but Mick 5ZDR managed to work one on the morning of Dec. 24. The best openings occurred to VK6 and on the 24th the band was open to VK6 for at least five hours with quite solid sigs. On 27th and 28th, the band opened to VK9 and Russ 9XK and 9ZGW were heard. Russ was worked by a few but 9ZGW was not

Unfortunately no sign of VK8. Garry 5ZFM, Mick 5ZDR and George 5GG have been the most active stations this month, exchanging several numbers in the Contest.

V.h.f. Group activity this month embraced one of the best fox hunts held to date with 14 cars participating. Results were as follows: 6 mx first event, Eugene 5AV; second event, Garry 5ZFM; third event, Graham 5ZAP. 2 mx: Keith 5MT won the first and third events for both 6 and 2. Ron 5MK was the fox and he invited all participants back to his QTH for supper provided by his XVJ Joan, which was very much appreciated by all.

Mobile activity has been quite good of late with Mick 5ZDR and Ron 5MK working DX from their cars. Nell 5ZAW has been out mobile quite often also. Gilbert 5GX and Vic. 5JH have been out portable on the week-ends with Gilbert working his share of the DX. The 4th turned out to be an unofficial field day with Laurie 4ZBL/5 and your scribe 5BQ at Mt. Lofy working Stuart 5ZDG mobile at Clarendon and Vic. 5JM mobile on the Mt. Barker Road. Half an hour later John 5ZCJ was contacted mobile at Pt. Noorlunga. Then Mick 5ZDR mobile in the city was worked by those at Mt. Lofy.

Dave 4ZAX is back in VK4 on vacation and heard working DX from his old QTH. Gerry 5ZFM is portable at his summer residence in Goolivva with the filaments always hot.

144 Mc.: The most important news this month is the fact that Stuart 5ZDG will be taking up permanent residence in Whyalla and he intends to run about 80-100w. on 2. At last Adelaide will have an active 2 mx station in the country and Stuart should have contacts very regularly. Mick 5ZDR has been on 2 building up a score for the 2 mx section of the Contest and quite likely David 5AW and Al 5ZCR in the south-east have been doing the same.

288 Mc.: George 5GG, Brian 5TN and some of the newer chaps have been on 1 mx exchanging arial numbers for Intrastate contacts. David 5AW has had the only Interstate contacts with 3ZER.—5BQ.

TASMANIA

The V.h.f. Group of the Tasmanian Division continues to function well, holding meetings on the third Wednesday of each month, in the W.I.A. rooms. Recent lecturers have included Len 7LE and Paul 7ZAS. Paul spoke to us about Radiophysics. The Sunday morning W.I.A. new broadcast continues to be retransmitted by Alan TMY on 50.88 and 144.27 megacycles.

Plans have been arranged for the "Athol Johnson Memorial Contest" to be held on the last two week-ends of Feb. 17 and 18 and Feb. 24 and 25. This is designed to encourage mobile and portable operation within the State. Although Interstate contacts do not count for points, the increased activity hoped for may make it worth the attention of mainlanders. A point is scored for every mile worked; a number, consisting of a signal report plus reference, must be exchanged. The same station may be reworked after five hours or by either station moving at least five miles.

50 Mc.: Local activity on this band is greater than this time last year, at least nine stations are active from the Hobart area. Mobiles include 7ZAI, 7ZAL and 7ZAO. Barry 7ZAK and Geoff 7ZAS should now be active on 50 Mc., both have had rx's working well and tx on the way. Paul 7ZAJ is putting a better signal northwards with a higher aerial and improved modulation system.

Openings during the latter part of Nov. were quite good, 14th provided VK2, 3 and 4, with patchy openings to VK4 later on in month. Dec. 1 brought an opening to VK2 and 3, 3ZKJ in Melbourne was worked by 7ZAO—working Melbourne is rather a rare occurrence from Hobart. Dec. 3 provided a good all-day opening to VK2, 3, 4 and 5. Things were relatively quiet until the 24th when VK2, 4 and 5 appeared; during the next three days the same call areas were worked.

No more VK3s appeared and no sigs from VK6 or VK9—but we are still hoping. Various ZL stations were heard by David 7ZAI but as yet none worked. Stations active in the south during this period were 7MY, 7ZAX, 7ZAC, 7ZAL, 7ZAJ, 7ZAQ and 7ZAO.

144 Mc.: Activity on 2 mx is rather low at present, but better things are hoped for as a number of stations have indicated their intentions of constructing gear for this band.

288 Mc.: This band is providing consistent local contacts. No one has yet produced workable crystal controlled gear, modulated oscillators still hold force. Hobart's hills have provided barriers which make some beating. Reflections from Mt. Wellington provide a path when all else fails. A newcomer to this band is Brian 7ZBE.—7ZAO.

SWL

Maurice Cox, WIA-L3055
Flat 1, 37 Boyd Crescent,
Olympic Village, Heidelberg,
N.23, Victoria.

As I am writing these notes on 2/1/81, listening to all the 6 mx DX I am wondering if all VK S.w.l. are taking part in the Ross Hull Memorial Contest—I hope so.

It is my first R.H. Contest and am enjoying it quite well. Mac Hilliard lent me his v.h.f. rx—28 to 100 Mc. for which I thank him. It is amazing what you can hear when the DX comes in. I put up a 6 mx dipole but it's not a patch on my W0V0 all-band antenna. So if the DX is there you can hear them on anything. To date I have 203 pts.—VKs 6, 4, 2, 5 and one lone 9. Anyway, we of the VK3 Group wish you all the best for the Contest.

By the time you all read these notes, the first VK S.w.l. Convention will have taken place. Next month I'll tell you all about it. In this year all VK S.w.l. office-bearers would like to see as many as possible come along to the Group meetings. Try and make your Group a big success, hop in and help as much as possible.

VK GROUP NEWS

VK3: Last meeting held was attended by a dozen or so. General business, etc., was short and sweet. We then had a general discussion amongst ourselves. Mike Owen happened along and we had a peak into the tx room which, up to date, looks quite good. The organising committee will have their backs bent this year to make it one of the most successful. So here's hoping you will all turn up to the meetings and visits.

VK2: No news at all.
VK4: Have had letters from s.w.l.'s which are under Correspondence.
VK5: Nothing to date. Colin must be on holidays.

VK6: Have had nothing for quite some time. We hope all is well over there and the Group is expanding. Hope to hear from you soon.

VK7: From Mike Jenner. He has passed his A.O.C.P.—congrats, Mike. The S.w.l.'s went on a tx hunt and they piled into a car with a Command set plus a loop which went crazy and they got bushed, but they had a lot of fun. Their last meeting was on conversion of surplus gear. What did you learn, you guys?

Yes, I would like to hear from any of you Taswegians re your gear and a photo for this page. Thanks for the list. Mike ends his letter by saying I quote: "So until next time your very tired and under-worked servant." And in a P.S. he says he likes a lot of correspondence, but doesn't get any. Now, you lads, write him with information or queries, give him some work to do.

CORRESPONDENCE

I have received correspondence from Don Grantley, Eric Trebilcock, Les Salter, Charles Thorpe, Leigh Banks, Harry Major, Neville Fisher and Chas. Abernathy.

Don Grantley reports the following: He had a letter from the hard working QSL manager, Jim W2CTN and he refers to s.w.l.'s and QSL cards and says he gets bundles containing hundreds of s.w.l. reports through the Bureau and at times he finds the going tough, therefore, preference has to be given to cards sent direct to him at his home QTH. Any s.w.l. having reports for any station under the control of Jim can forward them to L3068, Box 145, Albury. Don is in touch with him at frequent intervals. Don has heard 206, 65 confirmed, 32 U.S.A. States confirmed, 41 heard on s.s.b. Total cards received 390 and number of reports sent 1992—this is since 1957. His three rarest are VSJNT on s.s.b., ZB2I on c.w. and YA1AO on c.w. He has sent more in the last six months than any other period.

Due to Mac Hilliard's generosity Don was able to enter the Ross Hull Contest. (Yeah, me too. Don). Our thanks to you Mac for lending us the gear. His new rx which I think is an R1155, should be now be in operation. Congrats. to M. Richards of the Albury Club for his fine effort in his first R.D. Contest.

When Don returned home from Melbourne he found his antenna down, but has now put up a 20 mx vee boom of sorts. This one gives coverage from any direction on all bands from 20 to 10 mx and even works on 6 mx. Thanks Don for the information.

Eric Trebilcock. He's back at Essendon Aerodrome working shifts again for a while. He did a trip to the Geelong Amateur Club not so long ago where he spooked for 75 mins. (what a marathon Eric, I thought rag chewers on 40 were bad enough). He says he enjoyed meeting Amateurs and S.w.l.'s—young and old.

Les Salter, of Kingaroy (VK4XS). He read Don's article in Sept. "A.R." '80 re the two el. beam and wrote me for details. (It should be up now. Les.) How's the DX from it? He's been off the air for 12 months and is trying to make a come-back. Well, Les, I hope it works out well for you. Let's know how you find it, will you?

Charles Thorpe, of VK4 land. He's not only won one of our S.w.l. Contests, but received another certificate the other day, first in VK in the R.S.G.B. 21-28 Mc. phone contest '80; 22nd in the overseas position. Congrats. Chas., will send you up your certificate as soon as possible for the Contest run last year. I wonder if we run another how many entries we would get. Fine on your scores for the DX ladder. Thanks for the pat on the back re the notes.

Leigh Banks writes me again and hopes to take an active interest in activities of s.w.l. in the near future. Leigh is only a very new member. We will look to seeing and helping you in any way, Leigh.

Harry Major writes me a long letter and it is very interesting and I am going to quote some of his letter. "One thing came to my mind over the week-end reading the Dec. issue of "A.R." in the appeal of the Federal Executive in the Editorial for increasing membership. I am the trade supervisor at the Collingwood Tech. School and we have a Radio and Elec. Club among the boys, conducted each week. Each month I write a radio article for the club and have lent them some of my gear and they are interested. I feel if we could interest these boys more we could possibly provide many more prospective members for our clubs and the Institute. So far I have not done anything along s.w. lines, but intend to do so next year. The club master is one of our electrical and electronics teachers, although not a radio man, but together we have done something to interest the boys and several have built crystal and transistor sets.

"One great difficulty is the cost of parts for suitable sets for s.w. listening. I feel if "A.R." could publish some simple type of s.w. set suitable for juniors to get a taste of a.w.l'ing it would do much to create greater interest. Equipment with two or three valves and with easy-to-make coils, etc., would be the type and these could be built during club meetings. We older listeners often forget that the younger generation have never had many of the earlier thrills we had years ago with simple and easy to make equipment; now we have a chance to help them. I hope this idea may be of some help and if anything can be done, I will help to push it along."

Many thanks Harry and I personally will do all I can to get help for the boys and that goes for anywhere in VK land. More from Harry next month.

From Oatlands—VK7. Neville Fisher wrote (for the first time) that after reading "A.R." and noting no VK7 s.w.l. scores in the DX ladder, he'd let me know his small score and give me a run down on his gear, which is as follows: A centre fed dipole for 7 Mc., 20 ft. high, an EF50 preamp, and a 12-tube double conversion rx h.b. which covers 3.5, 7, 14 and 28 (what about 21 Neville? The best of the Amateur band). He has just bought himself a full size 3 el. beam for 14 Mc. and is at present replacing the 7 Mc. dipole with a new higher 40 ft. folded dipole. Neville, like other s.w.l.'s is looking forward to the forthcoming R.D. Contest. Thanks Neville, hope to hear from you again.

From my old pal, Chas. Abernathy. I know his age, but am not letting on: would like to know the name of his KYL. His son, Robert, 22, is 2ZDA and is getting sliced soon (another good man gone west!). All the very best for the future to you and your YL, Robert.

Just shows you how one can get excited on 6 mx. Chas. told me he had sent a report to 3ZGD but in fact it was 3ZGA, his first 50 Mc. s.w.l. report, and has now got over the excitement and his list of 8 mx has gone ahead at a very fast rate.

ODDITIES

Ron Young built a 40 mx mobile converter for his bomb, but it only works on 20 mx. These b.c. coils aren't much good are they Ron?

Haven't seen Frosty at the meetings since he won his contest cup. But he's a busy boy what with his band and guitar playing! Mac has been touring around Interstate of Xmas

with his 8 mx mobile. A thousand new type report forms will be available soon. Have not seen Mike Ide or Peter Nelissen of late, must be the Riley Club which has bitten him.

Len Poynter, 3ZGP-L3001, has no rx and has missed all the 8 mx DX. Haven't heard from Graham Ruttig for some time. John Donald and Clarrie Walker are conspicuous by their absence. Soon I'll include a s.w.l. report in these notes the way I think it should be done.

BAND CONDITIONS AND DX HEARD

Eric didn't give his impressions of the band, but has heard on 20 mx c.w. the following: VR1B, SM5KV/QG5, MP4QAQ, EA8BW, FL8ZA, MP4QAR, KW6CB, VS1KQ, ZS1RM, MP4BDE, MP4BCV, ODSAL, ZC4AK.

Don says mainly the Pacific can be heard and plenty of it, and has heard 60IMT, ST-2AR, W80LJ/PK, UL7KDW and 9N1MM (on phone) and ET2US c.w. He reckons all bands are on the mend.

I myself say 20 has had some good days and I think it will get better. I have heard VQ4RF, SV0VO, I1GH, W6s, ZLs, EP1AD, G6PO, VK-0ED, 9N1MM, KG6AJB, JA6MW, VR1G, KE-1JF, ODSAL, MP4TAC, 5A5TA, on s.s.b. DJ-1BZ, CN8AR, ZS90Y, ZS5QV, VQ4RF, MP-4BBW, H18KL, 4X4FA, CR8AH, VS6AE, KP-4AZ, VQ4RF, CT2AH, SV1AE, HZ1AB, EP2AG, ZC4AK. So 20 has had its ups and downs, but mainly up and is on the improve.

15 Mx. This last week 15 has been really good to Europe, has been peaking to Asia and Europe at 2300 E.A.S.T. Don has heard CR-9AL, I1CCM, DL1VX plus all Oceania.

I myself have heard 4X4AV, GJ3AF, ZC4MO, DL1AP, SP5PS, SP7AX, I1CCM, CR6AL, DJ-20B, 9M2VE, F2FL, CO2BE, HM1AE, VA1AB, CR6LA, ODSCV, YUIKC, CP1CI.

10 Mx. Nothing other than KG8IQ, KA8LF, W6BHM, I1DSM and UA0DZL. That's it for this month. I would appreciate boys, if you could write what you have heard, say from the 30th of the month to the 30th of the next month, what you've heard on each band and your impressions of band conditions, but let me have them by the 1st of each month. Thank you.

QSL CARDS RECEIVED

Eric Trebilcock has received cards from: VQ1SC, ZL4JF, T12CMF, YS10, KP4AEQ, VS-1FZ, LUSAO, Y08KAE.

Don Grantley has received cards from: ZB-2I, Z3ZHA, CN2BK, W2CTN, VK9GK and VR2DK.

Chas. Abernathy, 50 Mc. cards to hand: VK-321R, 4NG, 7ZAO and 7ZQO. On L., W0SVV.

Would like to know in future what cards you have received each month.

73 and good DX, Maurice L3055.

DX LADDER

	Conf.	Hrd.	Zon.	No. of Conf. Cards
L3042 Eric Trebilcock ...	258	275	40	6577
Rod de Balfour ...	122	180	—	—
VK4 C. Thorpe ...	85	137	34	—
L2022 D. Grantley ...	86	214	34	396
L3074 Mac Hilliard ...	53	194	24	—
L3055 M. Cox ...	29	194	18	60
L3016 M. Ide ...	28	98	—	—
L3065 L. Thomas ...	16	128	13	30
L3072 T. Heywood ...	12	60	11	18
L2211 C. Abernathy ...	13	31	4	—
L5031 C. Hutcheson ...	5	96	8	—
L3068 D. Grantley ...	4	103	—	—
L5020 F. Aslin ...	4	40	4	—
L2057 R. Wood ...	3	3	3	3
L2159 R. Thompson ...	2	73	2	—
L2052 T. Mills ...	2	14	2	—
L3006 I. Woodman ...	1	4	1	—
L5028 G. Smythe ...	1	28	1	—
L7013 N. Fisher ...	—	22	—	—
L2185 A. Chatto ...	—	79	—	—
L2158 B. Vieck ...	—	79	—	—
L2204 S. Ferry ...	—	35	—	—
L3077 D. Fraser ...	—	69	—	—
L2011 G. Albeck ...	—	18	—	—
L2155 P. Irvine ...	—	5	—	—

★

CALL BOOK MAGAZINE

The Federal Treasurer (Bob Boase, 65a Franklin St., Melbourne) still has for sale at £1 (post paid) the following issues of this great American directory of Hams: Winters 50/60 (United States only), Spring 1960 (United States only), Spring 1959 (world-wide).

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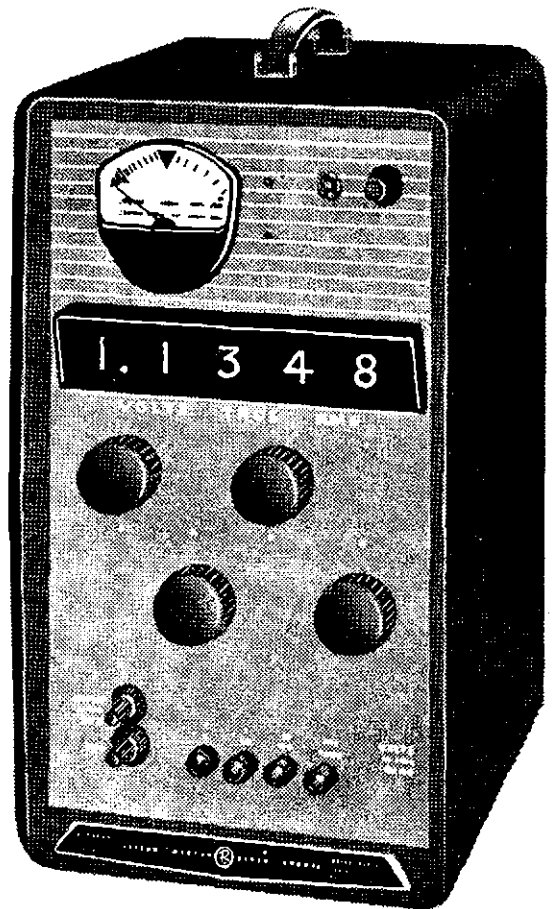
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Specifications :

Voltage Range: 0.1 to 1199.9 v.

Frequency Range: 50 c.p.s. to 20 kc.

Accuracy: 1/4% 0.1 to 300 v., 100 c.p.s. to 10 kc.;
1/4% 0.1 to 1199.9 v., 50 c.p.s. to 20 kc.

Input Impedance: 2 megohms in parallel with 15 pF. to 45 pF.

Power: 60 watts, 115/230 v., 50 to 400 c.p.s.



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N.S.W.: 307 KENT ST., SYDNEY. BX 1111
S.A.: 204 FLINDERS ST., ADELAIDE. W 1711

SIDEBAND

Bud Pounsett, VK2AQJ
22 Seiffert Centre,
Queanbeyan, N.S.W.

A.C. RIFFLE

Does that weak carrier that you can hear in your own rx sound absolutely T9? If it does not, try adding an additional section of filter to the power supply to the carrier oscillator. You will probably be very pleased with the result. Just a word of caution, be careful about the placement of the filter choke. Make sure that hum is not induced in it from the power transformer.

CARRIER SUPPRESSION

How often have you been told that you have some carrier showing? This report usually makes you go through the carrier balancing procedure all over again and often you have been sadly misled. For instance, if your signal is "40 db. over S9" at the other fellow's rx, and you have a carrier suppression of 40 db., your carrier level will be S9! So before you get the screwdriver and test gear out, make sure that this is not just a case of very good conditions.

S.S.B. ACTIVITY IN "G" LAND

The following is an extract from the Oct. 1960 "Sidebander" magazine—the publication of the Single Sideband Amateur Radio Association—and is an up-to-the-minute resume of s.b. activities in the U.K. It was compiled by Ted Hayes, G3KHE, the S.S.B.A.R.A. representative in England:

"180 Metres: A few stations equipped, some small activity but not a popular band, mainly because of the limited frequencies available. (Ship-shore transmissions nearly every 9 kc.)

"90 Metres: The main band for s.b. in "G"—many nets active each evening—1830 G.M.T. onwards. Main frequencies used are between 3.750 and 3.785. During the winter months, transatlantic QSOs are possible and this coming season will see many newcomers to s.b. making their first efforts to work Ws on this band. European stations are also operating in the above portion of the band and, during the night hours, some really good DX can be worked.

"40 Metres: Little activity on this band, mainly due to the limited frequencies now planned for European Amateurs but daylight QSOs are heard around 7.065 Mc. This band could be very good for dawn (G.M.T.) West Coast contacts; many W8s have been copied with S9 signals at this QTH around 0800 G.M.T.

"20 Metres: Still the best band for real DX in spite of the extremely poor conditions that have prevailed during the summer months. An increasing number of new G calls being heard and, with the availability of commercial tx's, I would forecast that the present number of active G stations on this band will be at least doubled by next Spring.

"15 Metres: Apart from the regulars that remain faithful to fifteen, there is not a great deal of activity due mainly to the fact that only a small percentage of the tx's in use can operate on the band.

"10 Metres: Ten has been well and truly down in the doldrums for the last three months so little or no s.b. activity has taken place on this band. Coupled with the fact that very few stations can transmit on this band, it does seem that until (if ever) conditions do vastly improve, G signals will be most conspicuous by their absence.

"To sum up, at the present time, most s.b. equipment in use here in the U.K. is home-brewed and is mainly built to operate on 80 and 20. The two Amateur magazines in circulation here have recently both contained very good constructional articles, in particular those by G2DAF, and considerable interest has been aroused. The shortage of suitable filter crystals has become more acute which could mean a lot of construction not being undertaken.

"At the present time, we only have one English-made commercial tx on the market. Surprisingly, the price is comparatively low—costing roughly 325 dollars, complete with power supply. For rx's, the choice is not so limited, and these cost anywhere between 150 and 300 dollars with a new Eddystone rx in the 1200 dollar range."

20 METRE S.B. ACTIVITY

In an excellent position to hear most signals in Australia, John 4DD has been keeping a check on the number of VK sideband stations using the 20 mx band. He reports that N.S.W. leads with Victoria second. Here are the figures by States:

New South Wales	40
Victoria	24
Queensland	7
South Australia	8
Western Australia	7

Tasmania, Northern Territory, New Guinea and the Australian Capital Territory have one each.

John is continuing to keep the check, details of which I shall give you from time to time. I wonder how long before these figures are doubled?

PERSONAL

We all are familiar with how helpful the Amateur fraternity is, one to another. This was borne out recently by the experiences of Dudley 2DQ, who keeps a lone vigil from far away Broken Hill. Dudley writes:

"Had a Collins R390A i.f. strip sent me by a K4, and the Ham Spirit came to the fore when, following my weekly talks with Noel ZZF, the following came along:

"5NN heard me asking for a wee piece of shielded braid; sent along enough for the job.

"3BQ likewise went into action after hearing my groans re 915 Kc. tuner and 455 i.f. strip; sent along 1370 xtal which works like a charm.

"3AHR found me a much wanted 6AK6 which was not procurable from my suppliers.

"ZLIAFO ditto, as they are readily obtainable in ZL, and I could not get at the socket to change for an available tube.

"Certainly makes one think that the side-winders are a 'listening and acting' crowd, er?

"Noel ZZF came to the fore when I mentioned that the 455 Kc. 16 Kc. wide mech. filter in the strip (along with the 2, 4 and 8 Kc. wide jobs there) served no purpose and the beautiful vertical slopes made me think that a xtal in the right spot made me think to restrict bandwidth would probably do the trick in my new exciter; he wound up some toroids and selected condensers, and, on checking it the lads like the present audio cutting off at 2.8 Kc., so perchance we shall let you hear the new tx on either 80 or 20 one of these fine days."

And I have since heard the new 2DQ tx and it sounds very fine. No wonder his call is now known as VK2 Delightful Quality!

NORTHERN TERRITORY—VK8

John 2QJ has arrived back from his round trip to Darwin. John operated mobile with a KWM2 from VK4, 8, 5, 3, 2, and 1. While in Darwin, he visited Eddie 8OW from whose home Chuck 8TE has been putting VK6 on the s.b. map under the 8OW call sign. However, Chuck now has his own call, 8TE, and it is anticipated that he will be heard from Darwin for some time to come. Chuck, who is a Philco Systems Engineer, is attached to the Air Force. He is using a KWM1 and 2 el. Mosley beam and has held the calls WARHE and W8DPF back home in the United States.

Wireless Institute of Australia Victorian Division A.O.C.P. CLASS

commences

THURSDAY, 2nd FEB., 1961

Theory is held on Monday evenings, and Morse and Regulations on Thursday evenings from 8 to 10 p.m.

Persons desirous of being enrolled should communicate with—
Secretary W.I.A., Victorian Division, P.O. Box 36, East Melbourne (Phone: JA 3535, 10 a.m. to 3 p.m.), or the Class Manager on either of the above evenings.

DX

(Continued from Page 19)

2TH, VS10, ZB1HC, ZS1RM, 5A5TA, 601AA, SM5KV/9Q5. Eric received a card from KG-61CD which now makes him 259 countries confirmed heard.

Don L2022 is now listening on 6 mx with a crystal converter into an AR7. He will be concentrating on this band and will not be listening on other frequencies for some time to come. Hrd. 7 Mc. c.w.: DL4ZF, G3LET, G6IC, JASAI8, JA8LN, UA9FS, UA0OE, VR 2DK, Ws, YU4E8T, 14 Mc. s.s.b.: G3FKM, KR6BH, KG6AJB, KH6AJB, KR6GP, VF6WD a.m. MP4TAC. C.w.: FB8CW, FB8ZZ, HZ1AB, KM6BI, KW6SDG, KP4CC, LU3HL, JZ0FO, MP-4TK, VQ4HT, VR1B, VU2NR, YU1AD, YU5ADP, ZC4AK, ZZ2TH, 5A5TW, 21 Mc. s.s.b.: ZS-6AOW; a.m. VS5GS, KR6IM; c.w. KH6DQ. 50 Mc. a.m.: JA6NP, JAICEY, JA4CJ.

Dave L3039 found the 14 Mc. band fairly good most evenings with some Europeans coming through, and plenty of UAs from Asia. 3.5 Mc. c.w. hrd.: SP2BK, F6EL, DL1GK, 7 Mc. c.w.: PA0KMG/MM, 14 Mc. c.w.: UA-0KUV, UA9VB, UA0UC, UA0CK, UA9KDL, VU2BG, VU2PA, T12CMF, JA1FHT, JA1AB, OH3NM, BV5HPT, DU1OR, HK7ZT, KR6AF, VS6DS, YV1AD, KW6DF, UR2SW, W4DBA, 21 Mc. c.w.: JA1BQZ, UA9VB, VS5GS, VS9MB, OE3NH, WL7DNK, UJ6KAA, KN0EV.

QSLs RECEIVED

BER8-195: KG6IC Marcus IS., LA3SG Jan Mayen, LZ1AG, M1/W4BPD, UL7KAA, UP2AC, VQ1SC, VR5L, YS10, YV1AD, 4X4KC.

VK2QL: EP1AD, ZEBJW 7 Mc., FG7XF, U1-8AD, UO5PK, 8J1AA, T12MF.

VK2ZR: ZD1AW, VQ1SC Zanzibar, YU3ZW, XZ2BE, JZ0FO, UB5KJK, DL8EZ, DL8CH Saar, CX2RE, 173 cards received for the month including 37 from listeners.

VK5AB: AC5CQ.

ADDRESSES

FQ8HP—Box 41, Brazzaville. (2QL).

HS1R—Via W60ZL. (2QL)

OD5CT—Box 5043, Beirut. (2QL)

W80LJ/PK—Project Hope, Washington D.C., U.S.A. (BERS-195 and 2QL)

HK0HCA—Via K8ONV. (BERS-195)

HK1QQ—Box 342, Barranquilla, Colombia. (BERS-195)

VK3AYL—Melbourne C. of E. Girls' Grammar School, South Yarra, S.E.I, Vic. (BERS-195).

JZ0PM—Paul Meyer, Agots, Netherlands, New Guinea. (4DO)

FB8CW—Henri, P.O. Box 152, Diego Suarez, Madagascar. (4DO)

YN1CAA—Does not QSL says YN4AB. (3YD)

YN4AB—Hans Henrick, Siund via Managud, Nicaragua. (3YD)

ZM6AB—C/o. Faleolo Airport, Western Samoa.

Several letters of late show that many of us are in the same position as VK3ARX with regards to those much wanted QSLs to build up our DXCC confirmations. He suggests an "address wanted" list run occasionally may get the QTH from someone who has already received a card. In his case the Bureau, airmail sea mail, I.R.C. QSL managers, etc., have been tried. Still, 48 countries are outstanding. To overcome partly at least this situation an "Addresses Wanted" column will be given a trial, starting next month.

I again wish to thank Don Chesser, Burlington, Kentucky, for the use of his DX Magazine in compiling these notes. Also thanks for the many letters received from VK Amateurs and Listeners. 73 John.

GOING S.S.B.?

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Telephone: UW 5388

Correspondence

Any opinion expressed under this heading is the individual opinion of the writer and does not necessarily coincide with that of the publishers.

BIRDAGE AERIAL

Editor "A.R." Dear Sir,

My attention has been drawn to the correspondence which appeared in the September issue of "A.R." relative to the Birdage Aerial. It is agreed that a V dipole has little directivity on its own. However, when a V dipole is placed apex to apex with a similar structure used either as a director or reflector an X type array results which is superior to the normal two element array with parallel elements, normally referred to in this country as an "H" array.

The improvement, in particular as regards front to back ratio, is so marked that X type arrays have almost entirely replaced H arrays for television reception in Great Britain. In the London area alone there must be nearly one million X arrays in use, and it seems probable that a similar trend will become evident in Australia as the t.v. industry develops.

The Birdage is essentially two horizontal X arrays stacked vertically and fed in phase so as to provide increased gain and concentration of radiation at a very low angle. As in any other type of array, the precise length of wire for resonance is a function of wire diameter. Readers will doubtless recollect the fierce arguments which used to take place regarding the precise length of wire required in the loops of a cubical quad!

The Birdages manufactured by the Mini-mitter Co. and sold in considerable numbers in the U.S.A. are fabricated with tubular elements of one inch diameter. Any attempt to reproduce the array using thin wire elements would naturally result in failure unless the dimensions were suitably increased. In the latest version, the parasitic element is tuned as a director, giving a further increase of gain, and the tuning stub is replaced by a small inductor which results in a more neat and tidy appearance.

—G. A. Bird, F.Inst.P.I., A.B.I.R.E. (G4ZU), Technical Director, Bird Patents Ltd.

MULTI-OPERATOR CLUB STATIONS

Editor "A.R." Dear Sir,

I am writing on behalf of the Northern Command Signals Amateur Radio Club. We have noted that there is no section for multi-operator club stations in recent contests. We feel that there may be sufficient radio clubs, etc., in Australia to warrant the inclusion of such a section in future contests.

Such a move may go a long way toward increasing club spirit and stimulating interest among the younger members of clubs, particularly those who have not yet completed station building, or perhaps have not yet qualified for the A.O.C.P. The latter group may be able to operate under supervision according to the "Handbook".

We would be pleased to see further correspondence on this subject.

—B. W. Bartlett, VK4UW, President, Northern Command Signals Amateur Radio Club.

MORSE CODE

Editor "A.R." Dear Sir,

I feel sure that my old friend Roth Jones is having us on. Anyone who has QSL'd VK-3BG on c.w. would confirm that he is one of the best c.w. operators in the game.

However as a good publicity man he may have deliberately over-stated his case in order to draw attention and bring about discussion on a just cause.

The trend today appears to be away from c.w. operating towards s.s.b. We traditionally associate s.s.b. with a.m., but a few moments to each mode will surely convince one that s.s.b. and c.w. are closely allied. A sharing of frequencies between s.s.b. and c.w. seems a more logical position than that of s.s.b. and a.m.

—N. Roberts, VK3NR.

Editor "A.R." Dear Sir,

Since the publication of my considered observations on a more rational approach to the allocation of our frequencies, particularly on 14 Mc., it has certainly met with a mixed reception from congratulatory letters and telegrams to abusive letters. One chap even "did

his block" in the streets of dignified Melbourne, causing unnecessary embarrassment to himself. Which prompts me to raise the question "How balanced are we?"

To add further weight to my initial remarks I solicited the aid of a business acquaintance currently employed on market research in a senior executive appointment with one of Australia's top manufacturing and marketing companies. (Incidentally he can tune a receiver quite well and read morse but has no interest in our hobby.) He has a natural flair for analysing a situation and forming his own conclusions—conclusions which, in his business, means the expenditure of a substantial portion of his company's revenue budget. The task I set him was to analyse the frequencies between 14000 Kc. and 14350 Kc. and determine the relative activity of the three modes, c.w., a.m. and s.s.b., between 8 p.m. and 11 p.m. on week days and on Saturdays and Sundays—morning, afternoon and evening. His report, which is listed below, makes interesting reading and surely substantiates my belief that we could well rid our bands, especially 14 Mc. of c.w.

DAY	C.W.	A.M.	S.S.B.
Monday	5	25	70
Tuesday	7	10	83
Wednesday	10	15	75
Thursday	5	15	80
Friday	5	20	75
Saturday morning	nil	5	95
Saturday afternoon	15	15	70
Saturday evening	10	15	75
Sunday morning	nil	10	90
Sunday afternoon	15	15	70
Sunday evening	10	10	80

These figures were taken over the full period and averaged. To the foot of his report he made the following observations:

"Although the s.s.b. stations are far more active they are all concentrated in a small sector of the band whereas the others seem to have plenty of space which is not used. While my figures show the degree of activity they do not really portray the true picture as the s.s.b. is conveying a far greater amount of communication due to the duplex type operation; the c.w. and a.m., on the other hand, repeat so much of their material."

This all makes interesting reading, especially as they were taken out in a November week when conditions were fair to good and no

contests operating. I was amazed at the low a.m. activity; the abnormally low c.w. activity was, of course, to be expected. The old die-hards for c.w. want the frequencies just to use them when and if they want them and will fight hard (mainly by the written word in "A.R.") to retain them. Surely this is as selfish as one can get.

If my band allocation submission is not acceptable it is up to us to operate a.m. and s.s.b. from 14000 Kc. up. If the top 100 Kc. are not needed by c.w. then let those whose frequencies are cramped move in.

The figures from my friend's research exercise prove beyond all doubt that very, very few are interested in c.w. today, that s.s.b. is growing rapidly in popularity due to its outstanding efficiency and more frequencies are needed for the latter. The sooner we rid our ranks of c.w. the better for all concerned. Surely the will of the majority must prevail.

—Roth Jones, VK3BG.

★

THE MIDDLE RANGE OF DX

These countries with large Amateur populations (over one thousand but less than two thousand) should assist you to obtain that DX certificate: CX, F, I, IT, KH6, KL7, LA, OH, OZ and XE.

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NOTES

FEDERAL

FOREIGN LANGUAGE

Regulation of the Handbook for the Guidance of Operators of Amateur Stations has again been amended to permit Australian Amateurs to transmit "plain language messages in any recognised foreign language."

This regulation was first of all interpreted by Departmental Officers to mean only the English language. Five years ago it was amended to permit the use of foreign languages, and two years ago this was rescinded for reasons of security.

As from 1st January, 1961, you can again conduct your QSO's in the language of the other country providing you comply with the relevant regulations pertaining to the operation of an Amateur transmitting station.

CALL SIGN CARDS

Back about 1937 the Australian National Travel Association supplied 50,000 call sign cards to the Wireless Institute of Australia due to a nice piece of liaison work on the part of Mr. Allan Brown, VK3CX. These cards depicted typical Australian scenes, animals and birds and can still often be seen gracing shack walls in Australia and no doubt overseas.

The Federal Government recently made a statement that it is to take a more active role in overseas promotion of tourist travel to Australia as part of a plan to increase Australia's earnings of foreign exchange. The Prime Minister (Mr. Menzies), when announcing the plan, said that the Government would continue its support of the Australian National Travel Association and an immediate additional grant to the Association has been approved to enable it to accelerate its present plans.

The Institute has approached the Association with a view to gaining its support for the printing of QSL cards for the Amateur Service which gives a unique opportunity for Amateur Radio to fill yet another role. Some 100,000 cards are sent out of Australia annually, providing an excellent medium for assisting the Government in its Tourism Promotion Plan. If the Institute's application is accepted and taken up, cards will be made available to all Divisions for free distribution to members.

FEDERAL QSL BUREAU

It would be appreciated by those associated with the VK3 QSL Bureau if VKs 3VJ, 3XU and 3AWX would please clear the huge (scores) of QSL cards accumulated at 478 Victoria Pde. (Thanks if already done so.)

An interesting QSL to hand for yours truly is that from VK3AYL, the recently acquired call sign of a Church of England Girls' Grammar School near Melbourne. Apart from Science Master Chapman, the operators are teenage girls, of whom Mary and Gail are "chiefs". The station is active on 7 Mc. phone using 10 watts input from a Type 3 Mark II, into an end-fed half-wave antenna and using a 4-tube rc. Rather a humble set-up, perhaps, but the girls are keen and will be more active than ever in 1961, when VK3AYL will become one of the activities of the School Science Club. The girls are designing a special QSL card for use in 1961. Contacts will be appreciated.

Can you guess who is the Federal QSL Bureau's best customer? Statistics during the past five months show that VK3NO and VK3NQ share the honor, and they're well out in front of the QSL card field of a thousand or so. Congrats OMs.

SILENT KEY

It is with deep regret that we record the passing of:—

- VK3II—T. L. Simpson.
- VK3LM—J. S. Anderson.
- VK3AMB—K. M. Wheelahan.
- VK5PB—W. P. Burford.

During 1961 the Kansas (U.S.A.) Federation of Amateur Radio Clubs announce that trophies will be awarded to the DX station working most Kansas stations. QSL cards will be necessary. Send application with date and time of all claimed contacts (but do not send cards until requested). There is no fee. Entries close 31st Dec., 1962, at 1203 East Douglas, Wichita, Kansas, U.S.A.

Another award available. The Sunflower Centennial Certificate for proved contacts (10) with Kansas Amateurs during the 1961 calendar year. One award for phone and one for c.w.-phone mixed. No fee required. Send QSL cards for signed statement by a radio club officer that the QSLs are in possession of the applicant. Cards will be returned. Send to same address as for previous paragraph claim.

At about the same time as these notes are being read, Ray VK3RJ should be only two or three days' sailing from Melbourne on the completion of a round-the-world sea trip with Mrs. Jones. For general information, Ray intends to continue his long-time jobs of Federal QSL Manager of the W.I.A. and writer of these notes for each issue of "A.R." Welcome home, Ray and Lil, and let's hear "all about it" per medium of the columns of future issues of this magazine.

—Eric Trebilcock, BERS-195, Act. QSL Mgr.

FEDERAL AWARDS

D.X.C.C.—Attention is directed to the footnote in the Countries List regarding VP2 stations. All confirmations for contacts with Leeward Is. and Windward Is. prior to 1/8/58 should be perused so that advantage may be taken of the separate listing of the various members of the Federation as from 1/8/58, e.g. confirmations are held for Antigua and Montserrat prior to 1/8/58 one credit will be given as for "Leeward Is." but opportunity may be taken to submit a confirmation from either of these places (but not both) for a further credit as from 1/8/58.

Nigeria (ZD2)—As from 1/1/61 the prefix for Nigeria has been changed to 5N2. Further advice will be issued later regarding the British Cameroons which still use prefix ZD2.

HR, Honduras.—Add to Countries List shown in "A.R." Jan. '61. (Omitted in error.)

W.A.V.K.C.A.—During Dec. '60 Awards have been issued to: No. 142, WSLGG, Leonard Parsons; No. 143, K2UJ2, Kay Gaynor; No. 144, KP4CC, Juan Castañeda; No. 145, K9EAB, Cliff Corne; No. 146, W4BYU, Ed Mau; No. 147, UR2BU, Karl Kallemaa.

—Alf L. Kissick, VK3KB, Awards Manager.

AUST. CAPITAL TERRITORY

The Canberra Radio Society held a very successful Christmas meeting on Dec. 18. About 50 members, visitors and ladies were present including visitors from Goulburn Radio Club. The evening started with general interest films and at 9 o'clock the men retired to the tx room for a rag-chew amongst themselves, and the tx went on the air on 20 mx. The band was fairly good and the big switch remained un-pulled till well after midnight. In the meantime, the ladies were entertained with films and supper.

For some weeks now, the Society station, VK1ACA, has been on the air from 7.30 p.m. on Friday evenings and continues on until the DX disappears. The station at present is putting 120w. of a.m. into an 80 mx dipole and is receiving healthy signal reports on the Hallcrafters hearing aid. A new QSL card has been printed and is available for collectors at a cost of one call on a Friday evening. Shortly, the station will be working c.w. as well as a.m. and later will go over to s.s.b.

Activity generally in A.C.T. is increasing and should grow rapidly in the next few months with the influx of population from VK3 land. The Canberra Radio Society proposes to liaise with nearby Goulburn and Yass Radio Clubs and shortly should have 50 and 144 Mc. nets operating throughout this area. At present 144 Mc. is regularly open to the south-west and with higher power might open up to Sydney. Recently one VK1, who shall be nameless, was returning from Sydney on a Sunday morning with 144 mobile gear.

Personalties: David 1ATR and his XYL (Doreen, 1YL) are leaving shortly for a few months overseas. No doubt we will see some fine equipment on his return from W land. Incidentally, 1YL has a fine c.w. fist on 20 if you are looking for a VK1 c.w. contact. She has been heard to protest at the "hullo-good-bye" QSO and complains bitterly at the card hunting Hams. So if you call her, stay and chat awhile.

John 1ZAR has a brand new harmonic, YL variety, and we understand is working very hard on a new outdoor shack. No doubt to avoid the local QRM. Congrats, John. We will congratulate you again when that v.f.o. on 144 is frightened by h.t.

Stan 1ASE is also sporting a new shack and a new s.s.b. rig. A very fine signal now that you've got the bugs out of it, Stan.

Eddie 1VP might be losing his dislike of the d.c. bands. After years on 144, he is now coming down to 50 megs. Careful Eddie, or you'll be on 80 mx before long.

Ted 1AOP has been off the air for several periods lately with odd illnesses but is now fit again and building up mobile and v.h.f. gear. We hope you avoid any further troubles, Ted.

Three members of the Society will sit for the full license in January, so by the time this is printed might have signals on the air. Several young members are taking the W.I.A. course and receiving morse instruction, so we should have a succession of new VK1 calls during the next year or so.—1ZDG.

NEW SOUTH WALES

HUNTER BRANCH

The attendance at the final meeting for 1960 was poor in numbers, however it contained the usual enthusiastic all-weather core and while they are there we will never die. Stuart 2ZDF acted as projectionist and allowed Bill 2XT to look at the slides he took on a recent Eastern tour and give a few descriptive words. President Lionel struggled up three fights of steps with a c.r.o. but the pictures of it were entirely out of phase with Bill's slides. The comedy was supplied when Lionel did as he was told and put his finger somewhere to see if it was hot—it was, and the words that followed carried me back to the time when I travelled with a bullock team in Western Queensland. Noel Divrsey, of the S.S. Zafre, was a welcome visitor and he hopes to join the ranks of the Amateurs when he gets back to Hong Kong. Others in attendance were 2ZL, 2RJ, 2AYL, 2AKX, 2QB, 2AQR and associates Sutherland, Stobbs, Munn, Blyth, Gray and Bailey. Congratulations were extended to Norm Finch in passing his Z license; might see more of you now Norm.

The meeting broke up after there was a distribution of tinned or rather canned fish. Knowing what a rush there would be to get to the supper, I left a few minutes earlier for the other room. Even then I was too late to prevent Ardent from getting an early start. Bill 2ZL, being a bit older than the rest, was last there and it was only because I reserved

W.I.A. D.X.C.C.

Listed below are the highest twelve members in each section. New members and those whose totals have been amended will also be shown.

PHONE

Call	Cer. Cnt- No. ries	Call	Cer. Cnt- No. ries
VK6RU	2 251	VK6KW	4 202
VK6MK	43 243	VK4HR	12 192
VK5AB	45 243	VK3BZ	3 176
VK4FJ	21 221	VK3GB	50 171
VK3WL	14 211	VK4RW	23 164
VK3ATN	28 204	VK3EE	10 163

Amendment:
VK3TG .. 48 112

C.W.

Call	Cer. Cnt- No. ries	Call	Cer. Cnt- No. ries
VK3KB	10 286	VK4HR	8 218
VK3CX	28 273	VK3XU	48 213
VK4FJ	29 264	VK7LZ	17 212
VK3NC	19 236	VK6RU	18 210
VK3FH	18 226	VK3YL	39 203
VK3BZ	6 223	VK5RX	23 196

New Member:
VK3AX .. 68 119

OPEN

Call	Cer. Cnt- No. ries	Call	Cer. Cnt- No. ries
VK3ACK	6 282	VK3BZ	4 231
VK4FJ	32 287	VK3HG	3 225
VK6RU	8 265	VK3WL	45 225
VK6MK	74 247	VK7LZ	23 223
VK3NC	77 236	VK3XU	61 221
VK4HR	7 233	VK6KW	13 216

him some cakes that he got any. As in past years, Mr. Stobbs, with a couple of assistants, served the coffee and very nice it was, too; so the year finished with quite a delightful evening and topped off an entertaining and interesting year of talks, lectures and films. Of course John Gray spoilt things by telling untrue stories about your correspondent; if he is not careful I'll spell his name with an "e". Several v.h.f. boys have been very active lately—2AYL, 2ZMO and 2ZNW have been making the Sydney boys talk to them. Mac 2ZMO now has a rotatable five-over-five and a well modified SCR522 and puts five-and-nine Sydneywise. Stuart 2ZDF has joined the ranks of T.Vidlots but after a few days of it went to Melbourne for a holiday. I thought Tanys had returned to Sydney. There was an excellent roll-up at Bill 2XT's joint, and he wined and dined the boys around the billiard table; thanks Bill from all of us. Associate Tony Mullins has gone and done it, but no doubt we will see him in due course; congrats to you and yours, Tony. Harry 2AFA, a stranger these days, is in the pink of health and as he hasn't had a game for a long time I took him around to Zulu Lulu so that Bill would win at least one game of billiards in 1960, but alas it was not to be. Sorry to hear that Ernie 2FP will soon be hospitalised, hope you are out before this appears in print.

Next meeting boys, Friday, 10th. Will you be there?

VICTORIA

SOUTH WESTERN ZONE

The Zone has lost one of its earliest and best known members with the passing of Leigh 3II. Forty metres can never be quite the same without his distinctive voice and the Old Timers' Net, of which he was the mainstay, seems to have passed with him. Our sympathy goes to his XYL Mary and their family and to John 3AGD.

Now that the holidays are over and the harvesting mostly finished, activity has been noted again in the Zone. Static and the lure of DX has curtailed activity on 80 mx though. Reports from Graham ZL3UG indicate that the night owls Ern 3AEM and Danny 3ADD are still burning the midnight oil. Just shows how deep your scribe has to dig to get news

from next door. Graham is the owner of a very nice s.s.b. signal and is looking for VK contacts on 80 mx. Before the s.s.b. scribe gets his foot on my neck, I must mention Neil 3HG, who is very close to his 100th country, on sideband now and also Chris 3AXU has plans to eliminate the carrier.

The 20 mx band has been letting quite a lot of VK3 signals come through here, one of them belonging to Norm 3NC. Welcome to the notes Norm! Norm spends his time on 20 mx and is well up in the DX listings on the c.w. side. He uses, if my spies are reliable, 20 watts and an umbrella of 500 ft. vee beams from his shack on the hill.

Talking of DX, we believe some was coming through to Ballangiech recently and a certain honourable gentleman turned the wick up a trifle too much and the modulation transformer went up in smoke. Rumour has it that the power transformer accompanied it also, precluding any attempt to substitute a brass modulator. However, whatever the cause, Wally 3UT we miss you.

Some new calls are noted within the Zone. Welcome to Eric 3XL and Lindsay 3ZKL. Eric is on 80 with both phone and c.w. Lindsay has gear ready for 288 Mc. using p.p. 7193s and super regen. and looking for starters. Looks like Bill 3XE is resting from the labours occasionally. (Who said this was the holiday season?) Bill has a tx for 288 Mc. but as yet no receiver.

V.h.f. activity is increasing again in the Zone with the 50 Mc. openings. At long last we have logged Bill 3ZFG with his 150 watts. Bill was too busy however with the VK4s to respond to a call from the west. Eric 3ANQ has dragged himself away from 2 metres to keep in touch with Peter 3FX who has taken the mobile to VK5 again.

The holidays brought Peter 3ZAV with his portable rig seeking high spots. It was reported that he would be on Mt. Napier but evidently Peter doesn't like the fauna up there, and who can blame him? Tiger snakes and Ham Radio don't mix too well. Instead he and his offsider set up in the fire spotters cabin on Mt. Rouse from where they made some good contacts and fooled at least one local listener who thought he was hearing 2 mx sigs from Geelong.

The holidays brought many of the Zone members down to the coast, amongst whom we found Kevin 3AKR at Warrnambool with his

power boat. After a burn around Lake Per-tobe and witnessing a masterly performance on skis by Francis Desally, Brian 3KN has been bitten and talks of forsaking the shack for the lake with a home-brew boat. So far he has no takers for the skis but Bill 3XE is nibbling at the bait. We are pleased to hear that at long last Brian has shed his armoured shirt.

A well known station to Zone members is Jack 3APL. It is nice to hear that Jack is on the job again after a long spell off work and not too busy to have no time to spare for that new rig. The new rx there has a commercial front end, 85 kc. i.f. strip and all mod-cons. The new tx will run the limit with provision for s.s.b. with a T/R switch for break in. He has also completed a transistorised g.d.o. ranging to 40 Mc.

Dick 3ABK has an occasional QSO on 40 with the reworked Command tx with a.m. or d.s.b. as you order. Pat 3ADN comes up occasionally on 80 mx, but too much DX about on 20 for John 3ARJ and Harry 3XI. John is a regular with the Warrnambool group on 50 Mc. on Sunday evenings too.

Don't forget the W.I.C.E.N. practices chaps and please note the time is now 2030 hours on 3550 kc. until further notice. Also please make a note of our Melbourne link—Bruce 3ASN and Bob 3AUK. Bob and Bruce, who are father and son and operate at the same address, are formerly VLSs from the Casterton network and as they both work at the same place near their home, are prepared to open a channel to the city for emergency traffic on call. The telephone numbers are 27-3202 at home and WY 2451 at work, so if you find yourself in a spot with emergency traffic call someone and get them to ring Bob or Bruce.

MOORABBIN AND DISTRICT RADIO CLUB

The new Committee is as follows: President, Arthur 3AWO; Vice-President, Ken 3ACS; Secretary, Alf 3LC; Asst. Secretary, Harold 3AFQ; Treasurer, Peter 3APD; Committee, Ken Seddon, Harold Hepburn, Ted Curtain, Don Haycroft; Auditor, Ian 3AXC; Film Librarian, Laurie 3CN; QSL and Certificate, Bill 3JE; Transmitting, Jack 3VT.

The new syllabus provides for activities as follows: Five crazy whist nights, three barbeques, three 80 mx tx hunts, three film nights and a white elephant night, as well as a mid-

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OBTUARY

THOMAS LEIGH SIMPSON, VK3II

With deep regret we announce the passing, after a long illness, of Mr. T. L. Simpson, VK3II.

After his early schooling at Hamilton and District College, he went on to Scotch College. From there he went to the Ballarat School of Mines and then joined the firm of Ronaldson Bros. and Tippett as an electrical engineer. Then came World War I, and young Simpson joined a Light Horse Regiment and saw service during 1915-16 with the 3rd L.H. Field Ambulance. Then in common with many other cavalry men he transferred to flying and as a pilot served the rest of the war with the 3rd Squadron A.F.C. on the Western Front. His exploits brought the awards of the Distinguished Flying Cross and the Belgian Croix de Guerre.

With the end of the war, Leigh went on to the property "Basill," at Dunkeld, and started his long life of public service. He became a councillor of the Mt. Rouse Shire and represented them and the Municipal Association in many spheres. This took him, amongst other bodies, to the Glenelg Regional Committee and in interest in the port of Portland; and to the Country Fire Authority from 1948 to 1950.

In 1939 he took his Amateur license and the call VK3II, which became so well known on 40 mx. Later when the lettered number plates were issued, he registered our number VK811 and shared, with VK390, the distinction of being the only Australian Amateurs to display their call signs on their cars.

He took particular interest in mobile work and with the call sign of VLSJF and later VLSJA was one of the original members of the Westmere Rural Fire Brigades Network, which calls became as familiar to firemen as did VK3II to Amateurs.

Mr. Simpson was an Elder of the Dunkeld Presbyterian Church and he served his church well as a director of Alexandra College. Naturally his interest in radio brought him into association with the Flying Doctor Service which owes much to the Simpson family. A brother, Dr. George Simpson, whose death occurred only a short time earlier, made the first flight to an injured patient near Mt. Isa.

Among his other interests were the Glenelg Base Hospital, of which he was one-time president, committeeman and life governor. He served on the committee of the Hamilton F. & A. Society and the Hamilton Branch of the Graziers' Association. During 1946-47 he was president of the Association.

Mr. Simpson was a keen field naturalist and a keen yachtsman on Lake Linlithgow. Lately he took up the sport of gliding and visited Benalla regularly for this purpose.

He leaves a wife, two daughters, a son, and two grandchildren to whom we extend our deepest sympathy. He leaves too a vast circle of friends in many walks of life and a place in our lives which can never be filled for such men are rare.

year party, annual picnic and Christmas party. Many visits are being arranged and lectures vary from technical subjects to travel.

In conjunction with our theory class we now have a Morse code class held every Thursday evening. As before any non-member wishing to participate may do so by simply joining our club. Contact Alf Chandler, VX3LC, at 1013 High St., Armadale, or by telephone BY 3913.

QUEENSLAND

PILGRIMAGE FOR PROGRESS

For some considerable time VK4 Division has felt that there could be much greater co-operation between metropolitan and country members in matters of vital importance in the administration of the W.I.A. in Queensland. The State capital, Brisbane, is situated in the remote south eastern corner of the State and industry and commerce have found it necessary to decentralise by creating branches in the larger provincial towns.

The Division thought decentralisation was the answer and, as my XYL, Jess, and I were proceeding northwards on holiday, Council delegated to me the pleasing duty of placing before the country chaps the advantages of forming further branches, particularly in Rockhampton and Townsville and also calling in at the various towns within the hurricane-prone

areas and offering W.I.A. personnel and equipment to the local committees for use during periods of national disaster.

Now Jess and I are only a few microamps off sixty and ordinarily lead a Darby-and-Joan existence, but when the 22nd August, 1960, dawned bright and fair, Darby and Joan became Jack and Jill as we started off in a new Holden station sedan and joined the procession of southern travellers following the sun.

Mackay: Arrived 25th August, 1960, and contacted Pioneer Shire Clerk and other local committee members and found that Mackay which is in a hurricane-prone area, is well and truly organised to meet the impact of any national disaster. Dr. I. Chenoweth, Government Medical Officer, is the moving force and claims that Mackay has the best emergency set-up in the State. I arranged for John 4FH to act as Liaison Officer between W.I.C.E.N. and the committee. John is a school teacher, amateur theatre enthusiast, singing instructor among many other things. During afternoon tea with John and XYL Millie, I found John had some excellent equipment and a dream of a tower.

Townsville: Townsville and Rockhampton are so strategically situated, geographically, that, together with Brisbane and Maryborough, they would be ideal centres from which W.I.A. affairs could be administered in such a manner that members in the remote areas could have greater participation and representation in our activities. Townsville and district Amateurs have formed the Townsville Amateur Radio Club and, although it is not affiliated, most of its members belong to the W.I.A. Upon arrival at Townsville on 29/8/60, I had afternoon tea with Bob 4RW. Bob is our staunch supporter in the north and is editor of the Townsville "A.R." notes. Dinner with Bob 4MF, who used to like me, and then, with Bob, proceeded on a shack crawl after collecting Frank 4PF. We finished up at the shack of Eric 4EJ, where there was a real gathering of the clan. I here met Charlie 4BQ for the first time and I believe Charlie still likes me. I was invited to address a meeting of the T.A.R.C. on 8/9/60 and during the waiting time received further hospitality at the hands of President Alan 4PS and his mother, Eric 4EL and Bert 4LB and XYL.

I had formed the opinion that Townsville Amateurs could not entirely see our point of view. The T.A.R.C. is a most enthusiastic band of Amateurs and its affairs are conducted most efficiently. It was quite understandable, perhaps, that they would resent any suggestion that the identity and present status of their club would be lost by absorption into the W.I.A. as a branch.

My address to them included the following as an argument for the formation of a branch:

1. I mentioned that the R.S.S.A.I.L.A. had seen the need for decentralisation and had divided its members into sub-branches, districts and branches, and that we could follow their example by forming clubs, sections and branches in our Division with the Divisional Executive in Brisbane composed of delegates from each branch.
2. Each branch would have complete self-government or autonomy in the local sphere and could approve election of members, issue certificates of membership, badges, etc., under delegation from the Division and answerable only to the Division in respect of matters of policy concerning the State or Commonwealth.
3. Each member would have greater participation in W.I.A. activities in that a motion passed by the Townsville Branch could, by being channelled through the appropriate bodies, quite possibly be adopted as world-wide procedure.
4. Each member would have greater representation in W.I.A. activities.
5. As an approved branch any motion submitted by them would affect all members, if adopted, and not just those in any one particular area.

Twenty-one members were present at the meeting, five apologies were received at the meeting and two further apologies were received by me personally. I received a most attentive hearing and at question time no punches were pulled, and if the gulf was not closed it was narrowed to the extent that it could be bridged by greater understanding on both sides. No decision was made and I gave an undertaking that I, personally, would do nothing to disturb the harmony of the club by trying to form a branch which would include only some of their members. I have every hope that the Townsville boys will form a branch and that their first job as a branch will be the approval of the T.A.R.C. as an affiliated club in their area.

Cairns: Arrived in Cairns on 10/9/60 and there met a very dynamic personality in Basil 4ZW, who hitherto had merely been a voice giving plenty of cheek over the air. Also Bob 4RW was in Cairns on holidays. Basil and his XYL Zoe saw us on every one of the 10 days we were in Cairns and did everything possible to make our stay enjoyable. A meeting was arranged and whilst waiting for the meeting I arranged for the appointment of Basil on the local committee, the secretary of which is Tom Briggs, Superintendent, Cairns Ambulance which conducts the Flying Ambulance. As a reciprocal measure the Ambulance Radio Operator, Charlie Harriman, was appointed treasurer of the Far Northern Radio Club and a 3 k.v.a. transportable generator was made available to Basil for emergency power when required. A visit to the shack of Arthur 4SM was a highlight of the Cairns' visit. Arthur is 70 years of age and his interest in radio dates back to 1911. Arthur and I nostalgically talked about pi circuits, Browning Drakes, Loftin Whites and generally had us a good time.

The Cairns meeting was duly held and 10 Amateurs were present including Harry 4OH from Mossman. The Far Northern Amateur Radio Club was formed with Basil as President and Afton Westcott as Secretary. Incidentally, these northern boys are real keen and some came 100 miles to our meetings.

Atherton: A Saturday afternoon meeting was held at the QTH of Harry 4HK, six persons being present. Thanks to Harry and XYL for their hospitality on this and other occasions and glad to hear that your son passed his scholarship. Harry, Alex 4MA travelled up from Mt. Garnett.

Innisfail: Arrived 26/10/60 and visited Civic Authorities and arranged with the Shire Chairman, Mr. Webb, for the appointment of Bob 4TK as Liaison Officer. Met Bob and XYL, Eileen, and daughter and enjoyed their hospitality. My only complaint is that Bob is so neat and tidy that my XYL Jess grabbed my ear and pointing to Bob's excellent equipment and layout, said, "What about it Mate?" I wonder what she meant.

Ayr: Arrived 30/9/60 and enjoyed the hospitality of Claude 4UX and his XYL Jess for the next few days. Claude is another of those energetic blokes with the right ideas. A meeting between Amateurs and Civic Authorities was convoked and convened at the Shire Hall and liaison established between us. Claude is A.O.C.P. instructor for the boys in the district and his success has been phenomenal. Claude's Jess and I did the sword dance over my crossed crutches with Claude at the piano.

Rockhampton: Perhaps I may be pardoned for saying that my visit to this town of over 45,000 souls was the highlight of the trip. Frank 4FN, past VK4 President, very energetic and steeped in W.I.A. lore and great was my pleasure when I learned that the Mayor of Rockhampton, Alderman R. J. B. Pillbeam, M.L.A., had by public notice, called a public meeting at the Town Hall for the purpose of forming a branch, on 8/10/60. The Mayor was most enthusiastic about Amateur endeavour and initiative especially from the point of view of national emergency and the provision of a healthy hobby as outlet for youthful energy. Frank was appointed President with the Mayor as Patron. Thanks, Frank and XYL Helen.

Bundaberg: Most Amateurs in this town, fifth largest in the State, are members of the Wide Bay and Burnett Branch and occasion was taken to address the gang at the weekly A.O.C.P. classes. Vic 4BJ, the Chief Kookaburra, was appointed Liaison Officer on the local committee.

Wide Bay and Burnett Branch: This is the pioneer branch and was formed at a meeting held on 9/8/59. Gordon 4GH is President and he has shown that the branch has the capacity to endure and develop. Classes are regularly held in the three towns in the area and membership has increased 100 per cent. since the inception of the branch. T.v.i. teams are active in the area.

It is my firm conviction that the life blood of enthusiasm must be spread throughout the State through the medium of clubs, sections and branches so that members in remote areas may participate in our activities.

Classes: One of our greatest sources of recruitment of members is the A.O.C.P. Class. Our greatest lack is a good correspondence course which would be available to all members. We gratefully acknowledge our indebtedness to Norm Beard of VK2 for his invaluable course supplied to VK4 members. We now understand, and appreciate, that it is impossible for Norm to continue to supply in the numbers we require and I here suggest that Federal Executive might consider the possibility of having courses printed or roneoed in bulk and supplied to the various States—for a fee of course.



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SECTION A—PRIMARY TERMINALS: ANODE 3, C.T. 4, ANODE 5

Modulator Ohms A-A	R.F. Amplifier Load Resistance and Secondary Terminals						
	8-9	8-10	8-11	8-12	8-13	8-14	8-15
2000	1000	1500	2000	2500	3000	4000	5000
2500	1250	1880	2500	3120	3750	5000	6250
2800	1400	2100	2800	3500	4200	5600	7000
3000	1500	2250	3000	3750	4500	6000	7500
3400	1700	2550	3400	4250	5100	6800	8500
3800	1900	2850	3800	4750	5700	7600	9500
4000	2000	3000	4000	5000	6000	8000	10000

SECTION B—PRIMARY TERMINALS: ANODE 2, C.T. 4, ANODE 6

Modulator Ohms A-A	R.F. Amplifier Load Resistance and Secondary Terminals						
	8-9	8-10	8-11	8-12	8-13	8-14	8-15
2000	570	850	1140	1420	1710	2280	2850
2500	710	1070	1430	1780	2130	2850	3560
3000	850	1280	1710	2130	2560	3420	4270
3400	970	1450	1940	2410	2910	3880	4850
3800	1080	1620	2160	2700	3250	4350	5400
4000	1140	1710	2280	2850	3420	4560	5700
5000	1430	2140	2860	3570	4270	5700	7150
6000	1720	2570	3430	4300	5120	6850	8600
6600	1890	2830	3770	4710	5650	7550	9400
7000	2000	3000	4000	5000	6000	8000	10000

SECTION C—PRIMARY TERMINALS: ANODE 1, C.T. 4, ANODE 7

Modulator Ohms A-A	R.F. Amplifier Load Resistance and Secondary Terminals						
	8-9	8-10	8-11	8-12	8-13	8-14	8-15
2000	400	600	800	1000	1200	1600	2000
2500	500	750	1000	1250	1500	2000	2500
3000	600	900	1200	1500	1800	2400	3000
3400	680	1020	1360	1700	2040	2720	3400
3800	760	1140	1520	1900	2280	3040	3800
4000	800	1200	1600	2000	2400	3200	4000
5000	1000	1500	2000	2500	3000	4000	5000
6000	1200	1800	2400	3000	3600	4800	6000
6600	1320	1980	2640	3300	3960	5300	6600
7000	1400	2100	2800	3500	4200	5600	7000
8000	1600	2400	3200	4000	4800	6400	8000
9000	1800	2700	3600	4500	5400	7200	9000
10000	2000	3000	4000	5000	6000	8000	10000

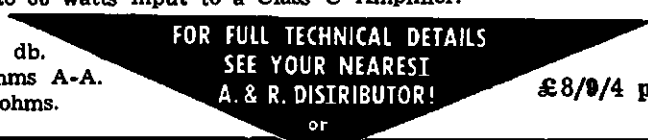
The following example shows the use of the chart:—

- (1) Modulator load impedance: 3400 ohms A-A. (2) Class C Amplifier D.C. voltage: 550 volts.
 (3) Class C Amplifier D.C. current: 130 mA. (4) Class C Amplifier load resistance: 4250 ohms $\frac{(2)}{(3)} \times 1000$.
 (5) Class C Amplifier power input: 71.5 watts $(2) \times (3) \div 1000$.

Locate the Modulator A-A load impedance of 3400 ohms in the first column. Sections A, B and C all list this value but the required secondary load 4250 ohms is available only from terminals 8 and 12 in Section A. Use primary terminals 3 and 5 (C.T. 4) and secondary terminals 8 and 12. Other impedances may be obtained within the limits shown in any one Section of the Chart by multiplying or dividing the primary and secondary values on the same horizontal line by the same factor. Maximum D.C. voltage: 750 Volts primary and secondary.

Maximum D.C. current: 130 mA. each side of primary. Maximum D.C. current: 130 mA. in secondary.
 Power rating: 40 watts, for modulating up to 80 watts input to a Class C Amplifier.

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 Impedance range, primary: 2000 to 10000 ohms A-A.
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In conclusion I would like to say that my partner and greatest help on the trip was Jess, my **XYL**. She is always "having a crack" at Amateur Radio but she is always ready with encouragement and practical help.

—S. J. Armstrong, **VK4SA**.

MARYBOROUGH

Gordon **4GH** regularly on 7 Mc. and has even been heard on 14 Mc. Arch **4CB**, in between t.v. openings, working some new countries on 21 Mc. phone—**FQ8** is the latest. Con. Leacy, zone secretary, now picking up after a spell of ill health. Here's hoping for better health in '61, Con.

Ron **4BG** back to his old haunts on 14 Mc. c.w. Doing better since re-connecting the feeders to his folded dipole. Grahame, ex-**4DJ**, will soon be on under a **VK9** call Bill **4SW** is mainly operating on 7 Mc.

TOWNSVILLE

The New Year is now only a few days old. Just wonder how many has made the new resolutions and broken them already.

Conditions on the various bands have not been the best, though at times 21 Mc. opens up for some choice **DX** to appear. Have been lucky enough myself to land **EP5** and **AP2** on phone for new countries, while on 14 Mc. managed to make a contact with **FB8KK** on Kerzulen Is.—his first **QSO** for 1961.

Pleased to hear the southern boys on 50 Mc. calling the **Z** boys in **Ayr** during the Contest. At times good openings, but so far this year Contest scoring is below last year's Ross Hull Contest.

Very pleased to hear old voices back on 7 Mc. Frank **4FC** at Ingham has a new resolution to let the grass grow while he calls **CQ**. Alec **4MA** from Mt. Garnett put in spare time on the band, while Harry **4HK** uses a portable rig while re-building—very nice signal and l.b. modulation. Basil **4ZW** still wiles away the time talking to Bob **4TK** and dodging the washing up. Charlie **4BQ** took off for the Tablelands but think foods beat him; was not away long enough. Bill **4ALY** mooching around the north, so far has not called, maybe too busy with Bob **4CR** in degassing **807s**.

How many read the article in *Readers' Digest* January, "Calling **CQ**". Key to airwave adventure. Very nice to show the scoffers and a boost to the many who are hoping somebody to do the same.

See by last "A.R." that some chaps in the fringe areas of t.v. are having problems. Can anyone say just what is the official view with regard to these areas? See Correspondence page "A.R." 1960. My head not yet chopped off.

SOUTH AUSTRALIA

The monthly general meeting of the Division that has the least number of "Squares," to wit, the **VK3** Division, was held in the club rooms to a capacity audience of 151, being one more than that of the same meeting last year, and took the form of the usual Xmas Get-Together. The attendance beat the all-time record for this type of meeting by one, and again proves just how popular this gathering together in festive spirit has become with all and sundry. Official guests included Mr. Kerr from the Emergency Fire Services, Mr. Traynor and Mr. Pike from the P.M.G.'s Dept., and a number of other celebrities about which I am unable to say anything, owing to the fact that somebody purloined the visitors' book, but this I can say quite sincerely, visitors and members all thoroughly enjoyed themselves and the convivial spirit displayed throughout the meeting had to be seen to be appreciated.

The President and Chairman of the Division, Lloyd **5OK**, opened the meeting and read out the list of new members, and as the meeting was in the process of ratifying them, up jumped Joe **5JO** and in considerable haste said, "Mr. Presamsfeld, I hereseejod, move theoply allotpdu be suspendourhaert." Cool as the proverbial cucumber, Lloyd, without blinking an eyelid, and giving the impression that he had understood every word that Joe had said, gracefully inclined his head and with a sad smile on his lips said, in a voice broken with emotion, "It has been moved that all business be suspended until next meeting," and before he could say anything more, 150 voices said in unison "seconded".

Now if you have read the opening of this month's notes, you will have by now discovered that 151 members were present, which means that one member did not second the motion and despite the hostile glances from 150 members present, Luke **5LL** stood his ground, or perhaps, it should be, sat his seat, and exchanged glare for glare. All of those standing immediately called out "Division," and before you could say s.s.b., those foolish

enough to stand up for the division remained standing all night, and those canny ones who called "Division" were comfortably seated with grins on their faces like cheshire cats. Luke, by this time, had realised that for once in his life he had said the wrong thing and spent the rest of the night explaining to the standers-uppers and at the same time received the plaudits of the cheshire cats. Whilst all this was going on, the President had become a sobbing wreck at the lack of business acumen on the part of his flock of morons, and was led gently away by one of his sympathetic councillors toward the kitchen, from whence for some considerable time his grief-stricken sobs could be heard at regular intervals, together with the noise of Coke bottles being dropped on the floor. To save further embarrassment to all concerned the lights were gently lowered and the first film appeared on the hastily erected screen.

Three films were shown, a Walt Disney story about the busy Beaver (I had an attack of conscience half way through this film!), an excellent cartoon on the common cold, and to wind it up, and also to give the viewers a chance to sharpen up their teeth for supper, an extremely interesting film of the well known **VK4** coral reef. I have seen quite a number of films at our general meetings over the past years, and I can say without any fear of contradiction that these three films were outstanding and far and away the best that we have ever seen, and a pat on the back goes to Neil **5ZAW** who arranged the screening.

At this point in the proceedings the chairs were moved back, the tables were set up, the goodies were brought on, and all present prepared to do battle unto the death, and then disaster struck. It was discovered that the milk supply was non est, and consternation reigned supreme. Apologies were the order of the night, and although nobody seemed to mind, it was unfortunate that it had to happen. Several stories went the rounds concerning the reason for the missing milk supply, but I do not subscribe to the one which said that Doc **5MD** left it until dark to get the milk and thought it was Strawberry he was dealing with, whereas he found to his dismay that it was Ferdinand. He was still puffing when he reached the meeting, but I am not one to judge by appearances, although he did appear a little pale and wan!

Les **5LC** caused further consternation when he had the audacity to ask for a spoon to stir his tea, but after a frenzied search in every available cupboard the missing spoons were found. Wouldn't it just be like Les to ask for a spoon to stir his tea? He is probably a direct descendant of Oliver Twist! Anyway, despite all these distractions, everybody seemed to enjoy the goodies, and as usual the remains of the orgy were taken to the St. Mary's Home for Children, and once again the Matron of the Home extends her grateful thanks for remembering them.

All in all, a jolly good night which was thoroughly enjoyed by all present, and reflects great credit on the members of Council who were responsible for the arrangements, both before and after the meeting, and as I was carried from the supper room to my car by sixteen or seventeen of the members, I was speechless in praise for their efforts and could only say "Burr Burrp."

Jim Paris was in charge of the food preparation in the kitchen, and must have put on two or three stone in weight from the beginning to the end, judging by the bulges in the most unlikely places, but after all he did a great job and could be pardoned for sampling the wares now and again, after all he wanted the best for the guests!

Cec **5BZ** was noticed to the fore at the meeting and was looking well following his recent trip to the Snowy River scheme in **VK3**. Cec, as you know, is one of the Trustees of the **VK5** Division and a master of the spoken word, which he suavely demonstrated when I said it was bad luck about there being no milk. "Oh that is nothing," he graciously said, "I don't drink milk myself!" "I am alright Jack," they call him!

A real old-timer in Arthur Cotton (ex-**5HY**) came up to me at the meeting and said that he had left my little bit of supper in the kitchen, for which I somewhat surprisedly thanked him. Several more of the members also came up and told me the same. Suspecting something afoot, I made a few judicious enquiries, only to find that Keith **5KH** had announced over the **5WI** session to bring a basket supper and a little bit for "Fancy." How low can one get?

Heard **5KK**, the Prime Minister of Luchdale, heard on 7 Mc. on New Year's Day working all and sundry. Announced that Joe **5JO** was his house guest for the week-end and was still wrapped in the arms of Morpheus. Heard Joe later and he sounded quite fit and well. Un-

derstand that he was on the way to visit poor old Jim **5LM** but heard the bad news of his passing when he called into Arch.

Ken **5DM** also heard on N.Y. morning bemoaning the poor conditions on the band for N.Y. eve and not being able to exchange seasonal greetings with any of the boys. To cap it all, he said that the planes were flying up and down the passage all night and slamming the doors as they went through. Frank **5MZ** paying a visit to the S.E. including Mt. Gambier, and by now has returned to the big smoke quite convinced that the S.E. boys are a great bunch of fellows. Was heard plaintively calling for Carl **5SS** before he left, but no Carl could be heard. You should have made a noise like a budgie Frank, that would have brought him out.

I thought that I had heard everything in Amateur Radio, but I never thought that I would ever hear Luke **5LL** say that he never turned the radio on at all during N.Y. eve. Seems that t.v. claimed his attention and he forgot, of course it might have been because his outlook was a little sour at the time, he broke an axle on the last day of the year!

George **5RX**, our local certificate hunter, added another one to his belt last month when he received his much sought after W.A.P. certificate. The number of the certificate was only 10, which leads me to believe that it will sojourn on Wilkes some time this month, and find a home among George's rare ones.

Brian **5CX** (ex-**5ZCX**) arrives home from his to celebrate his return to the land of civilisation he will walk up the aisle with Gwen. No further information available on Gwen except that she is a **VK3**, but I have my spies at work and expect all of the gen any day now. Joe **5JO** has been maintaining skey with him for some time and possibly he will give me all the details if I put the vacuum pump on him.

Norm Colman (he who is addicted to diving down trapdoors into cellars and lobbing on his head) is up and about again and looking none the worse for his experience. The latest information on Buck **5DA** is that he is making slow progress toward his normal health. Incidentally, I had a fortnight down with bronchitis myself, but did anybody ring me up and enquire about my health? Did anybody make an announcement concerning my serious condition at the general meeting? Did anybody give me a cheerio over the **5WI** session on Sundays, and say that they hoped that I would soon be well again? The answer is no, I repeat NO, and why? Simply because Council with its usual disregard for my feelings clamped down with a news blackout, even though they knew I was uncertain as to whether to choose a shovel or a harp. I am cut to the quick.

This Morpheus joker must have got around a bit on N.Y. morning. He had a strangehold on Keith **5WI** whose alarm clock failed to go off in time for his usual **5WI** session, and he eventually staggered out full of apologies and did his usual fine job on the session. That clippety-clop sound that was in the background of the session for the first ten minutes was his tongue dragging on the ground, so they tell me. You should have heard the mob ducking in and out on the frequency saying "Hello Test" and then having a quick listen. You should be highly pleased with the audience reaction Keith, they did everything except shout and whistle and stamp their feet. Leith **5LG** would have done that too, only he couldn't get them more than three inches off the floor until later on in the afternoon.

One never knows when or where one may come in contact with a would-be or ex-Amateur. The other day my **XYL** tricked me into staying in bed for a couple of hours on account of my cold and before I knew where I was the doctor was ringing the door bell. My wife let him in, ushered him into the bedroom, and then discreetly withdrew, closing the door behind her to await the dread verdict. Well, to make a short story longer (And How!—Ed.), he ran the rule over me, complimented me on my athletic figure and muscular build, and then on my asking him when I could go back to work, he said, "What do you do?" I told him that I was at the best broadcasting station in the Commonwealth, if not in the world, and was somewhat amazed to have him tell me that he was very keen on radio, especially Amateur Radio. He said that he had been down on several occasions to Doc **5MD** for some code practice, but somehow or other his medical studies had prevented him going or with the ticket. Well we had quite a long talk on the hobby of Amateur Radio, and of course whilst all this was going on, my wife was pacing up and down outside the bedroom door prepared for the worst. Finally, unable to stand the uncertainty any more she gently opened the bedroom door and with a very woe-begone face

said, "Is he very ill doctor?" The fact that the said would-be Radio Amateur Doctor was sprawled across the bed demonstrating the GAZU beam with the aid of his stethoscope and a couple of boxes of pills did not improve the situation, and by the time that my wife had finished her thesis on Radio Amateurs in general, the doctor had clambered into bed with me in self defence.

Although he left the house in quite a hurry we managed to get out of him that the germs had come from VK3, probably on a Xmas card, and believe it or not, on checking through the thousands of cards from VK3, well hundreds anyway, sure enough on a card from Ken 3AFJ and family, there were strange little men drawn in ink on one of the pages and plainly labelled germs. Well, how do you like that, and me always so careful where that family is concerned. Never mind, my turn will come, I've got a team of germs that will lick theirs any day, but what made me take to my bed was the fact that after Joan had sent me that book on aeroplanes and kidded me up a tree, she had to have a hand in such a dastardly plot. My faith in womanhood is broken for ever, well for a while anyway! Joan, how could you?

I have it on good authority that a regular exodus from Council will take place at the end of this 1960-61 financial year, and strangely enough all those giving it away are in no way disgruntled or sour. It just happens that business ties, domestic ties and the like have caught up with them all at the same time. Of course I have been sworn to secrecy and cannot tell you that the President, the Vice-President, the Secretary, the Treasurer, the Federal Councillor, and a couple of others will be throwing in the towel, but no doubt you will hear it from someone or other, and if you do, don't forget that I gave you a little hint. Wow! Even I might have to go back on the Council again. Oh dear, that will be no good, I wouldn't be able to rubbish us, nor would us be able to punish I. Oh dear, oh dear!

I asked Keith to blow down the ears of all of my spies over the W.I.A. session on New Year's Day, the first of the month and no news whatsoever. Well, you should have heard the comments on the call-back. I got the impression that I was Simon Legree, although just who was Uncle Tom I will never know. However it had the necessary effect, because Uncle Tom 5TL from Renmark came dashing in with his reports the next day, and had even extended his activities to Alice Springs.

A local Alice boy by the name of Graham Jenkins has passed the Z license (under the coaching of Frank 8AE and will be doing circumstances permit. Nice work Graham, and you too Frank, if everybody gets one more into the ranks our chance of survival gets better. Don't forget, weight of numbers always counts with officialdom.

Les 5UX by this time will have taken up his residence at Alice, and will be wielding the chalk at the Alice Springs East School as headmaster. He dropped me a line to say that he was looking out for a good rx as he expected to be the only VK8. How wrong can one be? The place is teeming with them Les! Not too much of that cane old boy, whacko, fancy getting six handers from that hunk of muscle, given with his usual smile, no doubt.

Fred 5MA not very active on radio at the moment, is spending most of his time on "standby" in this hot weather, and has had a number of interruptions to both leisure and slumber, because of being wanted elsewhere.

Hughie 5BC is in the midst of the home preserving season and is spending a lot of time washing jars and bottles for the apricots, etc., and probably will be a little more active on the air after the jam season. I have cleared six shelves in my pantry, Otto, will that hold it all??

Tom 5TL is happy again. He is no longer making appearances in the national programme for the A.B.C., although he has not stayed off the air to achieve this distinction, and has been playing around with a slow motion dial that he acquired from a certain VK3 disposals shop and reports good results. So much so, that he has written a screed of the conversion of the dial for the VK3 journal, which I

will have great pleasure in delivering to them. Nice work, Tom, wish that there were more like you. Not too many of course!

My shots at Comps 5EF on the matter of s.s.b. have given us both, and probably others, plenty of amusement, but I was stricken to the core the other day to receive a letter from Stan 2EL in which he alternately patted me on the back and kicked me in the part where I stick out the most. I am that used to VK5 never taking me seriously that I did not for one moment think that anyone else would, to say nothing of the fact that I did not think that my humble efforts in the magazine would be read by any other Division, that I received something of a shock to note that my remarks possibly could have offended, unconsciously on my part, a number of the addicts of s.s.b. To these gentlemen, and any others who may have made the mistake of taking me seriously on perhaps some other subject, I offer my humble apologies. I never realised that I had the power to stir the passions of man with my pen!

Half of VK5 must be on holidays travelling around and around, judging by the post cards that I have received following my aforementioned request to Keith 5WI to crack the whip around my team of spies. One card was addressed to Miss P. Parsons and was duly sent on by me to my daughter, only to be returned to me by my son-in-law (whom I think has always been a little dubious of me) with the suggestion that the P. was meant for Parsy, and the sender was Spy 999, or better known as Frank 5MZ, temporarily based at Mount Gambier, and having the time of his young life visiting all the local boys. Apparently his accident rating is still OK because at the time of writing no reports noticed in the paper of anybody falling in the Blue Lake! Incidentally, Frank took the passing of Jim 3LM pretty hard, they were a little more than radio buddies. Frank describes him as a real "White Man".

Another card from Joe 5JO who is apparently on a round trip because this one came from Currency Creek, near Victor Harbour. (In the money, Joe? Get it? In the money, Currency Creek. Oh I am a wit, I am killing myself.) Anyway, Joe called on Fat 5KM and Ron 5KN who apparently spend all their time fixing up the local goggle boxes and therefore only have time for Amateur Radio when emergencies occur, according to their past record anyway.

Received a long letter also from a new spy in Frank 8AE from Alice Springs, confirming an earlier paragraph received from Tom 5TL and also details of the Alice Springs Youth Centre, which I am keeping for next month. Many thanks, Frank.

My abject apologies to the Elizabeth boys, no notes this month. Ian 5QX scribbled me out a few at the Xmas meeting, but on looking back I distinctly remember complaining as to how tough one of the Ham sandwiches seemed to be, apparently the said few notes got into that sandwich because I certainly can't find them. Oh well, nobody can say that I don't digest the news from my spies!

Just as I was putting these notes to bed, a couple of days late, incidentally, news reached me that 5PB (known to me as Wally Burford) had passed away a few days before Xmas Day. He had lived at Naracoorte for many years, but about nine months ago he had shifted to VK3, and we in VK5 had lost touch with him. Lacking at the moment any details, there is not much I can say, except that I was sorry to hear the bad news and hope that his passing was peaceful.

TASMANIA

The club room fund has made considerable growth just recently. Several donations have been received for which the committee and the Council are very grateful. In addition to donations, the auction of donated surplus gear at the December meeting yielded a profit of £35/2/-. The final profit figure from the Cabaret held on 18th Dec. has not yet been determined. While the profit from this function was not great, yet we can be satisfied with the function as such. We have learned how to conduct such a function, we have learned from our mistakes which will be rectified at the next such function, and there are two results which encourage the committee very much indeed. First, the social side of the Institute at the Christmas season was very well catered for, and secondly, the attendance from non-members and the publicity in the eyes of the general public can only be of assistance to us in the future.

Christmas has gone once again, and the portable stations heard were 7CH, 7KA, and 7MF. As a result of the holiday season, the attendance at the January meeting was far below

the usual meeting. We had a most enjoyable and instructive presentation of slides of various aerial systems presented by Len 7LE, and the cordial vote of thanks afterwards was well merited.

Members may have noticed that our VK7 Bulletin is now posted at bulk postage rates and is registered as a periodical with the Post Office. This result has been achieved by the joint efforts of Tom 7AL and Ken 7KA, and will result in a considerable saving of Institute money per year. It was a job well done, chaps.

Remember the National Field Day Contest, the second week-end in February. Go out into the field if you can, or take part from home.

Mike, of the Shortwave Listeners' Group, has passed his examination and has gained his limited license. Mike, however, hopes to gain his code before taking out a call sign. Ted 7ZAU also hopes to gain his code and to have a full license by the end of February.

Finally, as convener of the club room fundraising committee, I would like to thank publicly Brian 7ZBE and Myles 7MF for their excellent and well-sustained work on behalf of the cabaret recently held. Although they did not do all the work, yet their efforts materially and substantially ensured the success the function undoubtedly was.

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EDITORIAL

★

GROWTH

THE Amateur population of Australia is growing. From some 3,000 in 1957, it is now over the 4,000 mark in 1961—this is quite a spectacular increase by all standards, but it may be even more surprising to learn that in other countries, such as Japan, the growth has been even more prolific. There, in a period of some three years, the population has grown from 3,500 to over 6,000—nearly double. In approximately the same proportions, the W.I.A. and the J.A.R.L. have also increased their memberships, but the Institute has now lost its status as the largest Amateur Society in Region 3. Our aim should be to reclaim that status.

The popular catch phrase—"It pays to advertise"—has always been enunciated as a healthy policy of the Institute, but it was substantiated with a vengeance a few weeks ago. It started from a short article on Amateur Radio in the January Reader's Digest. This excellent publication has a wide distribution throughout Australia and its articles are read by thousands of people and it was gratifying to the Institute that nearly 70 of its readers wrote asking for more details of our universal hobby. These enquirers were widely spread throughout the Commonwealth, and such a response to one short article was unexpected. Naturally your Executive took this opportunity to

endeavour to recruit some new members from those interested enough to enquire.

This wonderful response produced a counter reaction—it pointed out that there are still many citizens in Australia and elsewhere who have no idea at all what Amateur Radio means or represents. Whilst it is always pleasant to receive free publicity from unsolicited sources, the matter rests squarely on our own shoulders to promote our own advertising and recruit drives. The Divisions have done a good job in the last few years in maintaining our membership and in most cases of increasing it. However, no one would be foolish enough to say that more could not be done in this direction.

If our Institute, the oldest Amateur Radio society in the world, is to maintain the status we hold and to continue to grow, we must be prepared to engage in even more strenuous efforts to obtain new members. If every member of the Institute publicises the work and worth of the Amateur in his business and social activities, and obtains only one new member, then our present strength in a very short time will be doubled. The veracity of the phrase—"It pays to advertise"—will then be ideally demonstrated.

FEDERAL EXECUTIVE.

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HIGH STABILITY V.F.O.'s. OF RECENT DESIGN*

YU1FR introduces Amateurs to some new European ideas on extremely stable v.f.o.'s.

TIMA POPOVICH, YU1FR, ex-YU7BJ

In spite of the wide commercialisation of Ham gear these days, there are still enthusiasts who prefer to build their rigs at home. But, if only for the sake of our own edification, it will do no harm to discuss a few of the recent improvements in oscillator design, in some detail.

The problem of obtaining high frequency stability in variable frequency oscillators always presents a hard nut to the constructor, and not only to the Amateur constructor. No wonder that many efforts were made throughout the years, particularly since W.W. II. (both by Amateurs and Manufacturers) to develop and improve oscillator design in such a way as to approach stability characteristics close to those of crystal controlled oscillators.

There are a few oscillator types, developed experimentally by the laboratories of some radio manufacturing firms, in which frequency stability in continuous operation goes up to ± 0.001 per cent. Because of their great stability and relatively simple design, these devices are quite tempting to the Amateur builder, too. Of course, built with Amateur resources, similar devices will be less perfect, but still superior to the conventional oscillators.

Basically, all these circuits are of the electron coupled type with certain experimentally developed improvements.

CZECH TESLA OSCILLATOR

The Czechoslovak "Tesla" laboratories have developed an oscillator which presents considerable improvements over the popular series tuned Colpitts (better known as the Clapp circuit). Just as in the case of the Clapp, the coupling between the oscillating tank circuit and the tube is very loose. However, an important improvement is the fact that, unlike the Clapp, not only is the input capacitance of the tube shunted by capacitors of large value, but also the other interelectrode capacitances. This results in better stability by eliminating tube interelectrode capacity changes, as well as changes due to fluctuations of electrode voltages.

This oscillator is characterised by a remarkable frequency stability and low harmonic content, as well as constant output power over an extended frequency range.

The high stability of the "Tesla" oscillator offers the possibility of building it for any desired band without resorting to frequency doubling or tripling, usually necessary in compact mobile equipments.

The schematic diagram and component data, as presented by the Roumanian magazine¹ are shown in Fig. 1. The tuned circuit data is listed in the table.

Tuning is accomplished by the variable capacitor C9. Better results are obtained by using a ganged, double section capacitor, whose second section C10 should be connected across C1. This, however, involves more complicated construction. The range of bandwidth depends upon the values of the capacitors C1, C2, C3, C4 and C9.

Coil inductances are adjusted by powdered iron cores. The Table contains data for six different Amateur bands, and the values for the 72-73 Mc. frequency range are given to make possible the coverage of the 144-146 Mc. band by doubling in a subsequent stage.

acitor (from oscillator plate to the following stage) should not exceed 100 pF. in value.

For break-in operation the oscillator may be keyed in the cathode circuit.

For the 72-73 Mc. band, C4 is the tuning capacitor.

CLAPP-FRANKLIN OSCILLATOR

Another factory conceived high-stability oscillator, successfully built and employed by some European Amateurs, is the so called Clapp-Franklin oscillator, developed by the German Telefunken laboratories.²

As the name itself indicates, this design combines the good properties of

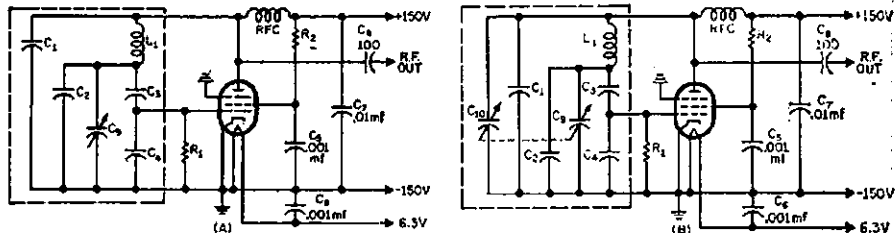


Fig. 1—The "Tesla" oscillator circuits and L/C charts developed in a Czechoslovak laboratory. Circuit A uses a single tuning capacitor while B employs a dual unit, C9 and C10.

Band Mc.	L ₁ μH	No. of Turns	Wire Gauge No. B & S	Tuning with Single Capacitor C ₉					Tuning with Two Ganged Capacitor C ₉ -C ₁₀				
				C ₁ mmf	C ₂ mmf	C ₃ mmf	C ₄ mmf	C ₅ mmf	C ₁ mmf	C ₂ mmf	C ₃ mmf	C ₄ mmf	C ₅ mmf
1.8-2.0	25.0	46	30	565	30	4800	470	250	500	25	5000	580	115
3.5-3.8	18.0	33	28	286	20	2600	250	125	245	12	2350	225	75
6.0-7.15	7.0	24	24	140	10	1470	130	11.0	134	7	1250	125	0*
14.0-14.35	3.5	17	22	68	5	700	68	11.0	62	3	600	57	7
21.0-21.45	2.5	14	20	44	3	475	37	6.5	41	2	350	33	7
28.0-29.7	1.7	12	18	31	2	300	20	11.5	26	2	210	21	7
72.0-73.0	0.7	1.7	14	8.5	-	130	2.8	1.5	7	-	150	2.8	2

* L₁ wound on 15 mm. diameter form (0.5906 inches).

* Original article shows C₉ as 0 mmf. This is probably an error, suggests Timia, and should be in the vicinity of 10 mmf.

Table I—Component values for the single and double tuned Tesla oscillators shown in fig. 1. The 72-73 mc range is provided for doubling, in a subsequent stage, to the 144-146 mc band.

Tubes recommended are 6AK5, 6AC7 or similar types. Certain dual triodes may also be used. In this case, one of the triodes serves as the oscillator, while the other one is used as an amplifier. For good results, only high quality components should be used.

The tuned circuit is housed in a shielded box. Special care must be taken to provide mounting of the components to permit spacing the coils well away from the sides of the box (at least two times the diameter of the coil), to prevent drastic reduction of its Q by the shielding.

Resistor R2 is chosen within the limits of 1,000-10,000 ohms. Upon its value depends the coefficient of harmonics at the oscillator output.

The value of R1 is chosen between 27,000-75,000 ohms. The coupling cap-

the Clapp and Franklin oscillators into one unit, tending at the same time to minimise their respective deficiencies.

The Franklin circuit, shown in Fig. 2(A) contains two tubes, one of which acts as the oscillator proper, while the second one serves as an amplifier and phase inverter. Values of the components are chosen so as to ensure a very loose coupling between the oscillating tank circuit and the tube, just as in any high stability unit. As a result of the negligible influence of the tube elements on the frequency generating tank circuit, the frequency stability of the Franklin oscillator comes comparatively close to that of a crystal controlled unit. The amplified feedback voltage

* Reprinted from "CQ," December, 1960.

¹ "Radioamatorul," February, 1957, p. 24. Official publication of A.V.S.A.P., Bd. Dacia 13; Bucharest, Roumania.

² YO3FT, "Radioamatorul," March, 1957, p. 16.

is returned to the grid through a small capacitance.

In the Clapp circuit, shown in Fig. 2(B) a high Q circuit is assured in a somewhat different way. The tube is tapped across only a small portion of the oscillating tank circuit by means of a capacitive voltage divider consisting of three capacitors in series across the coil. The resulting tank circuit has a high L/C ratio, thus providing a low tank current. In addition, the values of C1 and C2 are quite high compared to the tube capacitances. Hence, possible changes of tube interelectrode capacitances during operation cannot appreciably affect the frequency of the tank circuit.

The greatest shortcoming of the Clapp circuit rests in the low value of the radio frequency output voltage generated, which is dependent upon the setting of the series tuning capacitor. This results in uneven excitation of the following stages. The broader the band, the more pronounced the undesirable effect.

This inconvenience is overcome in the Telefunken circuit by combining the Clapp and Franklin circuits.

As shown in Fig. 2(C) the feedback voltage is not applied to the grid of the oscillator tube, as in the Franklin circuit, but to the junction of the two

voltage dividing capacitors, C1 and C2. The use of the conventional parallel tuned tank circuit produces a constant output power over a broad frequency range. This in turn provides level excitation of the following stages.

Fig. 2(D) shows the schematic of the tried and proven oscillator developed at Telefunken.

The resonant tank circuit is tuned to 3.5 Mc. The output power is approximately 1 volt effective, and output impedance is 100 ohms. For better thermal compensation, C1 is made up of combination of two parallel ceramic condensers, 15 pF. and 35 pF. respectively.

Tubes V1 and V2 may be triodes, or triode connected pentodes. A dual triode having separate cathodes can also be used.

Tube V3 is a high conductance pentode in a cathode follower circuit. The plate of this tube is shorted to ground for r.f. by a 5,000 pF. ceramic capacitor. Capacitor C2 is also ceramic, while C3, C4 and C5 are micas.

For the required inductance of 21 μH. the oscillator coil should be 25.5 turns of No. 24 wire on a ceramic form 1½ inches in diameter.

For wiring, No. 18 (or larger) wire is recommended. Particular care should be given to mechanical stability and rigidity of the entire unit, as well as to the quality of the components.

The unit should be placed in a metal box, lined with two or three layers of heat insulating material.

RADOSLAV CIRCUIT

The v.f.o. circuit to follow is an Amateur design presented by Rakar Radoslav in the "Radioamater" magazine,³ the official publication of the Yugoslav Amateur Radio Union (S.R.J.).

Figures 3(A) (B) and (C) illustrate how subsequent improvements were developed in the famous e.c.o. and Clapp circuits, by retaining and combining their desirable properties.

The resulting oscillator circuit has a crystal-clear note of constant pitch, excellent frequency stability characteristics and the device is easy to build.

The improvements in the e.c.o. and Clapp circuits are as follows:

(a) In the Clapp circuit, the capacitive voltage divider connected between the grid and ground does consume a certain amount of the already small energy available at the grid. In the newly developed circuit the cap-

active voltage divider is connected between the plate of the oscillator tube and ground. The amount of r.f. energy available at the plate being much higher, the possible effect of losses upon the circuit are of little consequence.

(b) In the Clapp circuit the suppressor grid serves as an electrostatic shield inside the tube, provided a pentode is used. In this circuit this is accomplished by the control grid with improved frequency stability.

(c) In the Clapp circuit the capacitances forming the capacitive voltage divider reach 1,000 pF. in value, while in this circuit they are of 2,000 pF. each. This insures a better cancellation of the results of changes in interelectrode capacitances during operation.

(d) In the Clapp circuit only the grid to cathode capacitance is shunted by a large capacitor, while in this circuit changes in all the interelectrode capacitances of the tube (grid-vathode, grid-plate, plate-cathode) are cancelled out.

(e) The working quality of the Clapp circuit, according to its designer:

$$N = 10 \sqrt{\frac{g G_m Q}{f C_m}}$$

while in this circuit:

$$N = 10 \sqrt{\frac{g G_{m\mu}}{f C_m}}$$

Where: N is quality of the circuit.

G_m is tube transconductance.

Q is the quality factor of the inductance.

f is the operating frequency.

C_m is the resulting capacitance of the capacitive voltage divider and minimal capacity of the series tank circuit.

μ is the amplification factor of the second tube.

Reference to the above equations indicates that, in this circuit, the highest usable frequency, conditions and quality of the components being equal, is considerably higher than with the Clapp.

Further advantages of this circuit in comparison with the conventional types of oscillators follow:

- ★ The cathode coupling system insures a very strong feedback of the current type, which is constant over a broad frequency range;
- ★ The output voltage has a medium amplitude of purely sinusoidal shape;
- ★ The separation is purely electronic;
- ★ The stability of the unit is comparable to that of a crystal controlled unit.

Fig. 3(C) shows the effective circuit diagram of the v.f.o.

It works on the following principles: When the high voltage is applied, oscillations will take place in the series tank circuit LC. Since the two 2,000 pF. capacitors (which serve to nullify changes in interelectrode capacity) are connected across the tank circuit, a current flows through the resulting capacitive voltage divider, bringing about voltage drops equal in value but opposite in phase, across each of its elements. Thus, at the point at which the grid of V2 is connected to the capacitive voltage divider the h.f. potential is zero. Since the voltages at the extrem-

(Continued on Page 7)

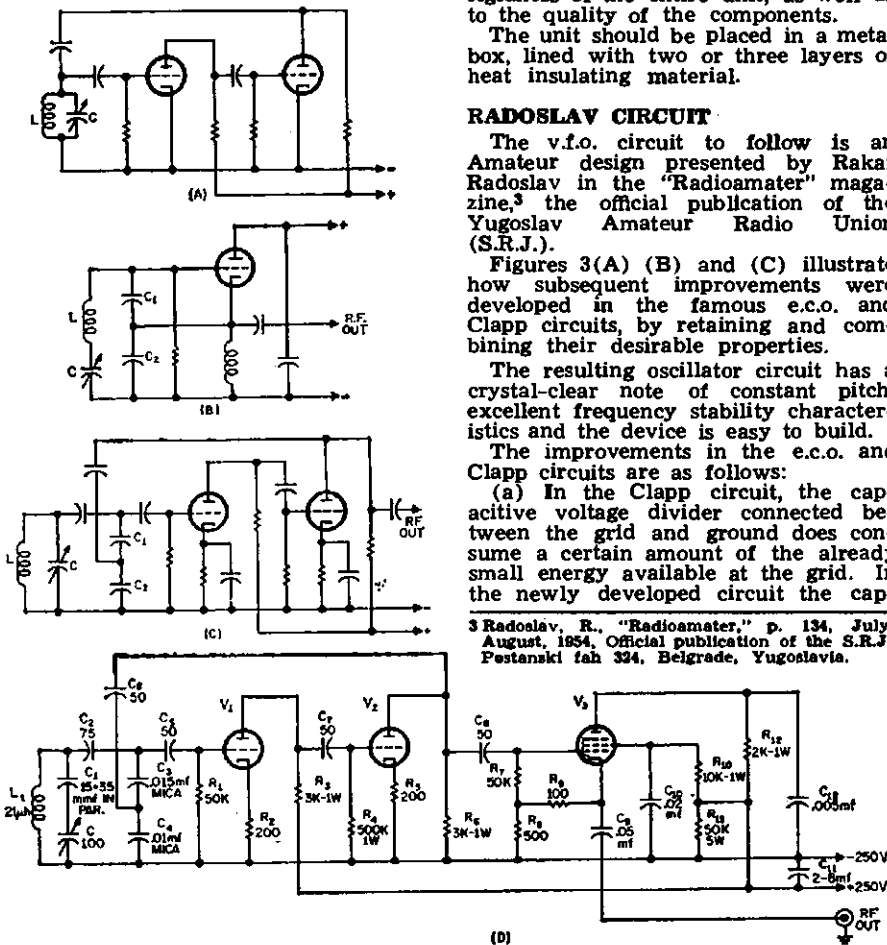


Fig. 2—A—The basic Franklin circuit. B—The basic Clapp circuit. C—Fundamental circuit of the combined Clapp-Franklin oscillators. D—The circuit of the Clapp-Franklin oscillator as developed at Telefunken.

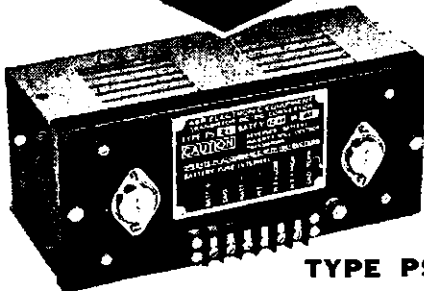
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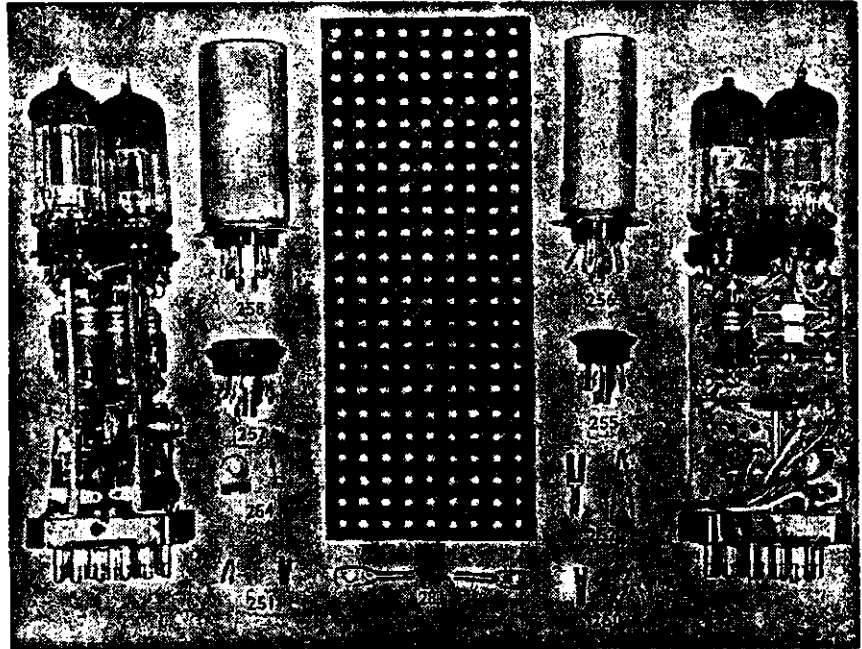
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ZEPHYR PRODUCTS PTY. LTD. 58 HIGH STREET, GLEN IRIS, S.E.6, VIC. Phones: BL 1300, BL 4556

THE SCR522/542-A V.H.F. EQUIPMENT

PART TWO

A. G. MULCAHY,* VK2ACV

SUGGESTED MODIFICATIONS

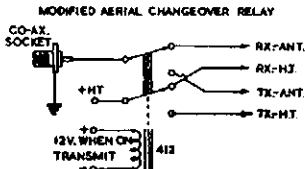
Many modifications to the 522 have been proposed over the past years and personal requirements must govern your approach to the matter.

The first decision must be whether to leave the units mounted in the case (type CS80) or to remove them and provide alternative mounting. Is the unit to be used portable or mobile or fixed? Is speaker or phones operation desired, etc., etc.? Everyone will have his own ideas on these points and no doubt will have ideas not stated here; however . . . !!

The power unit, controller and rack are of very little use from an Amateur viewpoint and may be scrapped for parts.

The transmitter and receiver may be removed from their original case and operated upon.

The channel selecting slide assembly will need to be removed from the receiver, but may be retained on the transmitter if only one frequency is to be used. Any one of the slide bars may then be lock-wired in the actuated position and the transmitter heads tuned and locked in reference to this slider. The original crystal switch and its wiring may be removed and the crystal may be mounted close to the oscillator tube socket.



Next decide how you want the units encased or mounted. A false front panel may be added to both transmitter and receiver. A standard 19 inch panel, set on brackets, will enable the units to be rack mounted, with a power supply, transmitter, receiver and speaker panel forming a neat v.h.f. combination unit. An alternative method is to enclose the units in cases salvaged from the TU-5 tuning units, ex the BC375 transmitter. These are a bit of a tight fit though. No doubt some chaps will prefer to leave the units in the original case!

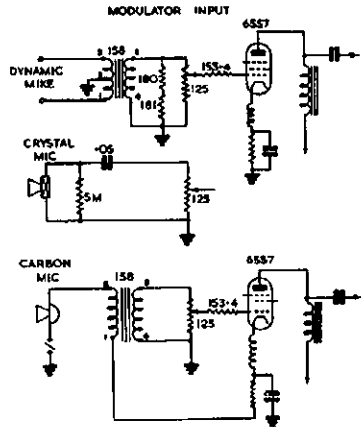
Having decided the mechanical form required, we can proceed with the mods—fix the tx oscillator to suit your needs, add a crystal selector switch if you're loaded with rocks!

Grid leak bias may be substituted for the existing fixed bias arrangement on the 12A6 tripler and both 832s. If you do this, don't forget a little protective cathode bias for the 832s also.

If you remove the slide tune assembly, you can extend the transmitter tuning heads, using sections of the removed slide bar assembly and 1/4 inch shafting and add individual tuning knobs to enable fine trimming and re-tuning of the transmitter at all times.

The r.f. indicator tube is an optional luxury, it is better removed if the unit is for portable or mobile use.

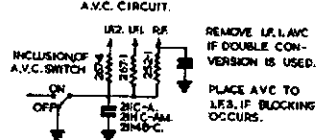
The modulator will need cathode bias if a fixed bias supply is not used, some 15v. bias is normally provided by the fixed bias supply.



The audio oscillator facility may be removed from the modulator speech amp. circuitry if not required and the whole of the grid circuit of this stage may be simplified by removing all components except the 1 meg. pot. (number 125) and having its wiper connect to the 6SS7's grid using a crystal microphone. A dynamic mike may be used by retaining transformer No. 158 under its original connection arrangement and feeding the microphone to terminals 1 and 3 of this transformer.

The transmitter Jones plugs, undesired relays and circuit wiring may all be removed. Power connections may be made via an octal socket and plug combination at the power unit.

A co-axial socket may be used in lieu of the two-pin jack or alternatively a 300 ohm ribbon feed may be used and banana plugs employed to connect to the two-pin jacks. If the original rack is discarded, an alternative aerial change-over relay must be provided.



An 0-1 mA. meter may be mounted on the front panel of the modified transmitter and wired to the meter socket on the transmitter unit.

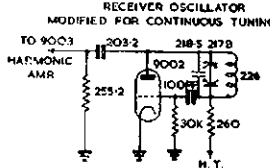
The receiver unit will need to be converted to continuous tuning. To do this, firstly, remove the sliding bar channel selection assembly and use some parts thereof to enable a 1/4 inch shaft extension to be attached to each tuning head. Decide the form of panel system desired. For a 19 inch panel, proceed as follows: Mount the receiver centrally on a 19 x 7 inch panel. Drill the following holes on the panel for

the following components: Volume control pot., noise limiter switch, a.v.c. switch, S meter switch, transmit-receive switch (may alternatively mount on the power unit panel), phone-speaker jacks, S meter and r.f. tuning head control shaft and last of all the oscillator tuning head control shaft.

It is as well to note that the 2 metre bandspread available on the SCR522 is very limited indeed. It is therefore advised that considerable oscillator tuning vernier facility be provided. This is most easily provided by a small diameter shaft—large tuning drum—dial cord, combination. This will give reasonable control over oscillator tuning. A vernier dial such as is available on the TU series tuning units is ideal for use on the r.f. tuning head.

Having fixed the mechanical aspects, we can proceed with the electrical side of things. This operation requires the whole receiver front-end be removed from the unit. Five screws, the tuning shafts, some earthing straps and an r.f. shield plate hold this assembly in the chassis. About ten minutes' work should see it out.

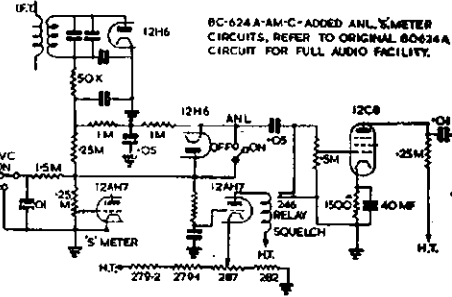
Modify the 9002 circuitry according to the schematic suggested and the



harmonic amp. stage is now our local oscillator, covering 83 to 144 Mc. and enabling the full 100 to 156 Mc. coverage to be had. The r.f. tuning will go below 100 Mc. and by fitting a discriminator and keeping the local oscillator above the incoming signal, it is possible to tune the f.m. band. On a sample unit, without altering the coil spacing, tuning was possible from 85 Mc. to 156 Mc. overall.

Receiver components which can be removed are the crystal sockets, oscillator plate load coils, transformer 295 and its associated wiring, and most of the audio system following the second detector stage. A suggested schematic diagram is given as a guide to what could be done.

A suitable source of h.t. and 12v. filament power must be provided. This may be taken from a separate h.t. sup-



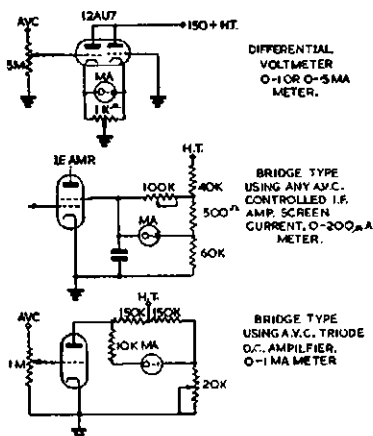
* 45 Louie Street, Padstow, N.S.W.

ply having a change-over switch system to enable transmit and receive operation.

A word or two of warning! Don't strain the ceramic shafts on the tuning condensers in the receiver. They will break if handled roughly. Run the equipment on lower than 300v. h.t. rather than above this figure as the condensers fitted in a lot of 522s are very prone to voltage failure.* If you modify the receiver for continuous tuning, don't fail to disconnect condensers 202.13 and 202.14 or else you'll get no oscillation. Try to obtain correctly sized Bristo keys to remove the tuning head flexible couplings as substitute tools usually ruin the grub screw. The output transformer may be replaced by a 3.2 ohm output transformer. If this is done, remember transformer 296 contains an h.t. choke and if removed the h.t. line must be rejoined.

If you possess a BC624C receiver, practically no modification of the receiver audio will be required. The interphone transformer 295 may be removed and if desired an extra tube may be added to operate an S meter—see suggested circuit.

"S" METER CIRCUITS



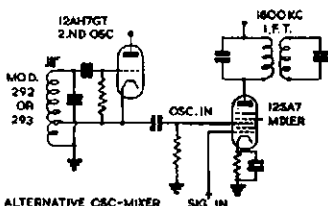
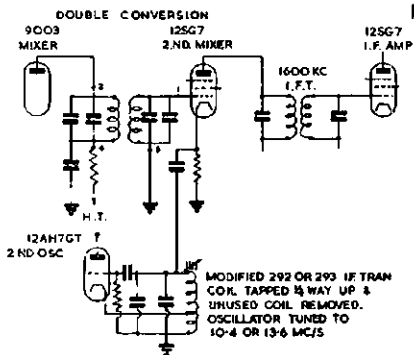
The BC624AM receiver may be further improved by using the 12J5GT 2nd audio stage as a voltage amplifier to drive a power output stage employing a 12A6, 12AQ5, etc. This may be accommodated in 295's position. The crystal oscillator half of the 12AH7GT is available for S meter use.

The BC624A requires most modification and perhaps the best approach here is to modify it to BC624C standard, plus extras to your own desire.

Double conversion may be included by removing 296 and substituting 292 or 293 to this position. Modify one of the i.f. windings of the re-located i.f.t. by providing a tap on the winding. Use the modified winding to provide a second local oscillator by (a) using a triode-hexode or multi-grid converter tube in place of the 2nd i.f. amplifier (12SG7), (b) use the 4, 5, 6 section of the osc./squelch 12AH7GT twin-triode as a "hot cathode" Hartley oscillator and use cathode injection to the 12SG7 2nd i.f. amp. for mixing.

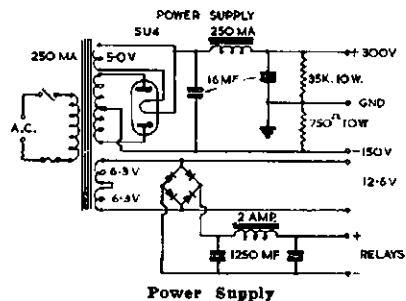
Remove all 12 Mc. i.f.s. other than 291 and install a 1600 Kc. i.f.t. in each of the three vacated positions. Dis-

connect the a.v.c. feed to the new mixer stage, but retain it on the first stage of 1600 Kc. i.f. If any tendency towards blocking becomes apparent in operation, apply partial a.v.c. to the second 1600 Kc. i.f. amplifier. A 455 Kc. i.f. could be used instead of 1600 Kc. If this is done, pay attention to the second oscillator stability or, alternatively, provide a small trimmer facility for oscillator drift correction. If excessive selectivity is apparent using 455 Kc. i.f.s., stagger tune the 455 Kc. train.



In the event that you prefer to build rather than modify equipment, the 522 is still a good buy! A host of good quality components may be salvaged—the modulation transformer and driver transformer are an ideal mobile combination. Components ex 522s have been used in g.d.o.s., oscillators, monitors, transmitters, etc., etc. Coils 227.1-4 are excellent 7 Mc. coils!

If you have any queries on components or circuit parameters, or if you require further information on this equipment you may write to me [enclosing a stamped addressed envelope.—Ed.] and I will endeavour to help.



NOTE:—

1. If fixed bias retained in transmitter, use circuit shown with 385-0-385v. transformer.
2. If grid leak bias used in transmitter earth transformer centre tap and first electrolytic and omit 750 ohm resistor, use 285-0-285v. transformer.
3. Use selenium or silicon rectifiers for relay supply. Remove all relay earth returns and complete relay circuits via common negative line. Both relay positive and negative lines must be above earth.

GENERAL CHARACTERISTICS AND INFORMATION

Transmitter Metering

Position	Switch Reading	Obtained	Normal
1	1st harm. amp. plate		0.4
2	2nd harm. amp. plate		0.5
3	Power amplifier plate		0.63
4	R.F. diode—if fitted		0.3-0.5
5	P.A. grid current		Full scale

Receiver Selectivity

The receiver i.f. selectivity is such that a bandwidth of 110 Kc. exists for 6 db. attenuation. 20 db. attenuation results at 90 Kc. either side of resonance, whilst 40 db. attenuation is achieved 130 Kc. from resonance.

Receiver Sensitivity

The receiver sensitivity over the tuned range averages 3.3 to 6 microvolts for 10 mW. output at 10 db. signal to noise ratio.

A.V.C. Characteristic

The receiver audio output will not vary in excess of +6 dbs. for a change in signal input from 20 to 100,000 microvolts under normal conditions. An output variation of +12 dbs. is given as the maximum acceptable test figure. The output at 20 microvolts input is rated as 0 db.

Image Rejection

The image rejection ratio at 145 Mc. is given as 17,000 to 1.

Transformers

A.F. Input 295: Prim. 1—pins 1 and 2; d.c. resistance 920 ohms; Z = 250,000 ohms. Receiver audio input.

Primary 2—pins 3 and 4; d.c. resistance 6.9 ohms; Z = 750 ohms. Dynamic mike intercom. input.

Secondary 1—pins 5 and 6; d.c. resistance 2,450 ohms; Z = 1 megohm. Grid drive.

Audio Output 296: Primary—pins 1 and 2; d.c. resistance 870 ohms; Z = 15,000 ohms. Plate load.

Tapped Secondary—pins 4, 5, 6 and 7; d.c. resistance 390 ohms; Z terms. 4-7, 4,000 ohms; terms. 4-6, 300 ohms; terms. 4-5, 50 ohms. Audio output.

H.T. choke—pins 2 and 3; h.t. filtering, 6 H., 340 ohms d.c. resistance.

Mike Input 158: C.T. primary—pins 3-2-1; Z = 200 ohms; d.c. resistance 5.2 ohms. Centre tapped microphone input.

Secondary—pins 5-4. Z = 420,000 ohms; d.c. resistance 4,000 ohms. Grid drive. 60 cycle test, ± 2 db. 300-3,000 cycles. Level -40 db.

Interstage Audio 159: Primary—pins 2-1. Z = 125,000 ohms; d.c. resistance 1,050 ohms. Shunt plate load.

C.T. secondary—pins 3-4-5. Z = 500,000 ohms; d.c. resistance 2,750 ohms. Push-pull grids. 60 cycle test, ± 2 db. 400-3,000 cycles. Level 0 db.

Modulation Transformer 160: C.T. primary—pins 3-2-1. Z = 22,000 ohms; d.c. resistance 690 ohms.

Secondary—pins 4-5. Z = 5,500 ohms; d.c. resistance 170 ohms.

Relays

130: Slow release relay. No information available.

131: D.p.d.t. and s.p.s.t., 150 ohms. 12v. d.c., normally de-energised, contactor (m.c.w. tone) relay.

HIGH STABILITY V.F.O.'s. OF RECENT DESIGN

(Continued from Page 3)

161: S.p.s.t. 200 ohms. 12v. d.c., opens when energised, press to transmit control.

412: D.p.d.t., one section has extra contact to ground receiver on transmit. 150 ohms, 12v. d.c. Antenna change-over.

246: S.p.s.t., 5,000 ohms. 4 mA. operates with current change of 0.2 mA. Squelch relay.

411.1 and .2: 13½v. d.c. Locking. S.p.d.t. .1 locking relay, .2 motor control.

Next time I will discuss the MN26 Compass equipment. Anyone having a pet-mod. he'd like to pass on could drop me a line and it will be included.

As it is intended that this series of articles, describing disposals equipment should provide for the maximum demand, you are requested to write me if you wish a particular unit to be featured. The list of available information covers most popular releases, so drop a line and state your needs. ●

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BOOK REVIEWS

A.R.R.L. ANTENNA BOOK

A most comprehensive treatise on Amateur antennas. 318 pages packed with all the latest information on antennas and matching systems for fixed and mobile stations.

The 1960 edition is one of the standard A.R.R.L. publications which is revised from time to time. It is a book which should be in the library of every Amateur. Published by the A.R.R.L., Australian price 31/- plus 1/6 postage. Our copy from McGill's Authorised Newsagency, 183 Elizabeth St., Melbourne, Vic.

SURPLUS RADIO CONVERSION MANUAL, VOL. 3

For a number of years I have had Volumes 1 and 2 in my library and I have found their cost low in relation to their value as they give much valuable information on a large number of items which are available on the Australian disposals market.

This new volume goes into more detail on a lot of modifications that are not covered in the other volumes. Almost forty disposals items are covered including the conversion of a BC458 into a phasing type s.s.b. transmitter capable of over 100 watts peak power output on 3.5 or 14 Mc.

Published by Editors and Engineers of U.S.A. and edited by William I. Orr. Australian price 33/6 plus 1/- postage.

Our copy from McGill's Authorised Newsagency, 183 Elizabeth St., Melbourne, Vic.

★

"A Guide to Amateur Radio"

Copies of the eighth edition of this excellent publication of the Radio Society of Great Britain are available from the Federal Treasurer, Bob Boase, VK3NI, 65a Franklin Street, Melbourne, at 5/-, post paid. Among the subjects covered are design and operation of communications receivers (including suppressed carrier reception), power supplies, transmitter design and operation, keying, telephony, aerials, frequency measurement, and other aspects of Amateur operation. There is also a great deal to interest the beginner and the person contemplating breaking into Amateur Radio.

ities of the series tank circuit are opposite in phase, the control grid of V2 is opposite in phase with the plate of V1.

The voltage at the control grid of V2 changes its bias, and after being amplified in the cathode circuit, excites V1, which inverts the phase and acts as a grounded grid amplifier. After the phase inversion, the h.f. oscillations are added to those of the plate circuit of V1 and boost the oscillations in the LC circuit. The h.f. output can be drawn through a 100 pF. capacitor from either the plate of V1, or that of V2. If the output of V2 is to be used, the tank circuit L1C1 can be tuned to any desired higher harmonic of the fundamental frequency. In this latter case, V2 serves either as a buffer, or as a frequency multiplier. A resonant choke can be substituted for the L1C1 tank circuit if preferred.

Fig. 3(D) presents the same circuit using pentodes instead of triodes.

It is desirable, although not a strict necessity, to use voltage stabilisation in power supplies with all the above v.f.o. units. ●

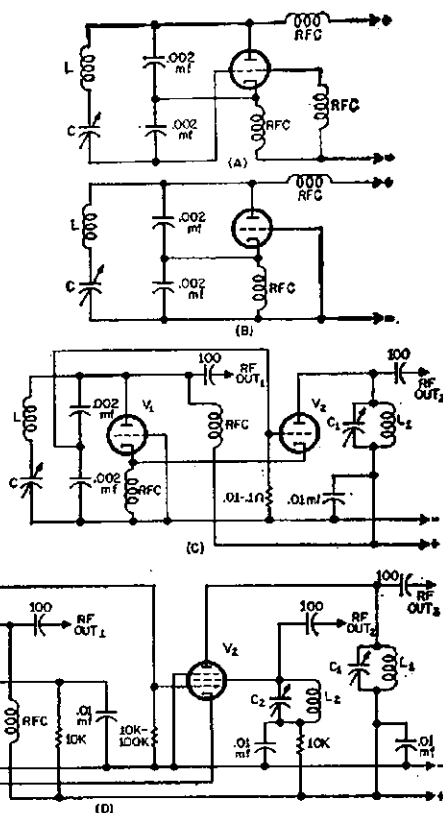


Fig. 3—A—B—C—The development steps in the oscillator designed by Reker Radoslev. Output may be taken from V1 or V2 as explained in the text. D—A pentode version of the oscillator shown in C above.

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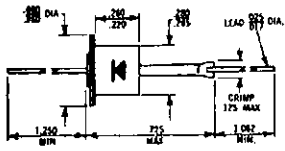


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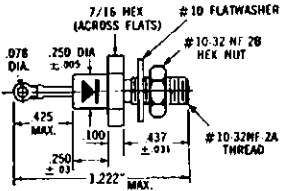


Ratings and Characteristics at 25°C Ambient

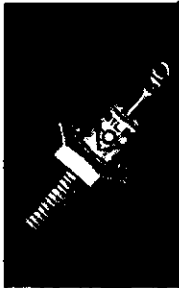
JTEC TYPE	INT'L TYPE	ZENER VOLTAGE RANGE		TYPICAL DYNAMIC RESISTANCE		IZ MAX.	NOMINAL TEMP. COEFFICIENT %/°C
		VOLTS	IZ mA.	Zz (OHMS)	Zz (OHMS)		
1N1518	1Z 3.9	3.6-4.3	50	9	250	-.04	
1N1519	1Z 4.7	4.3-5.1	40	8.5	200	0	
1N1520	1Z 5.6	5.1-6.2	35	5.5	175	+.03	
1N1521	1Z 6.8	6.2-7.5	30	1.6	150	+.05	
1N1522	1Z 8.2	7.5-9.1	25	1.1	120	+.06	
1N1523	1Z 10	9.1-11	20	1.5	100	+.07	
1N1524	1Z 12	11-13	15	2.4	80	+.075	
1N1525	1Z 15	13-16	13	5.4	65	+.08	
1N1526	1Z 18	16-20	10	11	55	+.085	
1N1527	1Z 22	20-24	9	18	45	+.09	
1N1528	1Z 27	24-30	7	28	35	+.095	

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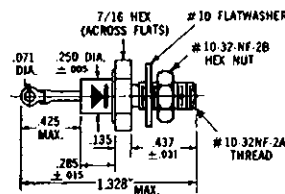


RATINGS AND TYPICAL CHARACTERISTICS

JTEC TYPE	INT'L TYPE	ZENER VOLTAGE RANGE		TYPICAL DYNAMIC RESISTANCE		IZ MAX.	NOMINAL TEMP. COEFFICIENT %/°C
		VOLTS	IZ mA.	Zz (OHMS)	Zz (OHMS)		
1N1588	3Z 3.9	3.6-4.3	150	2.6	850	-.04	
1N1589	3Z 4.7	4.3-5.1	125	2.3	700	0	
1N1590	3Z 5.6	5.1-6.2	110	1.4	625	+.03	
1N1591	3Z 6.8	6.2-7.5	100	.58	525	+.05	
1N1592	3Z 8.2	7.5-9.1	80	.5	425	+.06	
1N1593	3Z 10	9.1-11	70	.7	350	+.07	
1N1594	3Z 12	11-13	50	1.4	275	+.075	
1N1595	3Z 15	13-16	40	3.4	225	+.08	
1N1596	3Z 18	16-20	35	6	200	+.085	
1N1597	3Z 22	20-24	30	9	160	+.09	
1N1598	3Z 27	24-30	25	13	125	+.095	

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All dimensions in inches



RATINGS AND TYPICAL CHARACTERISTICS

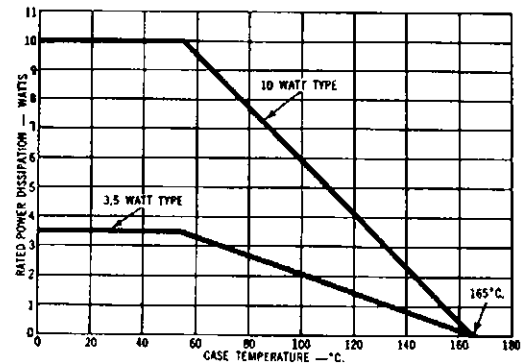
JTEC TYPE	INT'L TYPE	ZENER VOLTAGE RANGE		TYPICAL DYNAMIC RESISTANCE		IZ MAX.	NOMINAL TEMP. COEFFICIENT %/°C
		VOLTS	IZ mA.	Zz (OHMS)	Zz (OHMS)		
1N1599	10Z 3.9	3.6-4.3	500	.84	2500	-.04	
1N1600	10Z 4.7	4.3-5.1	400	.68	2000	0	
1N1601	10Z 5.6	5.1-6.2	350	.3	1750	+.03	
1N1602	10Z 6.8	6.2-7.5	300	.2	1500	+.05	
1N1603	10Z 8.2	7.5-9.1	250	.25	1200	+.06	
1N1604	10Z 10	9.1-11	200	.55	1000	+.07	
1N1605	10Z 12	11-13	170	.95	850	+.075	
1N1606	10Z 15	13-16	140	1.5	650	+.08	
1N1607	10Z 18	16-20	110	2	550	+.085	
1N1608	10Z 22	20-24	90	3	450	+.09	
1N1609	10Z 27	24-30	70	4.5	350	+.095	

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11th ANNUAL CONVENTION OF N.S.W. DIVISION, W.I.A.

SUCCESSFUL THREE-DAY GATHERING

The 11th Annual Convention of the N.S.W. Division was held over the week-end of January 27-28-29, commencing with the general meeting at Science House, Gloucester Street, Sydney, at which there were quite a few who did not normally attend such meetings owing to their geographical locations.

The main part of the Convention took place on the following day at the home of VK2WI, the headquarters station of the N.S.W. Division, located in a bush setting at Dural, some 25 miles from Sydney. The day was perfect, if a little on the hot side, and from early morning there were many helpers on the site assisting in the preparations for the function. Much of the preparation for such an event as this had been done over the period of many months, usually by the few enthusiasts who gather at Dural each Sunday, and it is always pleasing to the Convention Committee to see others arrive early to assist in tying up the loose ends.

Registration commenced at an early hour, the registration tent being manned by Frank 2QL with later arrivals 2AZN, 2ACD, 2EG, R. Morris and his YL. Frank of course also was handing out the QSL cards to those registering. Total registrations for the day were 283 included among which were 30 ladies and 36 children.

The Convention was officially opened by the Divisional President, Bill 2YB, who suitably welcomed members and visitors, some of whom had travelled from distant parts of the State in order to meet many of the friends they have made over the years, and many of whom they had not previously met personally.

Much interest was taken in the large disposal store conducted by the Disposal Committee under the leadership of its chairman, Keith 2ABK, and ably assisted by Barney Smyth and many others during the day's activities. This

section attracted a large crowd during most of the afternoon and the gear available was of excellent quality.

Many excellent and interesting exhibits were arranged, including a stand organised by Harold 2AAH on transistorised equipment of a varied nature. Among the gear he was showing were some fine examples of miniaturised equipment, of course using transistors, which attracted much attention and interest.

The next stand showed some very fine examples of commercial gear shown by Ron 2ALR, ably assisted by his son and ex-VR2DP. This consisted of the latest in Hallicrafters receivers and s.s.b. transmitters, and we feel was responsible for many checking over their small change and making mental notes on the desirability of the possession of these very fine pieces of equipment.

Leo 2AC took the day off from his daily duties to further the interest in s.s.b. among members. He showed a variety of his equipment and demonstrated to all the ease with which DX contacts can be made by the use of this mode. Among his helpers were Harry 2AJZ, Stan 2EL and Don 2ASW, all of whom are known as very keen s.s.b. men and who are all doing their level best to further interest in s.s.b. in this State.

The old timers' exhibit was organised by Joe 2JR, and with the moral support of Wal 2AXH provided a glimpse to the newcomer of what the gear was like in the old days.

Another display was organised by the V.h.f. and T.v. Group and was attended by many of the members of the Group during the afternoon.

The Secretary, Norm 2ALJ, was, of course, in attendance to offer assistance and advice to all and to collect any subscriptions offering.

During the afternoon, almost continuously in fact, the ladies prepared afternoon tea for all and for this very com-

mendable effort we have to thank Mrs. Duff, Mrs. Sobels, Mrs. Beard and Muriel Eagles, better known to all as 2AIA.

As the afternoon wore on, the 809 exhibit opened for the approval of all and again the dispensers of the amber fluid did a magnificent job under difficult conditions. Our helpers on this occasion were Ken 2XS, Ken 2ST and 2AGS.

Following a recess for the evening meal, the evening show commenced, and again the compere was Max 2MP. The first event was a Dutch auction for a Sunbeam steam iron, closely followed by a further Dutch auction for a transistor radio. The auctions were ably conducted by Phillip 2ZBB.

The evening quiz was the next item on the programme and consisted of a technical quiz and a general knowledge quiz, the questions for which were nutted out by Harold 2AAH and Tim 2ZTM. The five contestants in each of the sections of the quiz, selected in the draw from the hat, all participated in the prize list for event, the winner of the technical quiz receiving a "Little Nipper" radio, donated by E.M.I. Ltd., and the other four participants received a Compass receiver, donated by the Disposals Committee. The winner of the general quiz received an "Astor Desk" fan, donated by Messrs. Martin de Launay Ltd.; the runners-up received a torch each.

Films followed and were enjoyed by the throng who were present for this part of the programme. For this showing we are indebted to Dave 2EO and Val 2VO.

The President closed this part of the Convention, thanking all who attended.

Sunday dawned a very hot day, the maximum temperature for the day being 106.9 degrees, with possibly a few more degrees to be added on at Dural. This did not deter the mobile boys from taking their part of the function and the bands were quite busy while they



Mobile Contestants.



Blindfold Transmitter Hunt.

were working from a radius of more than 20 miles from Dural. All gathered at Dural for lunch and a pleasant afternoon (despite the intense heat) was had by all.

Further thanks to Dave 2EO for the colossal job he did for the show and also as O.I.C. Dural; also to Tim 2ZTM and his helpers in the erection of the lighting and maintenance of the lighting plant which was running for most of the day. Our thanks also to those many who worked in the background and whose efforts contributed to the success of this Convention.

Our gratitude to the members of the Blue Mountains Section for their work in organising and running the blindfold transmitter hunt again this year, indeed a popular event for both not only the sterner sex, but also the ladies and children.

We are also indebted to the following business houses for their co-operation in donating such a fine prize list and for the technical information provided:

E.M.I. Ltd., Little Nipper radio;
 Martin de Launay Ltd., Astor Deck fan;
 A.E.I. Ltd., Hotpoint jug;
 O. T. Lempriere Ltd., solder;
 A. G. Healing Ltd., multimeter;
 Mullard Ltd., valves, transistors and technical data;
 A.W.V. Ltd., folders of technical data;
 Lawrence & Hanson Electrics Pty. Ltd., Rola 6H loudspeaker;
 U.R.D. Ltd., two open orders for £2/10/0 each.

The co-operation of these firms is much appreciated and illustrated the esteem in which the Amateur fraternity is held.

PRIZE LIST

Blindfold Tx Hunt—Gents: Graeme Jessop; Ladies: Mrs. Wheaton; Boys: Greg Mackay; Girls: Susan Adams.

Tube Identification: 2DN.

Brass Washers in bottle of Nuts and Bolts: 2OM.

Series Resistors: 2DN.

Frequency of H.F. Coil: 2AIA.

Frequency of V.H.F. Coil: 2AIA.

Lucky Numbers: Gents, 2AFW.

Quiz Sheet: 2ZEX, 1st; 2OA, 2nd.

Most Popular Mobile: 1st, 2ASV; 3rd, 2AAH.

Morse Contest: 1st, 2EG; 2nd, 2OA; 3rd 2DO.

Mobile V.H.F./H.F. Contest: 2PM.

Mobile V.H.F. Contest: 2ZCF.

Mobile H.F. Contest: 2AAH.

REGISTRATIONS

The following registrations were made: VKs 2DN, 2ZDM, 2ZBD, 2ZBX, 2RI, 2ZTM, 2ZNM, 2EO, 2ZPI, 2QL, 2YB, 2ZBB, 2ACO, 2DO, 2AEY, 2ZAL, 2ZCF, 2ZEX, 2XP, 2ZJC, 2ASW, 2AKC, 2ALJ, 2HL, 2MP, 2ZCL, 2AZE, 2BK, 2KO, 2AWZ, 2AFB, 2ZAN, 2AAB, 2DP, 2ALR, 2ZGM, 2AIA, 2AAH, 2ACD, 2AZN, 2NU, 2AWW, 2AXH, 2JR, 2AQF, 2ZDF, 2AKX, 2ZL, 2AFA, 2SK, 2OQ, 2FM, 2RM, 2HZ, 2QA, 2VO, 2DW, 2AYL, 2RJ, 2ZDB, 2VC, 2XS, 2ZEW, 2AHX, 2IV, 2ACK, 2AC, 2AJZ, 2ST,

2ADL, 2AQX, 2AJA, 2EL, 2IC, 2QJ, 2ZK, 2EG, 2ZMC, 2XT, 2FP, 2HC, 2NA, 2OK, 2LS, 2OH, 2AAJ, 2YU, 2OM, 2DM, 2GW, 2EP, 2AXB, 2AVT, 2JX, 2ABK, 2NK, 2EX, 2AAW, 2GE, 2VJ, 2NV, 2ZPG, 2ARA, 2OR, 2CS, 2DY, 2IJ, 3AHR, 2VN, 2APB, 2ZKO, 2PZ, 2ICA, 2AKB, 2PY, 2QX, 2EI, 2ACQ, 2AFW, 2FY, 2TP, 2ZDW, 2ZCC, 2HO, 2ZCW, 2AGS, 2ANQ, 2ON, 2ALA, 2AVJ, 2ALF, 2ZFA, 2KM, 2ASV, 2PM, 2ZPM, 2NG, 2OA, 2ZAB, 2RN, 2ZAF, 2ZDK, 2ASZ, 2ANN, 2OM, 2BQ, 2AJQ, 2AT, 2APQ, 2VL, 2AGR, 2ART, 2ALL, 2ZBS, 2AAF, 2OY, Messrs. Claridge, Gilbertson, Allen, Fury, Hickey, Atherden, Green, Harwood, Keane, McKenzie, Warren, Champion, Harker, Nelson, Smith, Sice, Lehman, Christian, Walker, Gibbes, Osborne, Jackson, Jessup, Taylor, Cronin, Wadland, Carrey, Walker, Risbridge, Lester, Hord, Murray, Rowe, Smith, Aggett, Hand, Sumner, McLachlan, Sutherland, Burns, Gill, Barclay, Pollock, Mrs. Sobels.

★

"CALL BOOK MAGAZINE"

The Federal Treasurer again has for sale at £1, post paid, several back numbers (most in near-new condition) of this great directory of Hams. The following are available:

Winter 59/60 (U.S. only), Fall 1960 (U.S. only), Summer 1960 (U.S. only), Fall 1959 (World-wide), Summer 1957 (World-wide).

Apply Bob Boase, VK3NI, 65a Franklin Street, Melbourne, Vic.

TYPE 65

General purpose with low frequency response suitable for lively halls.

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P.A. use where less low frequencies are required than the 65 with a lift in the middle frequency to ensure high output without feedback.

TYPE 67

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Retail Price including Sales Tax

Type 65 MA	£11/0/7
„ 65 MD	£8/19/0
„ 66 MA	£11/3/6
„ 66 MD	£9/3/0
„ 67 MA	£11/3/6
„ 67 MD	£9/3/0

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DX

John C. Pinnell, VK2ZR
15 Summit Avenue,
Earlwood, N.S.W.
Phone: UW 4248.

We have passed through three or four years of excellent DX conditions when it was quite common to work a dozen or more Europeans in one sitting and perhaps work W.A.C. within a couple of hours. If we missed the rarer ones it was looked upon as a disappointment much more so than an achievement if we landed him. When DX work becomes as simple and as universal as it has been over long periods of this time, we begin to accept it as the natural state of affairs, and not as a portion of the "sunspot cycle". A few months back lists sent in included 30 or 40 countries worked during a good DX month. Things are changing—contacts are becoming more difficult.

In the next three or four years we will know just how much of this easy DX working is due to improved technique and how much we owe to conditions. Probably 85 per cent. of our success was due to conditions. Of course the greater number of Amateurs in certain regions will help boost some of the DX scores, especially those in the U.S.S.R.

Most reports indicate a downward trend in DX contacts and the number of reports are becoming fewer. Now fellows, I need those reports even if they are small, if I am to keep this page worthwhile. So please keep on sending them in.

NEWS AND NOTES

The prefix for Korean nationals is HM. HM8 novice; HM9 portable; HM0 clubs. HM9A/F, the HQ. portable station of K.A.R.L., was on a Special Expedition to Cheju Island from 5th to 14th August last year. This island is off the southern tip of the mainland of Korea. HM0HQ is the headquarters station of K.A.R.L. There are thirteen other licensed stations including a YL, HMIYL. The QSL Bureau of HM stations is K.A.R.L., Central Box 162, Seoul, Korea.

In the change over to new country status in Africa recently the position of Niger and Nigeria is not clear in the minds of many Amateurs. They are now two separate countries—Niger Republic and the Federation of Nigeria. The Federation of Nigeria changed its prefix to 5N2 on the 1st January. At the time of writing, I had no information on the prefix to be used by the Niger Republic.

Sint Maarten.—Because of the difficulties in obtaining log information, K2SWZ is no longer handling FJ2ME cards. He suggests QSL requests now be made directly to FJ2ME.

ZD8AH and ZD8CA, Tristan Da Cunha, will not be recognised by A.R.R.L. for D.X.C.C. credit as they had not obtained a license for that location.

KW6DF and KW6DG (ex-K0SLD), Wake Island, are active on a.m., s.s.b., and c.w. They plan to have the station active in all major contests. In the past four months they have had over 3,000 contacts and will continue to help the DX gang work and confirm Wake Island. They QSL via the World Bureaus 100 per cent.

Christmas Island.—Previously published addresses will eventually reach the VR3 gang, but recent arrangements will give a quicker service. Send your QSLs to: Christmas Island Radio Club, C/o. British Forces P.O. Box 170, Post Master, Honolulu, Hawaii.

ZS6IF/9, Lambert, back from his DX-pedition to Buchananaland, says the QSL cards for that operation have been delayed by Christmas work at his printers. He will start mailing them as soon as they are received.

British Honduras.—VPIAQ is said to be a pirate. VPIJH is quite legal but is thousands of cards behind in his QSL chores. However, he says he will reply to all cards received.

The Western Washington DX Club is helping an Indian National to become active from Sikim. The trip will take place in a few weeks time. The dates have not been fixed. A DX-40 and quad antenna will be used on 14 and 21 Mc., with mostly c.w. to be used.

By the time you read this, G3KKN should be operating as ZD6GA in Nyasaland. He plans to operate on 28, 21 and 14 Mc. a.m. and s.s.b. He will probably be at this location for a few years.

z zero time—GMT.

For those who work 80 mx, look for ST2AR, Sudan. Eric has improved his 80 mx antenna and hopes to get many more contacts.

FB8XX, Kerguelen Island, is on the air almost every day, on 20 mx c.w. Several operators use this station. Perhaps, in the next two or three years, this island may become silent as it has been mentioned as a possible location for French atomic tests.

The only active station on American Samoa Island is Paul K6CQV/KS6. He operates around 14320 Kc. s.s.b. most evenings from about 0530 until 0730z.

KW6CL, Wake Island, has shut down permanently and has returned to Hawaii.

If you worked V5SGS on 14 Mc. it was a pirate as the real V5SGS works 21 Mc. exclusively. Also, if you worked VP5AB or VP5RO during the past few months, both claiming to be on Cayman Islands, and giving W calls as their QSL managers strike them off as pirates. VR2DX has also been used illegally on 40 mx while the owner was in New Zealand. Still more on the list to forget about—VR6AD, AP4M and EA6GE, plus 119S claiming to be on Cocos Island last September.

The fact that VP2LO has been issued twice within one year has caused some confusion. The first one left St. Lucia in January 1960, and is now in Nigeria (John F. Stratfull, Audit Dept., Northern Region, Kaudna, Nigeria). The call was re-issued in about March 1960 to Cliff Wesler, K8CEO, whose QSL manager is W6NJU.

The VU2NRM DX-pedition to the Laccadive Islands is not cancelled, it's a matter of getting transport. He has been promised a passage at the end of February.

MP4BBW and VE7ZM will attempt a trip to the British Phoenix Islands about the middle of this month (March). It is not clear whether Phoenix and Gilbert Islands count as one D.X.C.C. country or not. My reference counts them as one.

5N2PJB, in the Federation of Nigeria, works s.s.b. on about 14300 kc. from 1500 to 1800z and c.w. on 14095 kc. from 2000 to 2100z. QSL via W7UEU.

Eighty metres from Nigeria. 5N2GUP will be found on 40 metres c.w. usually around 0630z. When contact is made, he will QSY to 80 upon request.

ZB1CH is again active from Malta. ZC4PB has returned to Cyprus and has his old call sign active on 80 and 10 metres.

After many years of little or no activity from Iran there are now, at least, 11 active stations from that area. Florence, EP2AQ is the w.c. YXL. Most of the operators seem to use c.w. but EP2AG is on s.s.b. and a.m. Hal Leith, EP1AD, offers to handle cards for all Iranian stations. His mailing address: A.P.O. 250, New York, N.Y.

ZD1GM, who is now in Nigeria, will not QSL. ZD1CM, Sierra Leone, will QSL.

Gaza Strip, Egypt.—Anyone who has not received a card from VE3BQL/SU drop a line to him at: S/Sgt. E. C. Veale, 439 E. 42nd Street, Hamilton, Ontario, Canada. He has a good supply of SU cards and promises 100 per cent reply. His successor at Gaza Strip, VE3EGD/SU, also QSLs 100 per cent. His address is: Sgt. R. C. Bennett, 2 Signal Sqdn, Camp Petawawa, Ontario, Canada.

W3KVQ is QSL Manager for VE2AR, 4S7WF, ZD1CM, CT3AV, VU2RM, ZD1AW, VS8AC and TF2WFF. Although ZD1AW has shut down and returned to Belfast, Northern Ireland, W3KVQ has his complete logs and will supply a duplicate card upon request.

DX ACTIVITIES

BERS-195: Eric says conditions down his way have been very erratic on 20 metres. His favourite period of old (1900-2100z) being almost a complete failure, and 7 Mc. near wash-out 24 hours a day. Countries heard now stands at 275 with 260 confirmed. The Spitzbergen QSL being the latest addition. VR1C was heard on 14 Mc phone. 14 Mc. c.w. heard: BV1US, BV1USA, BV3HPT, CO2DJ, CR9AF, EA8CC, FB8XX, FB8Z2, FK8AE, FK8AF, FQ8HW, FR7ZD, HC1FG, HC1LE, HK1HV, HK7ZT, HP1IE, KW6DG, LUSHL, MP4BCN, OA4ED, OAAFN, W8OLJ/PK, TI2WA, U8K8A, UL7KAA, VK9GP (Norfolk), VQ3HD, VQ3HV, VQ4HT, VQ4GJ, VQ2FJ, VR2DK, VS1KP, VS6EC, VU2SOZ, XZ2BE, YU5ACP, ZD6RM, ZE8JE, ZK2AD, ZS5AM, 4S7EC, 4X4HK, 8J1AB, 8M2GL, SM5KV/9Q5, SM5BUG/9Q5, VE0MC.

Don L2022 is back with us again and says the Ws are rolling in on 80 mx over the past few weeks. 7 Mc. c.w. heard: TF5TP, 5A1BK, UA0KCA, VE7BCG, UB5AM, 3A3AIS, UH8BI, DJ2AA, UL20 c.w. heard: VP6FP, KZ2MK, CO2BM, WJ7KDW, YV5RO, ET2US, LUSHL, ST2AR, KV4CI, HH2CB, TI2CMF, UJ8KAA, HK7ZT, UH8KAA, Y02KAB; Phone: VSSWS, W8OLJ/PK, 9N1MM, 601MT, YV5HU, VR1G, YU1AD, TI2AZ; s.s.b.: HR3HH, KH6BX, KP-

4VB. Score now 215 countries heard with 60 confirmed.

Laurie VK2AMB. Worked 7 Mc. c.w.: UA0EH; heard: VSIGZ, DU8TY, 14 Mc. c.w. worked: VQ2AB, W8OLJ/PK, VS9MB, VQ4HT, VR1B, JZ0PH. Heard: HC1FG, ZC4IP, TI2ES, 4S7EC, ZK1AK, CR7LU, CR9AH, KR6GY, BV3HPT, ET2US. 14 Mc. Phone heard: TI2CMF, VP1JB, 9M2DQ, VQ2EZ.

Col VKAQU sent in the following list of a few of the 14 Mc. stations worked on s.s.b. with 85w, and a two element quad. He found that band conditions were generally bad but every so often an interesting QSO was made. Here are some of them: HS2A, UA0LA, UR2AR (long path), DL3JR, DL4XF, SM5CO, HB9TL, KCAUSA, BP1USC, KH6ABH (French Frigate Shoal), KC6AO, KC6BH (Truk Is.), 9M2GA, VU2NR, ZSTR (Swaziland, long path).

Frank VK3QL has not been so active this month, been very busy after his holidays catching up on W.I.A. and QSL chores. W4CQW was heard on 80 metres and ON4IE on 40 mx (0745z). 14 Mc. c.w. wkd.: ZSTR (0640z), ZSSQU (0615z), EP2AF.

VK2ZK has been very active for nearly five years, averaging about 200 DX contacts per month. Due to a change in work routine it will be necessary to spend less time on the air—probably the contacts will be reduced by more than two-thirds. Stations worked on 14 Mc. c.w.: CP3CN, CX2BE, G3KXA, HA5FK, KP44Z, KW6DF, L4SDB, OK2QJ, FY1HQ, UA1LE, UA0LZ, UJ6A, VK08B, 21 Mc. c.w. wrk.: DL1EE, G3CEC, HA5KFR, JA4AQ, KR6MT, OH8OR, UA3HP, UA0SL, UD6AM, VS1FW, ZC4WD.

Ken VK3TL uses a dipole on 14 Mc. Last month some of those worked on c.w. were: KM6S, KC6GJ (the only op. in the East Caroline Group), UA0KKD, GF, EH, KKB, KCA, UU, VR1G (John is now the only op. on Ocean Is.), KZ5TD, KZ5MQ, VS1JW, VS1ZF, VS1DN, YU1EH, BV1US, VR2DK, YN4AB, CM9QN, TI2WA, KR6DO (Kume Is.), 4S7EC, UA1KC (Antarctica), JAS, VES, VUS, W/Ks. 14 Mc. Phone: EP1AD, 9N1MM.

Hal VK4ID0 says, "The bands have been very patchy—good at times, especially 14 Mc. around 1000z. Hal has had the W.A.Z. Certificate for c.w. for some time, and has now qualified for the Phone W.A.Z. Certificate. 14 Mc. c.w. worked: W/Ks, KH8s, W8OLJ/PK, CP3CN, G5ZA, JT1KAA, JZ0FO, KM6BI, KP4CC, LA5HE, LUSHL, OH4FT, OH7NF, OK2QR, SP3DG, UA0BF, KYA, EH, UA3FG, UA4KA, UA9DN, VX, UB5KQ, UM8KAB, VU2KU. Heard: GB2SM, GM3O1O, VQ2FC, UB5XJ, UP2A0, lots of U.S.S.R. stations. 14 Mc. Phone worked: JAS, OA1AX, VP6PV. Heard: I1AMC, UC2KAA. 21 Mc. c.w. worked: DJ2AA, DJ1VF, DJ3OG, G5HS, G6BG, HB9LO, HB9AAF, KR6MN, LZ1KBA, LZ1KSL, OESGR, OH3OD, OK1US, PA0RE, SP8FZ, SF8YC, UA3FU, UA9KOG, UJ8KAA, UC2AX, VS1ZF, VSSAE. Heard: DJ2HC, DJ2YA, DJ3EZ, DL1EE, DLI6V, G3ID, G3LGD, G8AX, HA5KFR, HB9MO, HB9TT, OE1JL, OE1RZ, OK1ZL, SP3DG, UA3AS, UA4LZ, UL7LA, UR2BU. 21 Mc. phone worked: G3GHE, JZ0PM. Heard: G2CBI, KR6DO, LA8LG, OH2NW, VS6CL.

QSLs RECEIVED

BERS-195: GC2FZC, K0SLD/KW6, LA1NG/P (Jan. Mayen), LA8FG/P (Spitzbergen), MP4BCV, TI2CMF, UC2BW, UH8AK, VK9GR, VS1EB, V5SEC, 4X4JL, JA1CRT/MM, YU300/MM, VK2AMB: VQ1HT, Z14JF, EA4NG, VQ4HT, CN2BK, VR3KD, VK3QL: ZL4JA, MP4BEE, LA2TD/P, FQ7XF. The MP4BEE QSL arrived just three years after the contact! VK2ZE: EA7IA, HA8CF, I1VBP, YO7DL, ZC4AK, TI2WA, HM9A/P, HK7ZT, CM2QN.

During a QSO with UA0AU he said he had worked several VKs but so far had not received any QSLs. He is anxious to get a VK card for D.X.C.C. and asked me to give the following fellows a reminder just in case they may have forgotten: VK2CK, 3GV, 3UR, 3VJ, 5AB, 5TC, and 7CC.

ADDRESSES

FP2AF—Via I.S.W.L.
AC5PN—Chawna, Thimphu, Bhutan, via Bhutan House, Post Office, Kalimpong, India.
FB8CJ—Box 73-0, Tananarive, Madagascar.
FB8CW—P.O. Box 152, Diego Suarez, Madagascar.
FL8AB—Now F8UD, Guy Depagne, Caroual, Erquy, Cotes-du-Nord, France.
FL8AC—Guy Maloche, C/o. C.F.A.O., P.O. Box 160, Lagos, Nigeria.
FL8ZA—Via W2JXH, Harry L. Whiting, 765 Park Ave., New York 21, N.Y., U.S.A.
FQ8AC and FQ8AD—Box 2253, Brazzaville, Republic of Congo.
LF2V and LJ3G—Via N.R.R.L., Box 898, Oslo, Norway.
PZ1AY—P.O. Box 21, Moengo, Surinam.

SIDEBAND

Bud Pounsett, VK2AQJ
22 Selfert Centre,
Queanbeyan, N.S.W.

T/R SWITCH

One of the problems encountered with fast send-receive systems is the slow speed with which most antenna relays operate. Some operators also object to the loud clack-clack of the relay. To overcome these difficulties, the electronic send-receive switch has been devised. Most sideband operators are familiar with the "T/R" switch, but for some newcomers here are some important points.

It has been found that, in some cases, connecting the T/R switch in the line to the antenna or antenna coupler caused the received signals to be attenuated. This attenuation is called "suck-out," and is caused by absorption of the signal by the final tank circuit. However, connecting the T/R switch input to the final amplifier tank circuit itself overcomes this "suck-out" effect and gives added selectivity from the tuned circuit.

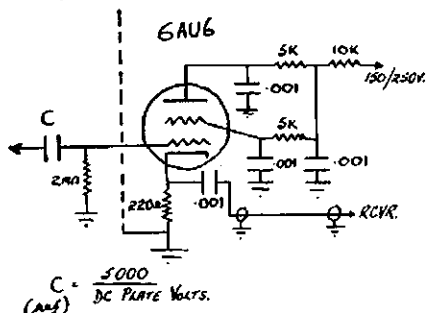


Fig. 1.—T/R Switch.

Unless cut-off bias is used on the final amplifier during reception, noise is generated which will mask all but the strongest signals. This does not present any problems. May I refer you to the Sideband page of "A.R.," Oct. '60. The bias network shown there will be of interest.

Fig. 1 shows the circuit that Stan VK2EL and a number of others are using. In explanation, Stan writes: "When no r.f. is present in the final tank, the T/R switch acts as an impedance matching cathode follower, matching the final tank circuit to the receiver input. When the transmitter is on, the small grid current of the 6AU6 tube causes a negative voltage to appear across the 2 megohm resistor, cutting off the tube very effectively. A tuned circuit could be used and the output link coupled to the receiver."

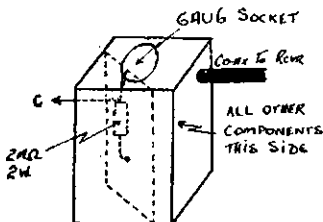


Fig. 2.—Physical layout of T/R Switch.

Stan reports that the switch works very well for him on all bands. The switch at VK2EL is built in a small shielded box with the grid pin isolated from the rest of the pins by a metal shield. Fig. 2 shows how this is done. Take care to ensure that the coupling capacitor "C" has sufficient voltage rating if you connect it to the plate of the final amplifier tube. Complete isolation between the input and output of the switch is essential for correct operation.

PERSONAL

Allan VK2RX has made a come-back to sideband, this time on the 20 mhz band. His transmitter is a 9 Mc. phasing design, using 6AL5

tubes as balanced modulators. A 6AU6 follows as a 9 Mc. amplifier, while a 6AK5 is used as a mixer. Sideband excitation is fed to the cathode of the 6AK5, the v.f.o. signal being injected at the grid. The v.f.o. is a 5 Mc. Command transmitter. A 12BY7 tube drives an 813 in a G2MA circuit. A 20 mhz dipole and a crystal controlled converter into an AMR101 complete the installation at Bexley North.

On Jan. 18, Russell VK3SX entertained several sidebanders at his home in Toorak. A most enjoyable evening was had and as you may guess, sideband entered the conversation at times. Those present were VKs 3NR, 3WR, 3KB, 3OZ, 3AHR and 2AQJ. It is very pleasant to meet your over-the-air friends face to face.

From South Australia is often heard the signal of Doug, VK5KK. Doug lives at Fullarton, an Adelaide suburb, where he uses an AR55A exciter, a 12BY7A driver and an 813 final. Three 6AC7 tubes are used in the v.f.o., one as oscillator, one isolator and one multiplier. A crystal controlled converter and a Type 19 Mark II. receiver take care of reception.

From VK5NN, of Blackwood, in the Adelaide Hills, I have some news of v.h.f. s.s.b. history. Phil tells me that VK5RT worked VK2ADT on 50 Mc. s.s.b. way back in 1950. Bob VK5RT was using a h.f. xtal filter (7.8 Mc.) and VK2ADT was on a.m. Seems as though VK1VP must relinquish the first-on-v.h.f.-s.s.b. honour to Bob. Bob and VK5QR play chess via 80 mhz sideband on Friday evenings.

40 METRES AND U.S.B.

"K.W. Viceroy" sideband transmitters are being heard on the various bands. One proud owner being VK2LH, Tom of Lismore, in northern New South Wales. The Viceroy is an English commercial transmitter which sounds very good indeed. It employs a crystal filter and has 180 watts p.e.p. available in five bands—80 to 10 metres. Lower sideband is available on 80 metres, whilst upper sideband is transmitted on all other bands. As 40 metre operation in Australia usually calls for lower sideband, this may be considered a shortcoming in this transmitter.

If after calling CQ on 40, you are answered by a sideband station that will not resolve, try the s.b. selector switch in the u.s.b. position. After you have established contact, change your own transmitter to u.s.b., if this is possible. There is nothing more frustrating than trying to break-in on two stations using different sidebands.

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6U8 REPLACEMENT

If a 6U8A gives up in your gear, try replacing it with a 6CQ8 tube, much more reliable, says VK3JK.

BC453 MODIFICATION

For you luckier people who have this excellent piece of gear, G.E. Ham News for September-October, 1960, has some interesting information on improving the performance on s.s.b. If you have access to this publication, do have a look at it. For those of you who do not see G.E. Ham News, I hope to be able to give more details very soon.

CRYSTAL OSCILLATORS

Several of the fraternity, including one a.m. operator, have expressed their delight with the low frequency crystal oscillator shown in the December notes. Do not overlook this circuit when you are designing your new filter exciter or crystal controlled h.f.o.

W8YIN—SILENT KEY

Sidebanders will be sorry to note the passing of Mickey Unger, W8YIN, who fought a gallant battle against cancer but died on October 11, 1960. Mickey was known to Amateurs throughout the world and was the DX Editor of the Sidebander, the S.S.B.A.R.A. Journal.

Correspondence

Any opinion expressed under this heading is the individual opinion of the writer and does not necessarily coincide with that of the publishers.

DEMISE OF ZL2EV

Editor "A.R.," Dear Sir,
I am enclosing a card from ZL2HV and a letter from his (now) widow for your perusal. The late Les Watson was an engineer in World War I, and a keen Amateur for many years. He worked all bands and made many friends in VK. He was an inspiration to newcomers to the bands. He will be sadly missed by all VKs who ever made a contact with him. Understandably, Mrs. Watson will not be able to reply to all those who have sent cards.
—L. W. P. Smith, VK2AWS.

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VHF

David Tanner, VK3ZAT
C/o. British Nylon Spinners,
Bayswater, Victoria.

Once again we have come to the end of our main DX season on the v.h.f. bands. For some, it has been quite good, but in the main, not as good as in previous years.

First, let us look at six metres. The season started well with quite a few short skip openings which seemed to auger well for the future. However, things became a lot quieter later on, openings to ZL were rare, even in VK3 and VK5, and other more exotic DX was almost non-existent. The decline in openings to JA and KH6 is certainly due to the decline in the sunspot cycle, but an explanation of the lack of Es openings is still forthcoming.

Activity on 6 metres in some areas at least was less than last year, and this could possibly account for some of the shorter openings being missed. For example, north-south openings during the mornings appeared quite frequently during week-ends and holidays, which indicates that the band was probably open during week days as well. A few more beacon stations such as VK6VK would give us more information on this state of affairs.

So much for 6 mx, what about 2 mx? The only feature on an otherwise uninteresting landscape was the 6 to 2 mx contact between VK5 and VK6. Contact has been made on 2 mx alone over this path before and could probably be done regularly if skeds were made. Here in VK3, two metres seems to be but a shade of its former self, mainly due to the fact that our former active exponents of larger arrays and better gear have left for greener pastures. Around the city at least, one of the shortcomings of the average 2 mx station is the antenna, although the construction of a reasonable one, a twelve foot Yagi at least, should not be beyond the means of anyone. Remember, a large beam, well situated, helps to increase both the transmitted and received signals.

On the 1 mx front, new records have been made, once again using stabilised equipment and adequately sized antennae. Work on 1296 Mc. in W land has also indicated just what can be done using stable tx's, large antennae, narrow band rx's and also the use of c.w. or s.s.b. and these same techniques can be equally applied here. So how about it? Let's see what new horizons we can open up in the future.—3ZAT.

VICTORIA

After an enforced absence due to shifting QTH and then a run of rx trouble, which is still not completely cured, I am back in harness again. Thanks to David 3QV for carrying on in my absence. Unfortunately my comments are rather brief regarding 50 Mc. as I have only heard rather incomplete openings on this band. Thanks to Maurice Cox and Mac Hilliard for their information.

For January, 6 mx activity was pretty fair for the number of openings but not for the quality. 1st saw VK4, 5, 6, and heard VK8, 3rd, VK4, weak JA, then VK4 and 6. 4th and 5th brought VK4. 6th, VK4 and weak ZL. 7th, VK4 and 9XK. 8th, ZL heard and weak VK4. 13th, ZL and 3ZFG/8 was worked here in Melbourne by a lucky few. For the rest of the month, VK4 and VK2 were in and out on quite a few occasions.

144 Mc.: Activity died quite a bit after the Contest concluded on 15th Jan. and in particular Bill 3ARZ was conspicuous by his absence. However, after making over 800 contacts on 2 mx only, I don't suppose we can begrudge him a rest from Amateur Radio. Incidentally, it wouldn't surprise me if Bill won the Contest with his effort.

On the DX front, nothing unusual until 23rd when David 5AW had a really good signal into Melbourne. David worked quite a few amongst whom were 3AFW, 3ALK, 3ZHY, 3QV, 3ZAQ and 3ZCG. Al 5ZCR was also on deck and stations he worked included 3ZCG and 3ZJY. 7LZ came through on 27th and worked 3ZDE and 3ZAI, whilst John heard Col on the following evening but couldn't raise him.

New calls noticed lately include 3EA, 3ARF, 3ZGL (ex-9ZAL), 3ZJL, 3AZT and his XYL Elizabeth 3ZJT, 3ZLN, 3AAD and 3ZHK at Dandenong.

Frequencies of interest are: 5GJ, 144.55; 5CH, 144.48; 5ZCR, 144.06; 5AW, 144.64; 3NN, 144.40. 288 Mc.: George 3ZCG is on the band every Wednesday night at 2000 hrs. looking for Melbourne contacts. 3AUX and SAAK (290.00 Mc.) hope to keep the Melbourne end going. Jock 3CS is back on this band again and worked 3ZER on the 14th. 3ZCG has been working 3ZER/3 with 5 and 8 signals both ways. George cracked the jackpot on the 23rd when he worked 5AW with 5 and 8-8 signals and got 5 and 6 from David. The distance involved here is about 280 miles and betters 3ZER/3-5AW by about 100 miles.

Late News.—Watch for VK2ZGC at Broken Hill on 51 Mc. He has been heard and worked from Melbourne.

The Ballarat (144) Moonbounce Project is proceeding well and the antenna installation is very nearly complete.

Jock 3CS will soon be active on 288 Mc. using a 24 ft. long Yagi lent by 3ZAT. Peter 3ZDO is also on 288.16 transmitting only at the moment. 3ZAT has passed the Morse and hopes to obtain 3LO in place of 3ZAT.—3ZGP.

50-54 Mc. BAND

At the request of the Institute, the P.M.G. Department has further extended the use of this band by Australian Amateurs until 31st December, 1961.

This approval has been granted on the understanding that if the band or portion thereof is required for television prior to 31st December, 1961, the Institute will arrange for it to be vacated by Amateur Stations within fourteen days of receipt of written request to do so.

TASMANIA

The next meeting of the Tasmanian V.h.f. Group will be on March 15. The January meeting included a talk by Barney 7ZAK on finding hidden 2 mx tx's. W.I.A. re-broadcasts continue on 50.88 Mc. and 144.28 Mc., and call ups taken by Alan TMY. Alan lost his modulation transformer while on this job recently but should be back to normal by now.

50 Mc.: DX wise, the band was too quiet during January. Many locals were away during this time; 7ZAO and 7ZAQ in VK5 and 7ZAI and 7ZAX also being absent. Thus conditions may not have been made the most of.

On 29th Dec., 7ZAC was up early, 0745 hrs., to work VK5. Later in the day VK4 arrived. The new year opened up in the right manner with an excellent opening to all States; 7ZAI worked 6ZDS, TMY also worked VK5. Other 6s heard but Interstate GRM seemed a bit too thick. VK5s were worked on back scatter as they worked ZL, Western VK3, VK2 and VK4 also worked at excellent strength. On 4th, VK4 worked by 7ZAC. Seemed to be little else during the Contest period. VK9XK was heard by 7ZAI and 7ZAJ (date uncertain), but couldn't make themselves heard.

Jan. 14 brought VK4 again, followed by a good all-day opening to VK2 and VK4 on the 17th. 7ZAQ and 7ZAO being active during the day and joined by others later on. VK2 seems to provide the strongest signals down here. Hugo 2WH on this occasion, being as strong at this QTH as a 150w. local 1 mile away. A report in the local press told of the reception of ABT Channel 2 in Alice Springs (on a communications rx), on the 16th and 17th Jan. However, no sign of the VK8 prefix was heard at this QTH on 17th, VK2 again on the 21st, JAs were heard by 7ZAI on 22nd at 1030 hrs. but none worked. Darrell 2ZLP popped up consistently at lunch time, as on 24th Jan. VK5s worked on 25th by 7ZAQ brought the month to a close.

Local activity is looking up well, 7ZAS and 7ZAK both now well established. Michael Jenner, at New Norfolk, is due on 6 mx on receiving his call sign. Michael guarantees David 7ZAI has the strongest signal on any band, ever to hit his town. We also hope to hear 7AB from this locale. Ted 7ZAV is another we'd like to come down to 6 mx.

Phillip 7ZAX, in between hawking soap powder, is on a major re-building programme —has spent some time concocting black iron

chassis and panels. News from the north tells of the return of 7RL at Stanley to 8 mx, ha hopes to be able to repair a damaged 4 el. Yagi soon; hope it reaches down south sometime Reg. I believe skeds have been arranged between 3ZJE and 7LZ on 50 Mc.—results unknown down here at the moment.

144 Mc.: Two metres is missing out badly right now, but should have some comers later on in the year. We'll have to make an effort to bridge the gap between Hobart home stations to Launceston and the North West Coast both on 2 and 6 mx. It may be a matter of hitting the right rocks on some of those 5,000 feet mountains. David 7ZAI will be operating portable on King Island during late February and possibly early March, looking for VK3 and VK7 contacts.

288 and 576 Mc.: One metre activity still hinges on mod. oscs. 7ZAI, running a 100w. one using a QQE08/40. 7ZAQ has a crystal controlled mobile in operation.

576 Mc. is at last kicking off; 7ZAI has gear going as have 7ZAO and 7ZAQ. Also interested are 7ZAK, 7ZAJ and 7ZAS.

Noticed 7ZAI and 7AS snooping around likely places in search of gear for 2,000 Mc. When, if?—7ZAO.

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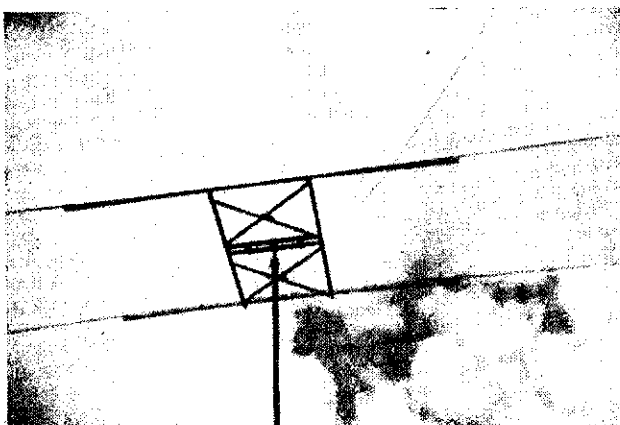
We, the office-bearers of the VK3 Group, are very disappointed in the poor attendance figures at the Group meetings. These meetings, in case you don't know, are held on the last Friday of each month at the rooms, 478 Victoria Parade, at 8 p.m.

I myself, have noticed that new members come along for one or two meetings and then we don't see them again. Why? I would like to know. After all, the Group is for you and your hobby, why not practice it, tell me why you don't come any more; write me a letter, tell me what your gripes are; better still, come to the meetings and tell me.

You know, chaps, I have a feeling what it is, dry meetings, too much talk and not enough action; nothing for you to do but just sit and listen to a lot of things that don't interest you, is that it?

So it's up to you boys to tell me and we will do something about it. Soon, I hope, with approval we will be able to have our own receiving station at the rooms. So keep your fingers crossed.

Quite a few visits have been arranged for the next few months so keep your eyes and ears open for further details.



My personal thanks go to Ian Woodman for the splendid work he has done in arranging these for us.

Another matter is that of news. I always welcome letters from anybody, no matter who or where you are, every letter is answered personally, and if your letter contains something of interest to the other s.w.l. I'll write it up in this page. Furthermore, I wish to thank all those who do write to me and there are a lot of you. Thanks again, chaps.

VICTORIA

We still plug along creating new members. There have now been issued 101 listener numbers. Incidentally, if any VK3 S.w.l. would like some QSL cards, just write to me and I'll forward some to you. These cards were printed by the Victorian Government Tourist Bureau. They are a very nice coloured card, a beautiful scene of Melbourne and the details for us on the back. There were a few errors made in the printing process, but they are easily overcome. I have sent out 10 already, the most I have emitted in 18 months.

Bert Stebbings spent his holidays at Denliquin. Bert said it was very hot, no fishing, so spent eight hours a day listening on 6 mx, then found out converter on the blink. Sorry to hear that Bert. We hope you have better luck on your next DX-pedition.

SOUTH AUSTRALIA

The Group has been very inactive, but on Jan. 18 a meeting was held to bring the Group into full swing again. Garry L5026 is at present constructing a 7 valve rx and will most

probably enter the N.F.D. Contest (best of luck, Garry).

Collin will be on leave, but his brother Trevor is entering a log. Dale L5025 is having bug trouble with his No. 11. Collin has logged a new country—XW8AL. He tells me he has a 522 rx on the way from Melbourne for use on 2 mx. Collin received a letter from Bob Simmonds, of Iron Knob, and Bob has put up the W0WO all-band antenna and he says it has very much improved reception on his 1155 rx. Collin would like circuits for 10, 15 and 6 mx converts—who can help? Thanks for the news, Collin.

TASMANIA

Michael writes with a query and wants to know what to do with members who live a long way from meetings? Michael, write to them with news of your activities down there. Keep in touch with each other; take note, you VK7 S.w.l.'s., write to your Secretary with your activities, he can write them in a letter to me for inclusion in the S.w.l. Notes.

Next month I'll give a list of VK7 S.w.l.'s. and their gear and give them each month after that for other States, so you S.w.l.'s. can write me and tell me what gear you use, plus the antenna.

CORRESPONDENCE

I have received correspondence from the following: Don Grantley, L3088; Eric Trebilcock, BERS-195, L3042; Howard Harvey, L5034; Harry Major; Graham Rutter, L3091; Chas. Aberneathy, L2211; Peter Horn, ZL337, soon to be a VK3 member.

John Walker, VK2, what a mail! Some of these guys write twice a month—I like it! Once again I repeat, anybody can write to me about their activities, the gear they use, plus antenna, don't be frightened. Don't forget your QSL ladder scores, send them no matter how big or small.

Howard Harvey, L5034, of 27 Wainhouse St., Torrensville, Adelaide, has quite an antenna farm.

At the top is a 5 x 5 beam for 288 Mc., then a 7 element beam for 144 Mc. Just visible at the bottom of the photo is a 1 metre ground-plane. A two element beam for 6 metres was added below the 2 mx beam after the photo was taken.

20 metre two element beam (director app. 30 ft., spaced 0.1 wavelength from dipole of 33 ft.). A 40 metre dipole is shown above the beam, but this has now been replaced with a new dipole coming from the point where the upper guys are attached to mast.

Eric says he has a plan. He's got to keep looking ahead two weeks or so. Do you know what he only listens one hour per day and believe it or not, goes QRT some times when the DX is at its highest. What a plan, I do not know how you do it Eric.

I met him the other night, he had just collected 60 QSLs for the month. He tells me he had a good Xmas, did a lot of travelling, had his mother over from VK5—81 years old and completed her 30th air trip. How about that, good for her. Eric's Federal QSL job is nearly finished. Ray is back now. Last month was Eric's busiest, 4,000 cards (none for me).

In 1960 he mailed 1,875 reports, received 916 QSLs from 125 countries and 37 zones; heard 178 countries in 40 zones; 49 ships, 6 motor cars. Up till 15/1/61, he had mailed 34 reports and has 14 QSLs from 9 countries and 9 zones. His all-time scores: 275 countries, 40 zones heard, with QSLs from 259 countries, plus 40 zones. Thanks Eric for that information, very good.

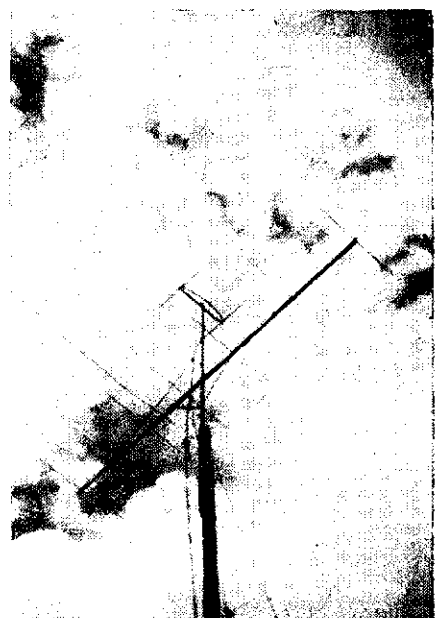
My mate, Donald Grantley, is next. He did not do very well at Albany on 6 mx in the R.H. Contest. He got into the Xmas break though just as it finished. Obtained about 50 points and heard one VK5. He also heard a JA (more than we heard, Don). He's put a co-ax. input on the AR7 in lieu of plugs, re-stored the 6A8 mixer circuit to the original 6K8. This improved the stability of the osc. and then he peaked the coil boxes again on the phone DX section. Other than 10 mx, which hit the c.w. part, as this is the i.f. for the converters. He obtained two 40 ft. Oregon 4 x 4 inch masts and is going to erect an end-

fed Zepp, 66 ft. long at about 45 ft. He's given me the gen on a vee beam, 33 ft. long each each, 90 degree angle (no less) and fed with open wire feed line.

On awards, Don says a s.w.l. version of the two W.I.A. awards on p. 13 of Jan. "A.R." would be the "ant's pants." I'll look into it, Don. Latest from Don is that his AR7 is under the bench and he is now using a Marconi R1155—more from him next month.

Howard Harvey, L5034, of Torrensville, writes me that he is nearly 17. His rig is a dual wave rx with additions and modifications for tuning 40, 20, 15 and has converters for 6 and 1 mx. His antennae are: 49 mx half wave centre fed dipole, 30 ft. high; 20 mx two element beam, 30 ft. high; 15 and 10 mx double dipoles, 20 ft. high; 6 mx two element beam, 21 ft. high; 2 mx 7 element Yagi, 22 ft. high; and 1 mx 5 x 5 (vertical polarised), 27 ft. high. What an antenna farm, and his photos on this page prove it. He has yet to build rx's for 2 and 1/2 mx, but he's still at school. Also he will be getting a new rx soon—160 to 10 mx. He has not been active much, only logged 58 QSOs, but has QSLs by report to 20 countries. More from Howard next month.

Harry Major is an old hand; his early s.w.l. was done on a 1 valve adaptor plugged into an ordinary radio set. It was rather hot and enclosed in a metal case with a good earth.



so as not to cause any interference. With two audio stages, it brought in dozens of overseas stations and hundreds of local Amateurs (not like now, Harry).

At the moment, he has a six valver, also spends a lot of time playing around with a 3 valve super. regen. originally designed for 144 Mc. and he's been trying out coils for the lower frequencies, but he's not having very much success. He wonders if the Editor of "A.R." could arrange some articles on simple s.w. sets for young beginners. It would help the younger lads to get started.

Graham Rutter, L3091, is in a one-horse town called Peebringa, with the C.S.I.R.O. Division of Metrological Physics. His only link with the outside world is a transceiver which often won't load when one wants to use it. Birds find the antenna a good resting place and by the time he's ready to use it each day, he doesn't have a sky-hook, hi! Equipment is a BC611F and 122. The 122 is often on the coast-guard and lighthouse frequencies having QSO with the Met. Station on Neptune Island. He wishes he had a rx, the locale is good, no noise and high up. Hunting is the best and he's going broke buying bullets to feed the rabbits with; there's so many of them. Save the money, Graham, and buy a rx'er.

Judging by what I have written here, I think I've used all my space. So I'll have to finish up now and write about Peter Horne and Chas Aberneathy next month.

There is no alteration to the QSL ladder, so will not include it. Till next month, this is your scribe going QRT, best of DX, 73, Maurice.

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FEDERAL

50-54 Mc. BAND

At the request of the Institute, the P.M.G.
Department has further extended the use of
this band by Australian Amateurs until 31st
December, 1961.
This approval has been granted on the under-
standing that if the band or portion thereof
is required for television prior to 31st December,
1961, the Institute will arrange for it to be
vacated by Amateur Stations within fourteen
days of receipt of written request to do so.

FEDERAL QSL BUREAU

Belatedly, perhaps, this Bureau reciprocates
Season's Greetings received from the "DL,"
"OK" and "VEB" Bureaus.

New address for the Cuban QSL Bureau is:
Apartado Postal Num. 6996, Habana, Cuba.

By the time these notes are read, the c.w.
section of the 1961 R.E.F. (French) DX Contest
will have been held. However, the phone
section will be held from 1400 G.M.T., 15th
April, to 2200 G.M.T., 16th April. Code is R/S
plus three-figure number of contact. Score 1
point for each French station contacted (France
or Colonies). Multiplier is each French depart-
ment or each overseas country. Total score is
points multiplied by multiplier. Scores to be
forwarded to R.E.F., B-P, 42-01, Paris, R.P.,
France (closing date not stated).

So successful was the Boy Scouts' Jamboree
on the Air, 1960, that already the week-end
of 21st and 22nd October has been set aside
for the 1961 event. Full details at a later date.
The Executive Commissioner of the Boy Scouts
International Bureau, Ottawa, Canada (VE-
3AM), desires to thank all those Hams who
assisted in the 1960 event.

The QSL Manager of the Okinawa Amateur
Radio Club has sent details of the Club Award
given for contacts with KR6 stations. In claim-
ing, the number of contacts required is de-
termined by the Zone in which the claimant
is located. Further details from the Federal
QSL Manager, W.I.A.

As this is probably the last time I will be
writing notes for this column (Ray VK3RJ is
due back home early February), I desire to
thank those readers who have commented favo-
rably on my efforts.

73, Eric Trebilcock (BERS-195), Acting Fed-
eral QSL Manager.

NEW SOUTH WALES

The month of January is a most important
one in the year of the N.S.W. Division of the
Wireless Institute owing to the fact that the



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St., Castlemaine; North Eastern: T. K. Ten-
nant, Park St., Tatura; Eastern: J. F. Ryan,
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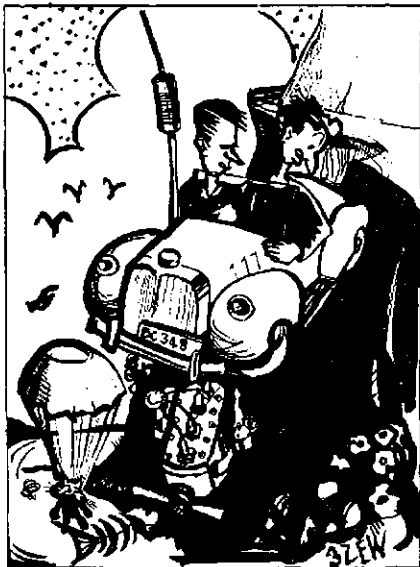
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the State Service Union Rooms, Elizabeth
Street, Brisbane.
Divisional Sub-Editor: W. J. Rafter, VK4PR,
Willandra St., Alderley, Brisbane.

Annual Convention is held at Dural on the
Saturday of the Australia Day week-end.

This year the Eleventh Annual Convention
was opened by the monthly meeting at Science
House, Gloucester Street, where there was an
attendance much lower than would be ex-
pected. Some, no doubt, are still fortunate
to be on leave, others working, while yet a
large proportion of our members appear to
have found the attraction of the t.v. screen
too much for them with the effect that they
are no longer seen at meetings as regularly as
in days of yore.

Those who did attend, however, heard an
interesting lecture on Frequency Shift Keying,
ably given by John Crocker of the Depart-
ment of Civil Aviation. This is yet another
of those interesting addresses which have
been arranged by Harold 2AAH, and in his
lecture, John gave us an insight into this type
of transmission which is being widely used
by his Department in their communications



"That's funny, the ignition hshh has stopped
all of a sudden."

QSL Bureau: Jack Files, VK4JF, Vanda St.,
Buranda.
Zone Correspondents: Maryborough: R. J.
Glassop, VK4BG, 80 North St., Maryborough;
Townsville: R. K. Wilson, VK4RW, Hogan
St., Stuart, Townsville.

SOUTH AUSTRALIA

President: L. F. Brice, VK5OK.
Secretary: J. C. Haseeldine, VK5JC, Box 1234K,
G.P.O., Adelaide. Telephone: M 7851.
Meeting Night: Second Tuesday of each month
at St. Paul's Church Meeting Room, Cr.
Flinders and Pulteney Streets.
Divisional Sub-Editor: W. W. Parsons, VK5PS,
10 Victoria Ave., Rose Park, S.A.
QSL Bureau: G. Luxton, VK5RX, 27 Belair Rd.,
West Mitcham, S.A. (Inwards & Outwards).

WESTERN AUSTRALIA

President: Cole Sangster, VK6CS.
Secretary: L. S. Edgington, VK6LS, Box N1002,
G.P.O., Perth, W.A.
Meeting Night: Third Tuesday of month at
Mends Street Hall, South Perth.
Divisional Sub-Editor: P. Hayward, VK6PH, 2
Barnsley St., Queen's Park, W.A.
QSL Bureau: Jim Rumble, VK6RU, Box F319,
G.P.O., Perth, W.A. (Inwards and Outwards).

TASMANIA

President: T. Allen, VK7AL.
Secretary: K. E. Millin, VK7KA, Box 851J,
G.P.O., Hobart.
Meeting Night: First Wednesday of each month
at W.A. Clubroom, 147 Liverpool St., Hobart.
Divisional Sub-Editor: T. Nichols, VK7ZZ, 9
Cressy St., New Town.
QSL Bureau: J. Batchler, VK7JB, 39 Willow-
dene Ave., Lower Sandy Bay, Hobart.
Zone Correspondent: North Western Zone—
Terry Tong, VK7TT. Northern Zone—Ray
Waldon.

network. John roused considerable interest in
his subject and was quizzed following the lec-
ture on some of the finer points of the system.
The vote of thanks which followed was moved
by Roy 2IV and was passed in the usual
manner.

Discussion followed, mainly initiated by Barry
2AAB on the prospect of this mode being per-
mitted on our frequencies in the future. This
matter is being pursued and more will be
heard on the subject at a later date.

At the close of the meeting there was little
discussion on the usual matters which is nor-
mally conducted on the footpath, no doubt most
members wishing to make an early start on
the big day following.

It is well to remind members and others
interested, that on the second Friday of the
month there is the mid-monthly meeting which
is held at 14 Atchison St., Crows Nest, for
which meeting some interesting lectures and
displays are being arranged. Details of this
meeting are always to be heard in the weekly
broadcast from VK2WI. So fellows, make it a
night each month, every month.—2ACD.

HUNTER BRANCH

This being the month to change or not to
change your local officers, how about you pre-
sented yourself for duty. I doubt if anyone
will object to step down. In your favour and
as Lord Byron said, "Give it a go—you never
know." The meeting night is 10th March at the
University of N.S.W., Tighe's Hill, at 2000 hrs.
As an added incentive, it is pretty certain that
Harold 2AAH will be there to talk about an-
tennae and those who heard his previous trans-
istor story will need no coaxing along. If
Divisional President is coming, and we hope
he is, maybe he had better walk.

The "Dural Do" for 1961 is now behind us—
I broke all records, but there is time to hear
a particular lecture, but found that the chapple
had taken unbrage and decamped. A pity
those things happen, but apparently you can
lead a chap to Dural but you can't keep him
from disappearing.

Noticed walking around the grounds were
VKs 2CS, 2ZL, 2AKX, 2AFA, 2RJ, 2AYL, 2ZDF,
2PZ, 2FP, 2XT, 2AEE, plus Messrs. Sutherland
and MacLoughlan. When I arrived, I found
that they must have heard me coming as the
gates were locked but was able to persuade a
gentleman in a gown and wig to squeeze my
car in a corner. I must say the grounds pre-
sented a vast improvement to last year and I
was close by to the goings-on. Last time I was
parked so far away that when I went out to
get my tea, I arrived back in time to go home.

Harking back to the aforesaid gent in wig,
etc., I was astonished to see that it was F.C.P.
A.P.Q., which stands for Federal Councillor
Perc APQ who had only been appointed to

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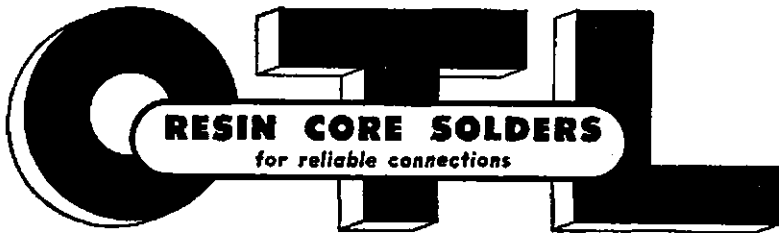


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Mo.	E. AUSTRALIA — W. EUROPE S.E.												Mo.
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E. AUSTRALIA — FAR EAST													
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that exalted position the night before. If Pierce does as good a job in that capacity as he did when he was Divisional President, all will be well, so look out F.E.—F.C.P. is on the job. One for your note book Pierce, and Pansy Parsons please copy; Tell 5WI to keep off 4WI during their broadcast on Sunday mornings.

I believe 2ZL's ground network is messing up 2CS's pipeline at Killibeen Bay. Varley 2SF's daughter was married early in the year and Tony Mullins has arrived back from his honeymoon. Wonder if it is true that a certain member has his poles chopped by an irate Indian. Understand that Gordon 2CI has had offers from the Tourist Bureau after his graphic description of the terrain as viewed by one Eric 6WM, whilst stationary mobile on New Lambton Heights. His shepherding out of Newcastle was taken over by Romeo and Juliet, and the last I heard Eric was at Belmont.

Note with interest that it is 25 years since "The Old Man" passed away, but Hiram and his offiders—Wouff-Hong and Retty-smitch—are remembered.

Was very sorry to hear that the Melbourne Monitor, Roy Parker, passed away. I have been in communication with him ever since I came on the air in VK2 land and being a very sick man he obtained quite a lot of enjoyment by listening to the Amateurs.

The two Goons, 2ZL and 2AQR, recently celebrated their 3,000th contact and boy what a lot of words have been wasted between those two. Secretary Gordon, so a bird tells me, is at last going to do a bit of study and trying for his ticket. However, he is barred from the Goon Show—we must draw a line somewhere. Looks like the Man in Melbourne has run out of call signs as Stuart 2ZDF is still waiting for a full call—there couldn't have been any sunshine in Melbourne as he came back from there without his usual tan. Of course anything can happen in VK3, so maybe they just skinned him.

Well chaps it is getting dark and I cannot afford to light the candle, so don't forget the Annual Meeting on the 10th and no doubt Bill Hall's social will be at his place on 22nd. So, as there may be a new correspondent for the next issue, all I can say is thanks for reading.—2AQR.

VICTORIA

Last month there was no news. This month there is little. Two reasons are apparent for this; first, your scribe has been on vacation, second, nobody has sent him any news.

Please, please let me have some news and views for the broadcast and the notes—VK-

W.I.A. D.X.C.C.

Listed below are the highest twelve members in each section. New members and those whose totals have been amended will also be shown.

PHONE

Call	Cer. Cnt- No. ries	Call	Cer. Cnt- No. ries
VK6RU	12 251	VK6KW	4 202
VK6MK	45 243	VK4HR	2 192
VK5AB	45 243	VK3BZ	3 176
VK4FJ	21 221	VK3GB	50 171
VK3WL	14 211	VK4RE	23 164
VK3ATN	26 204	VK3EE	10 163

Amendment:

VK3TG .. 48 112

C.W.

Call	Cer. Cnt- No. ries	Call	Cer. Cnt- No. ries
VK3KB	10 236	VK4HR	2 218
VK6CX	26 273	VK3XU	48 213
VK4FJ	29 264	VK7LZ	17 212
VK8NC	19 236	VK8RU	18 210
VK3FH	15 226	VK3YL	39 203
VK3BZ	6 222	VK3RX	23 195

New Member:
VK3AX .. 63 119

OPEN

Call	Cer. Cnt- No. ries	Call	Cer. Cnt- No. ries
VK2ACX	6 282	VK3BZ	4 231
VK4FJ	32 267	VK3HG	3 225
VK6RU	8 265	VK3WL	45 225
VK6MK	74 247	VK7LZ	23 223
VK8NC	77 238	VK3XU	61 221
VK4HR	7 233	VK3KW	13 216

3AKJ, John Battick, 9 Bayview Rd., Frankston. Phone 33478.

Elwood Life Saving Club: Due to an appeal made over VK3WI one Sunday, three of our members, Ron 3OM, Bill 3ARZ and Ian 3ZBi have done good service by assisting the club with installation of antennae on their new patrol launch and base station.

Disposals.—It is planned to enlarge the disposals committee for 1961 and to greatly widen the scope of its activities. Very good work has been done by the present committee—Russell Bradshaw and Gordon Dennis—who have worked under great difficulty to obtain what equipment they could. We think that 1961 will see more activity in this direction with some more people to share the work, and a possibility of new avenues open for procurement.

February Monthly Meeting.—How many were there at the meeting? A couple of dozen people! What were the agenda items like? Excellent! Why so few people? Why?

Portable/mobile transistor power supplies; a 6 metre s.s.b. filter type mobile rig; and a 7 Mc. mobile set-up were shown and discussed by VKs 3ZQ, 3ZAT and 3YS. The lectures were full of technical material and were very well presented with the actual equipment on display.

Contests.—Thanks to those who were out on the National Field Day. Don't forget, the 1961 R.D. Contest is less than six months away!

Amateur Advisory Committee.—Council has re-elected its three members to this Committee for 1961, viz.: 3ZO, 3OF and 3WY.

VK6WI.—The station at the rooms is working satisfactorily now, but there's still a lot to be done yet. What about it, chaps? V.h.f. gear now!

WESTERN ZONE

As these notes are penned, Bill 3AKW is enjoying the cooler climes of N.T.? whilst we southerners are sweating it out! Bill's itinerary will take him to Sydney via Alice Springs, Darwin and Brisbane. Surely there's a shorter route to Sydney Bill!

Bert 3EF found quite a few dry joints and leaky capacitors in his modulator the other night and now has one of the cleanest sigs in the Western Zone. Herb 3NN is at it again. This time it is 1 mx DX. Yes sir! and into VK5 too. Herb, ably assisted by Garry and Max, worked David 5AW in Penola. S8 both ends over a distance of 90 miles and running 16 watts. F.b., Herb, you've got me interested.

Merv. 3AFO has just finished modifying and aligning his AR7 rx with pleasing results. The local S.E.C. mains hash was only S7 before, but now it's S8 plus (darn it). Has also strung up two new antennae on 40 and 20 mx. Gosh, the birds haven't a chance around here now.

Gordon 3GW and Barry are busily engaged in knocking up an inductance bridge—no choke! Keith 3ATS is planning a table-top tx conforming to modern standards. Vic 3AEG, who hails from Murtoa also, will be on before this goes to press most likely, with a completely re-built rig. Wilson 3AFU, a newcomer to Amateur Radio, from south of Horsham, will be on the lower bands with an AT5 just as soon as work and rural fire brigade radio network commitments permit.—3AFO.

SOUTH WESTERN ZONE

Our congratulations go to Brian 3KN and XYL Helen on the arrival of another harmonic, the third and a YE too. Rumour has it that this is the first of a series of similar notices. No, no, Helen, we mean that the old bird may be visiting other places in the Zone, too. Brian has taken a little time off to get the mobile rig really on the nose, sorry beam.

John 3AMC has been heard using the new modulator on 30 mx lately. Eric 3XL, who surely must have the hottest rx in the zone, judging by what he hears, offers the news that 3KO will be spending some leisure hours in the zone with his ATR2B.

Tony 3WB has plans for another mobile, centred around the 108 set. The tx side will use a 5763 xtal osc. driving a 2E28 final from 160 mx to 20 mx with plug-in coils and link coupling. A carbon mike will be transformer coupled to the 2E26 Heising modulator. The rx section will be substantially unaltered except for the beefing up of the audio section. Alas, no mention is made of a key!

Although the local bands have been rather quiet lately, DX is still about and occasional listening on 20 mx has revealed that Jack 3JA and Norm 3NC are still getting amongst em. Very short skip did bring in quite a few VK3s on several occasions, but no zone stations were heard.

The resumption of the Sunday broadcasts from 3WI have continued to lay down a mighty signal from the new tx and we are

looking forward to the christening of the 80 mx section.

Our silent members, the associates, are none the less making their presence felt in various ways. Up Westmere way changes in the organisation of the network have taken some of the load off Hugh O'Rorke's shoulders and the job is going along nicely with quite a few new members this season. Secretary of the group is Tom Kinnerly, of whose mobile rig VL3KN we have mentioned before. A note has come to light mentioning two s.w.l's. from over Casterton way—Jack Murphy and Fred Bousefield. Unfortunately, that's all it tells, so can anyone help further?

The National Field Day Contest has passed into history now. At least one zone station took part as a mobile and did very well on 7 Mc. and poorly, we are told, on 3.6 Mc. He was Brian 3XN who camped by the Hopkins River. The 3AKN mobile blew up after one QSO and we retired to the home station instead; much more comfortable there. The 80 mx band was very good all day on Sunday and very few stations used it. We did and worked 3ADW/P, manned on this band by Keith 3YQ.

The W.I.C.E.N. practices have continued to be poorly attended. The time and dates for those who keep getting out of touch is 2030 hours on the second Thursday and last Sunday of each month on or close to 3550 kc. Special skeds have been arranged on every declared fire day and days of extreme danger which so often precede a declared day in this western side of the State. The initial sked is at 0715 hrs. on 3550 kc. and depending on our appreciation, other skeds will be arranged during the day. All country operators are asked to monitor this frequency ALL DAY if possible as this at present is the only means we have of putting all smoke nets into instant contact with each other. Valuable tips on the weather can be picked up on the Amateur bands, particularly on 40 mx during such weather. Anything which supplements the fire nets' own service is a help, specially from further west in the middle of VK5 land. So appeal is made to any VK5s who hear a zone member about to give him a moment or two. Thanks are due to 5TJ, 5MZ, 5K1/P (Tumby Bay), 5FM, 5VH, 5D3/P, 5AQ/P and others for their help and co-operation in the past month.

QUEENSLAND

TOWNSVILLE

For so early in the year, the bands have been very disappointing. Very little coming through on any of them. Noise is very predominant, wonder where it all originates? Heard two G boys discussing the fact that the B.B.C. television had been causing a lot of noise on 21 Mc. band. Anybody not experiencing noise come to my QTH and really hear it at its worst.

Quite a roll up at the annual general meeting of the club the other week; quite a number of the old faces missing. One chap was heard to remark, "They stayed away as the

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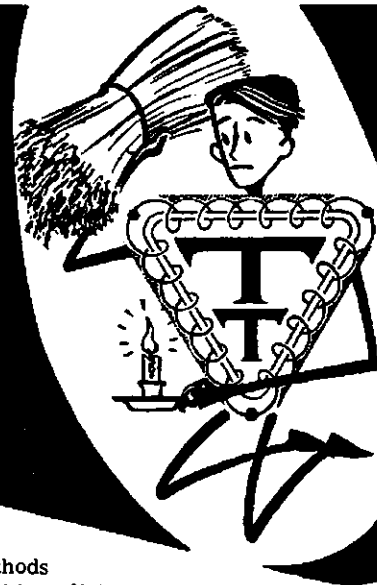
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various offices were being filled and they might be prevailed upon to accept." Quite pleasing that only 15 being present, most offices were balloted for and the voting was close. Eddie still holds the clerical position, and who later moved a notice of motion that the club affiliate with the W.I.A. Looks like being carried this time with a large majority. The new publicity officer, Frank Sturgess, is on the ball, had a large para in the local paper on the doings of the local Amateurs.

It is to be hoped that the aspirants at the last examination were all successful. Claude 4UX reported his class doing well and the Z boys are coming along nicely on c.w. Speaking of c.w., hope many of you boys have read the article in Nov. "CQ." "Some of My Best Friends are Novices," by K9MYZ.

Basil 4ZW in Cairns has four in his class and they hope to take the April examination. Certainly things are looking up; new voices on the band while the old ones silently fade out.

Heard that the impact of t.v. is now being felt in Brisbane and very poor roll up to the meetings. Consequently the country member wonders what is happening—no news being heard on Sunday's broadcast.

As the 50 Mc. Ross Hull Contest is over, can hardly wait to see the top number of contacts as conditions were very bad, only managed 44 QSOs myself; no openings to ZL or JA from Townsville.

See by a late issue of R.S.G.B. Bulletin reference made to contents of my letter which appeared a year ago in "A.R." reference to t.v. interference. Certainly our magazine is being widely read.

Bob 4TK just out of hospital again after a check up and now home again. Hopes to do more re-building in the future. Allan 4PS on a visit to Adelaide, hope he looks up his VK3PS call sign mate and crossed antenna with him. Will be no r.f. flashes or sparks as that scribe will blind him with the art of the pen.—4RW.

WIDE BAY AND BURNETT SUB-BRANCH

The annual meeting of this Sub-Branch was held at Gymbie on 5th February, with an attendance of 16 members and associates. There were four from Maryborough and 12 from Gymbie and further south.

Zone President, Gordon 4GH, reported a successful year, with increased membership. 53 associates sat for the last A.O.C.P., so some new calls should soon be heard.

Election of officers resulted as follows: President, Gordon 4GH; Hon. Secretary, Barry 4LN; Hon. Treasurer, Jim 4HZ.

A full report was received from Stan 4SA, our delegate on the State Council of the W.I.A. Due to other commitments, Stan was relieved of his position, and Bill 4WX was appointed.

SOUTH AUSTRALIA

Well, here we are again, VK5 sweltering under a heat wave, I am slaving over a hot typewriter, whilst everybody else slips ice water in front of an electric fan, or admires the scenery on the sea front. The only thing that keeps me going is the statement in last month's magazine that all sub-editors' money would be raised to double what they get now.

The monthly general meeting of the VK5 Division was held to a very representative gathering of members and visitors, the guest speaker being Mr. S. McLean (5ME/T). His subject was television as applied to the studio set-up, although in his talk he covered practically all aspects of the art, maintaining a non-technical approach to the whole subject which was much appreciated by the peasants, including myself, sitting in the back rows. It was my intention to give the talk in detail in the notes, but as usual my intentions were frustrated by the Council, due to their shortsightedness in preventing me from sending the blackboard over as part of my notes. I offered to take a photo of the blackboard with my Brownie box camera and send that along to the magazine, but all I got from Council was sniggers, in fact one uncouth member suggested that my camera would probably have holes in the bellows or something, and I was so upset that I could only retire into a corner and have a good cry.

Bob 5PU proposed the vote of thanks to the speaker in his usual capable manner, and the applause that followed was a definite indication of the success of the entertainment provided by Sid. Talking to several of the members who did not make the meeting for various reasons, every one of them said that if they had known that Sid was going to be the lecturer on the night, they would have certainly attended, and suggested that the lecturer be named in the weekly notes in the paper. I

quite see their point and promised to do this whenever possible, however my experiments so far with a crystal ball have not been very successful and I am forced to rely on the programme organisers for my information, and apparently they are not having any more success with their crystal ball than I am. Anyway, we have mystery hikes, mystery week-ends, mystery voices, so why not mystery lecturers. What's that? They used to always know in advance who the lecturer would be. Oh yes, but that was when a lot of old buffers were on the Council!

Little or no business was transacted at the meeting and for once the members retired to their couch of virtue at a respectable hour, much to the amazement of their better-three quarters who wondered if they were sickening for something or other.

Rex 5DO heard on 7 Mc. the other Sunday morning giving directions as to how to find his QTH to a VK3, and was quite surprised to hear his voice. Don't hear much from this joker these days; why I can remember when he was the Federal Councillor, he was always making statements to the daily paper, most of which he read for the first time on opening the paper, but these days like Brer Rabbit, he says nuffin. He used to reckon that I made them all up, but I never allowed his flattery to divert me from my duty.

Les 5NV heard portable from Port Vincent the other Sunday on the 5WI call-back, and a very good signal it was. This particular location seems to be very popular with the portable boys and I must admit that any signals that I have heard from that direction have all been extra good. Bernie 5WC was another to be heard on the call-back, and he sounded his usual cheery self despite the heat and a bad attack of power interference.

Heard the two Leigh Creek boys on also, Wally 5DF and Tom 5AQ. One or the other was having me on, both in the same town and one says that it is extremely hot, and the other says it was a mild summer as yet. Tom being the veteran resident, his judgment must be respected so-o-o-o-o-o, Wally, you have some hot weather to look forward to in the near future. That's all right, don't mention it. Bob 5RI was another one to be heard portable from Somerton, which I think would be a cooler place than the normal QTH of Mt. Bryan. The five watts was doing a good job, Bob, especially around the metropolitan area.

Everybody wants to get into the act! The place where I sign the time book has always been referred by me in these notes as the first station in the State, now what do I hear? Keith 5WI telling a station on 7 Mc. that he was not in the National, but the first bank in the Commonwealth. How low can one sink?

Received an interesting letter and a newspaper cutting from the local Alice Springs paper from Frank 8AE the other day, also a special pat on the back for a local school boy, Graham Jenkins, who recently passed his Limited Exam. at the age of 15 years. A product of the Alice Springs Youth Centre Amateur Radio Club, Graham has always been interested in Radio, although it is only since coming to Alice from Quorn, that his mother encouraged him to join the club and further his interest. He will not kick off in our hobby as yet but will wait until he has his Leaving Certificate in the bag. Nice work, Graham, welcome to the ranks, and remember to keep up that code practice.

The abovementioned club started in 1958 and was sparked off by the demonstration of an Amateur Radio Station at the 1957 Youth Centre sports day and hobbies exhibition, organised by Tom 5TL, who was the postmaster at the time; Mr. R. Umbarger, 5UM, an American Serviceman stationed in Alice at the time; and Frank (then 5AE, now 8AE). Mr. George Brown, base director of the Flying Doctor Service, has helped with the code practice, and Frank has handled the theory, and he says that if you want to improve your theory, then take on the job of teaching the young ones and you will be flat out to keep in front of them. Frank says that it is hard work, and takes up a lot of time, but he hopes that he has done it with the same good grace that Norm 4TY gave his time to help him back in 1936 to 1940. This, I think, sums up the whole thing, don't you? Many thanks for the dope, Frank.

Everybody was tickled pink to hear Buck 5DA bob up on the 5WI call-back the other Sunday. He sounded quite OK after his long sojourn in the sick bed and took the opportunity to thank everybody for their cards and enquiries as to his health. Buck is one of the real old-timers, old in our hobby, but reasonably young in years. I am considered in some quarters to be representative of the old buffers in Amateur Radio in VK3, but compared to Buck and his ilk, I am only a baby in

arms. He was active in the game when I was just a curious short wave listener. Nice to hear you, OM, take it easy!

If the gossip, the grapevine, the chatter over the back fence, plus the flutterings in the v.h.f. dove cotes can be believed, our respected Editor, Kel 3ZFQ, has been having a whale of a time up at Alice Springs. Despite the combined warnings of Myself and Tom 5TL as to just what he would encounter up there at this time of the year, he fearlessly set forth into the butk wiser v.h.f. enthusiast. I had a standing order with Chief Stagnant Water of the Hooby Dooby tribe to give Kel a tap on the scene with a Nulla Nulla if he saw him. No news is good news. (Pansies do not grow in VK3.—Editor.)

There is an old saying that there is nothing new in Radio, only repetition dressed up in a new guise. I was reminded of this forcibly this week when I made an unofficial survey of the Amateur bands for two or three days. When I came into Amateur Radio in 1932 there was a small select band of enthusiasts on each band, everybody knew everybody, and a strong bond of friendship existed between stations that has lasted for all time. For many years, during the boom time of Amateur Radio, this was all lost due to the numbers on the bands, but if you care to check on the bands today you will find the same call signs on each day or night, the same schedules, and once again the same christian names being given at first contact, and not after consulting a card index. Whether this is to the good or to the bad, I will not comment, but it is certainly good Amateur Radio.

The 5NO-5NQ combination now have their 20 and 15 mX beams installed on top of a 40 ft. tower. My spies report that Tubby 5NO is going on s.s.b. because he has a 2½ element beam on 21 Mc., the left hand of the reflector is missing! Jeff 5NQ has migrated to Whyalla for a quiet rest, leaving the fort and any DX signals to Dad to handle.

Bent 5BP has been heard occasionally using what he calls the only form of transmission worth using, to wit s.a.k.k. (suppressed audio keyed carrier). His mobile is now sporting a coat of multicoloured paint. First its green, then its blue, then it is a chartruse purple, and then to cap it all it becomes an indigo brown. It has to be seen to be believed! Ian 5QX is torn between the devil (s.s.b.) or the deep blue mobile rig. All he requires to become mobile is a tunable i.f. strip to hang on his converter, which hangs on something, which hangs on something else. Ron 5FY has been heard on 14 and 21 Mc. at times, but he finds the going hard at times competing against beams that soak up all the signals which are heading south. Don 5TM has been quite active on 6 mX and is working all that he can hear. The outcome of all this is, of course, that it is decidedly peaceful on 21 Mc. these days!

Clive 5PE has been busy with the club mobile project and is finding that the most difficult job that he has struck to date is to get the members of the club (who originally volunteered to run one) interested. Now what about it chaps, he has put a lot of work (including cash) into the chassis-cabinet department, so what about pulling your weight?? Keith 5EJ has been down from the north for the Xmas break and managed to snare some of the backlog of DX. Pete 5HB has been doing his share of activity with his QRP rig (10w.), and is using a Super Pro for his rx. For everybody's benefit I repeat, for his receiver. Don 5KD now has a mobile 288 Mc. rig in action and on a recent trip to the "Big Smoke" reports that he heard absolutely nothing, not a solitary sausage, not even 5PS was heard. Eh, eh, eh, what's this I am typing, I will have to check these spy notes more carefully.

John 5EV has been beaten by the mild weather and has not been heard much. I understand that he is waiting for the weather to get a little hotter, say 103 or perhaps 110 degrees, and then he will be in his element. Harry 5EU is still doing a good job on 21 Mc. and more than getting his share of contacts. In response to the numerous enquiries received, I am in a position to say that his lawn is doing nicely, thank you. 5HA, 5HU and 5HV are conspicuous by their absence from the bands, although a close watch is being kept for them, just in case they bob up at some spot or other. Another one who is missing is Robby 5EP, but there is a reason for this, he is having rx trouble—he hasn't got it.

Ken 5ZCH has been noticed promenading arm in arm with Hugo 5ZDA, up and down the 6 mX band, engaged in friendly competition with each other for the DX that 5TM has finished with. By the time that you are reading this (pure assumption on my part, although I am assured that the Editor is forced to read it), a keen listener at Elizabeth in Bill Verral will have sat for his Limited and all

hope that the news will be good news. The Elizabeth club station, 5LZ, will be operating in the Field Day and a 6 mx station will be working as well, so the gang will be looking to the city for some 6 mx portable/mobile contacts. Naturally as you read this, it will be stale news, but I have no conscience where space for VK5 is concerned!

Probably it is my grey hair, or perhaps it is the size of my fallen chest that gives me a deceiving air of wisdom, but it is remarkable how often I have been asked if there is any cure for XYLs who will persist in chattering, reading little bits out of the paper, or even wanting to discuss what happened to the change from the grocery bill last week. Just when the band is starting to open up. Whilst I admit to there being many such cures, I must stress the point that open resentment by snarling, swearing, or even throwing one's call sign book on to the floor in simulated disgust will get you nowhere, in fact it will more often than not lead to quarrels, tears, door slamming, even packing of suit cases and the threat of going home to mother. Not knowing of any sure cures, I can only give my method in the hope that it will work for you as simply as it does for me. When the band is showing signs of coming good, I simply stand on a suitable chair and look her straight in the eyes and order her from the room in very severe tones. This usually works very well, although there have been occasional times when I have missed the band opening entirely because the ambulance was late in arriving, and sometimes the stitches have taken the doctor a little time to fix up. Some of the gang solve the trouble by evading the issue by not switching on the rx at all, but this I regard as sheer cowardice, don't you? By the way, have there been any band openings lately?

For almost 12 months now the VK5 Division has sported themselves a journal. Posted out to the membership at various intervals, it has filled a long-felt want of both the city and the country members. Improving each issue, it is a credit to all responsible, especially the Editor (Brian 5CA) who should feel proud of his little paper, and as much as I dislike Editors and their little red pencils, I cannot bring myself to withhold praise when it is so deserved. One feather in its cap is the fact that this magazine ("A.R.") saw fit to reprint recently a paragraph from the journal, and gave credit as well. Can VK5 ask for any more?

Checking these notes before putting them to bed for this month, I am somewhat ashamed to note that quite a deal of "padding" is apparent in them. However, with no news from my spies in Mount Gambier or Renmark to hand, I feel that I am justified in allowing my imagination to run riot in an endeavour to keep up the motto of more space for VK5. The Editor, bless his little red pencil, will probably be so dehydrated following his trip to Alice Springs, that he will lack the energy to take the necessary action, plus the fact that he is well aware that I am of too modest a nature to impose on his noble generosity. Just as well Ron 3RN is not the present Editor, he took some blinding, the tyrant. Still, what could one expect from someone who gave his old chassis to short wave listeners to save tipping the dustman! Vive-la VK5!!

WESTERN AUSTRALIA

Well chaps here we are again after an absence of one month. I had a very nice holiday and worked lots of portable. The reception down at Esperance is all what an Amateur could desire, no QRM and the Eastern States all roll in 5 x 9 plus. I would certainly like that up here at my QTH. Other calls heard portable were Herb 6XO, Ted 6JG, 6MM and 6WD conversing at Waterman's Bay. Francis still has quite a bad throat by the sound of his voice, but it is getting brighter so cheers and 73 from the gang on the OW band.

It does not look as if 1961 has got off to a good start at all, with the breach between the W.I.A. and the V.h.f. Group apparently growing wider, owing to certain people on each side holding grudges of what happened back in 1956, and of their pig-headedness now in 1961.

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Both the names of the V.h.f. Group and the W.I.A. have a lot to be proud of, and no one group should want to change the name of the other in any way. I feel agreement could be reached to the benefit of both parties with both parties gaining from one another. Quote: "Together we stand, etc."

The V.L.F. Group gives the W.I.A. a reason for not wanting to come in with them, and that is that certain members of the Council of the W.I.A. are not liked by them, owing to their supposed dislike of the V.h.f. Group and of the things they have said about the V.L.F. Group in the past. All members of the W.I.A. Council were elected by all members of the W.I.A., some of whom are members of the V.h.f. Group. It is known that most of the members did not cast votes, therefore it was assumed that each and every member who did not vote accepted those in office, for if they did not, I feel sure they would have voted against, seeing as some Council members have been in office for many years. These men have devoted many of their leisure hours to the promotion of Amateur Radio and the only remuneration they receive is the "Progress" of our "Great Hobby," yet we see members on the outside who are not prepared to devote any of their spare time to the administration of the Institute but criticise the way in which it is being run.

To these members I say it is in your power to rectify this by taking some personal interest in your administrative body—"the W.I.A." If a greater number of members and newer members took a more active part in both the W.I.A. and V.h.f. Groups, the older members of each group would be forced to come out of the past into the future and leave their grudges back in 1956 where they belong and a sensible agreement reached as to the future of Amateur Radio in W.A.

In conclusion, it should be noted that this is the only State in which the Amateurs are divided administratively. Why?

Again I have not received any news from country Amateurs or city Amateurs regarding their activities, which makes the writing of these notes very hard. Have a look at VK5 notes and let us see if we can get ours to sound like theirs instead of the tone our notes have to take.

Well chaps, after this outburst, I suppose this is the last time I will be asked to write the notes, but I thought it was about time we ALL got together as one body, for the future of Amateur Radio as a whole, so I hope this does some good.—6PH.

TASMANIA

Those members who helped with the Scout Jamboree of the Air will be pleased to learn that boys from the Hobart area met in person both Amateurs who assisted in other States, and boys who spoke to our lads. These meetings took place at the Jamboree in VK3 early in January this year.

Bill 7YY became established at Bond Bay, Port Davey, as from 1st February, 1961, for a period of three months. Bill can be heard on both 3.5 and 7 Mc., as well as under the call sign 8TAC on the appropriate out-station frequency.

The Club Room Fund-raising Committee held two functions in the month of January. One function was a hidden tx hunt. Charlie 7KS and Barney 7ZAK hid the tx's in a quarry behind Snug, and it took three hours to find them. The Committee is delighted at the increased participation, both by way of direction finding, and by way of mobile gear shown at this function, and we encourage all members to do something about both forms of activity. In excess of \$5/10/0 was raised for the Fund. The second function was a social evening to hear a tape from George 7GC dealing with his trip around the world, and to view the 85 excellent slides of that trip. The gathering thoroughly enjoyed the presentation, and £1/17/- was raised for the Fund.

At the February meeting of the Division, we were honoured by yet another address from Dr. Grote Rever on the subject of radio noise from space, the title being my own. Humour, knowledge and an ability to reduce that knowledge to a level understood by the intelligent uninitiated made this lecture truly memorable. Dr. Rever expects to be in Tasmania for several years, so we confidently look forward to further absorbing addresses from him.

Remember the Annual Dinner to follow the Annual General Meeting on 25th March. This year, a lady partner for each member can be brought along and we have both a dance floor, music, dinner and supper taken care of, in addition to the usual forms of conviviality. So come along and make this dinner an occasion to remember.

Band conditions have been generally poor for the past month, that is for the bands 23 Mc. and below. With static lessening, however, the 3.5 Mc. band is becoming really the most satisfactory of them all, and I was delighted to work VRDK on that band on 3rd Feb.

We were very pleased to welcome Dennis 7DR and Harold 7MZ to our February meeting. Chen BV1HT hopes soon to visit Australia and he is looking for VK contacts with the hope of meeting the operators personally in the not too distant future.—7ZZ.

NORTH WESTERN ZONE

Disastrous news! Our President, Max 7MX, got himself some rare DX last month in the form of "Mumps". Sincerely hope you are now fully recovered Max and none the worse for the ordeal.

We had a tx hunt in January, which as usual was run in two sections. Syd 7SF was duly hidden away and transmitting very loudly at the appointed time for the first run, and George 7XL was not a great while in "scouting" him out. All participants were soon on the scene and we adjourned to the main beach area at Ulverstone for a picnic dinner. George had a very secluded hideout for the afternoon run, amongst all the blood-sucking wogs imaginable. Anyway, more by good luck than anything, yours truly found him first and had to hide for first run on 19th Feb., but more of that hunt later.

The radio control units, etc., for the Burnie Fire Brigade are at last giving full assistance to the Brigade and everything in the garden appears lovely; special thanks to Leon 7JP for the finishing touches he carried out.

Our first meeting for the New Year was held on 7th Feb. and 14 members were present. You can well imagine there was plenty to talk about after the Xmas break. Supper was, as usual, and after a small auction affairs were wound up reasonably early. I believe quite a number of zone members are contemplating visiting Hobart for the Annual Dinner later this month.

Haven't heard many of the local chaps on the air over the past few months, though I take a listen most nights. David 7MS has, he tells me, reduced his long vice to a little over 500 feet and is getting quite good results in some directions; still no luck with the bird cage though. Ken 7AI is still using his share of the band with his "duck talking" machine, and I'm led to believe the other Ken, 7JP, got a little off resonance at a wine tasting affair recently.

Bob 7ZAA hopes to be on 6 mx very shortly; you'll be able to have a real local QSO George. I have worked Dennis 7DR since he moved from our fair city, so he must have the rig somewhere near a power point. George 7XL has been on a spot of leave and was heard transmitting from a friend's QTH in VK3 land. I called on Max 7MX one night and found him at his favourite past-time of swapping yarns with ZLs, in fact I said a few words, too. See you all at the dinner.

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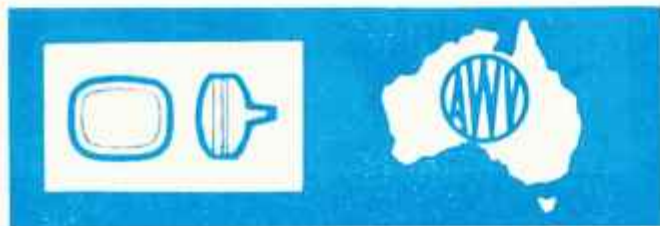
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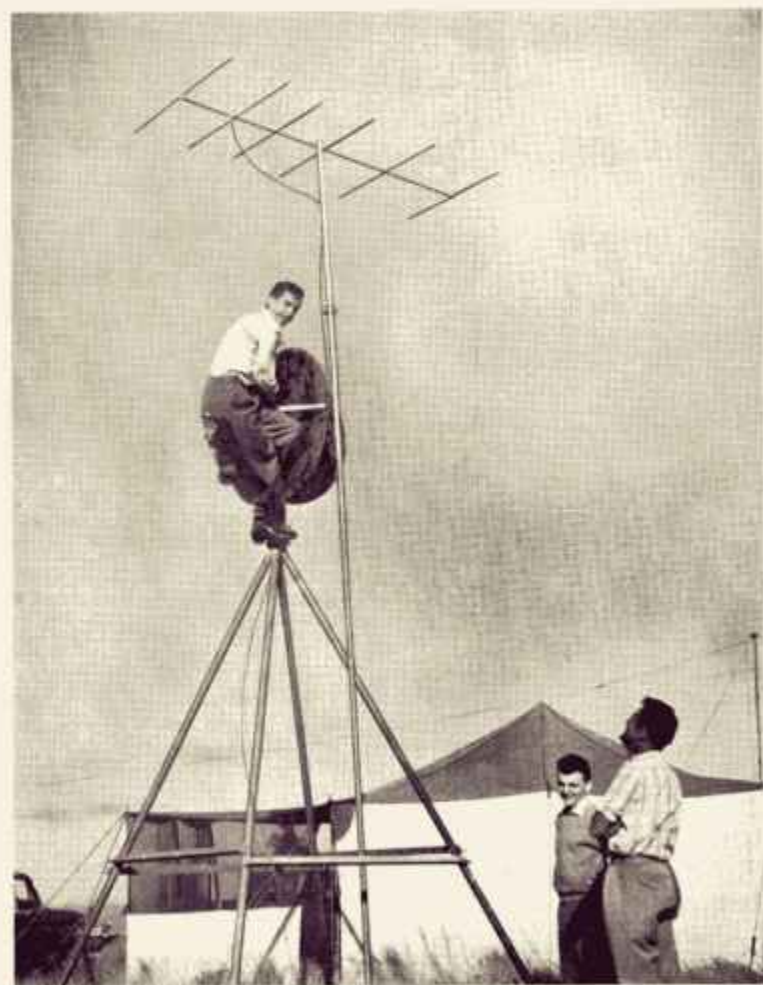
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AMATEUR RADIO

JOURNAL OF THE WIRELESS INSTITUTE OF AUSTRALIA

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EDITORIAL



AMATEUR RADIO PROGRESS

LOOKING back over twenty-five, fifty years, of communication by radio or "wireless" waves, someone has always written about "progress" and reviewed "modern techniques" as used "today" compared with "yesterday".

Since the early Amateurs pioneered the short wave bands and first demonstrated to the world that international communication by such means was possible, the Amateur Service has been in the forefront of these progress reports.

From the early spark days to the bread-board layout and the triode valve; from the metal chassis and crystal oscillator to the all-band beam pentode final, v.f.o. controlled, the Amateur has demonstrated his ability with modern techniques.

Ten years ago—well ahead of the field of commercial communication equipment—the Amateur commenced interesting himself in suppressed carrier transmission (s.s.b., A3a). Today—so many years after—the commercial field is looking to s.s.b. to help solve its problem in finding sufficient room in the overcrowded bands for the mushroom growth of communication services required under 1961 standards.

Because of overcrowding in the Amateur bands, the bulk of Amateurs today are leaning more towards this form of transmission—a system generally recognised as being profoundly more suitable for long distance work, greater "talk power"

and a "system benefit" of about 9 db. in comparison with conventional amplitude modulation.

Apart from the power gain, s.s.b. allows many more stations to operate without mutual interference in a given band of frequencies, minimises heterodyne interference, and makes it easier to operate with full voice break-in (VOX) systems. Like all other advances in the field of transmission, s.s.b. has its protagonists and its antagonists. Nevertheless, every Amateur who has studied the problems besetting the world in maintaining a semblance of order in the use of the bands for the countless services currently operating in this age, will quickly appreciate that, as far as the Amateur Service is concerned, s.s.b. is the answer to the congestion in our severely restricted frequency bands as compared to the pre-war years.

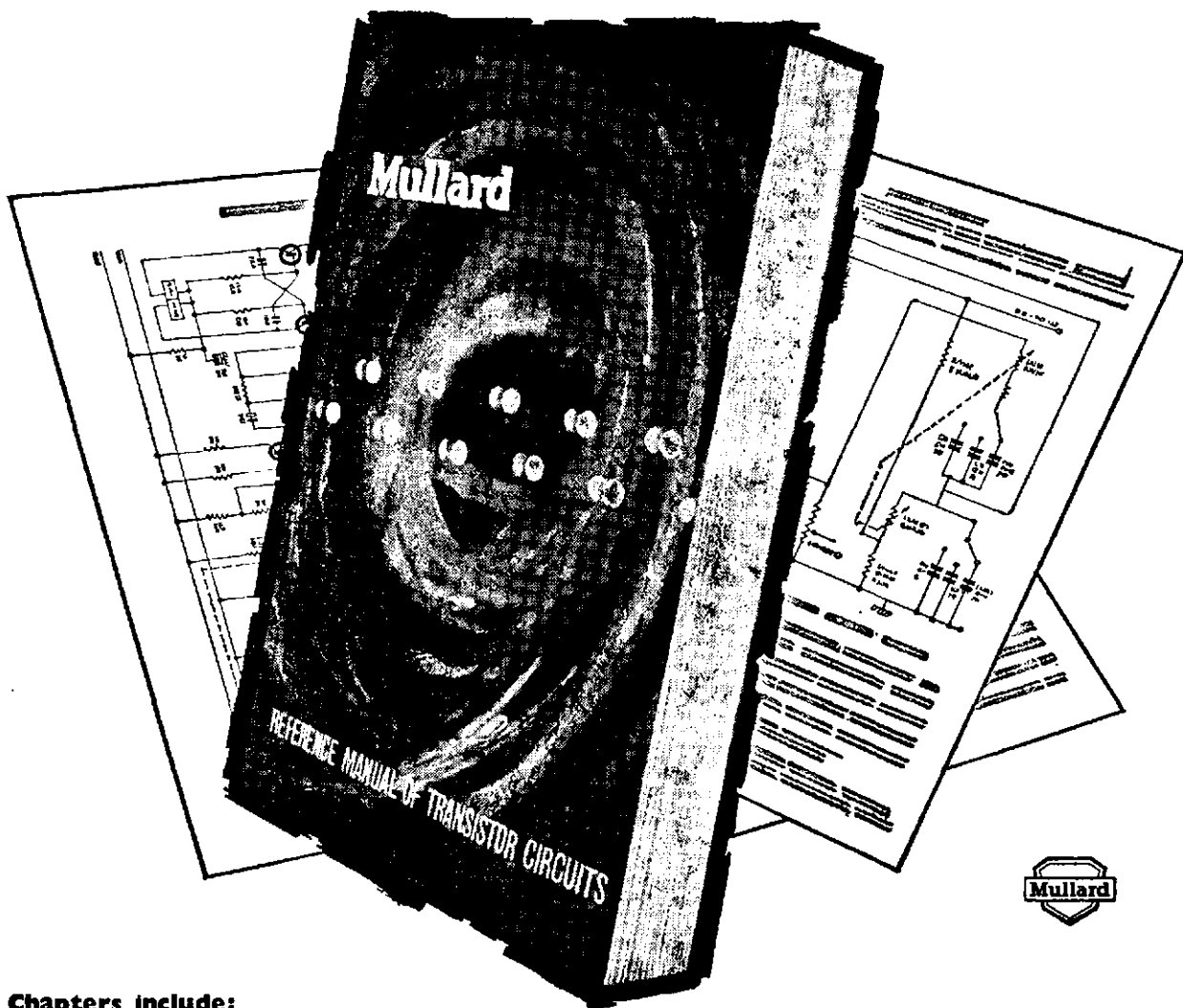
Don't forget, our numbers have tripled on a world-wide basis as compared with pre-war years, but our frequency allocations have shrunk. We are therefore destined to remain in the forefront of "progress reports" and utilise to the full the latest modes of transmission. Certainly we can't all do it, but we can, within reasonable limits, keep up with those who pioneered the way for us. S.s.b. is the immediate answer to ours and the commercial problem, a fact which we forecast to be proved true in the next few years.

FEDERAL EXECUTIVE.

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Amateur Radio, April, 1961

A FREQUENCY METER

BY AN AVID "A.R." READER

THIS article has been written mainly for the newcomer to the Amateur bands and who is perhaps wondering how the problem has been attempted by someone else. I would first like to thank the Amateurs who may recognise something of their own and to whom I am in debt to for their many suggestions and help.

The frequency meter described is a reasonably simple unit, but depending on the reader's need, it could fulfil the basic part of a more complex instrument.

A good vernier dial is an essential. There are two types available from disposals stores and both are excellent. The dial I use is a 6 inch calibrated 0-100 main scale with a small vernier knob reading 1/20th of each division. The other dial is a thumb-moved vernier with which it is possible to read 2,500 divisions. While this dial may be more difficult to mount, it may be easy to obtain from a disposals tuning unit.

The case is a new steel type 8" x 13" x 7" with louvred sides, a removable front, and finished in grey hammertone.

A small chassis was firmly mounted to the front panel with metal end brackets. The main tuning condenser was mounted above the chassis and coupled to the dial with two flexible couplings. The dial was also screwed to the panel and with a little care an excellent drive is achieved.

The variable oscillator tunes from 3.360 to 3.710 Mc. This will give adequate bandspread on 28 Mc., but in building another meter, I would arrange it to tune a slow as 3.2 Mc. so as to give a further check of calibration with WWV on 10 Mc.

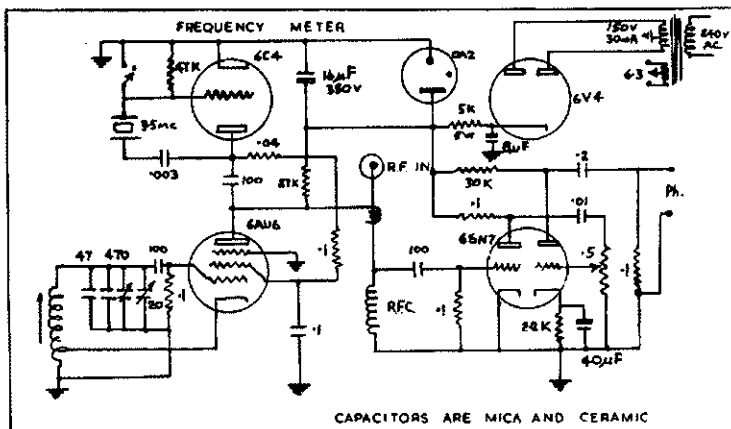
The ceramic variable trimmer condenser is mounted underneath and to the front panel. The horizontally mounted coil is also underneath the chassis and is a ribbed ceramic former type. A check through the junk box may locate a large diameter

(1" to 2") coil which is already wound. As the values of the various tuning capacitors can be altered, it is well worth experimenting with any available coil.

In my case, the 3.5 Mc. coil from an AT5 v.f.o., modified to 14 turns (cotton covered about 18 or 20 gauge wire) and tapped at 5 turns from the earth end. The main tuning condenser is a ceramic mounted single gang broadcast type with only three moving plates left. This is also from an AT5. In various experiments with different coils and

The oscillator valve is mounted upright beside the gang in a ceramic socket. All components were mounted for minimum wiring which was done with heavy insulated copper wire, laced where necessary.

A 6C4 valve is used as a 3.5 Mc. crystal marker. A miniature disposals crystal was used and the grid of the tube switched to earth when the oscillator is not in use. A 1 Mc. crystal may be used but there are less confusing harmonics with a 3.5 Mc. fundamental.



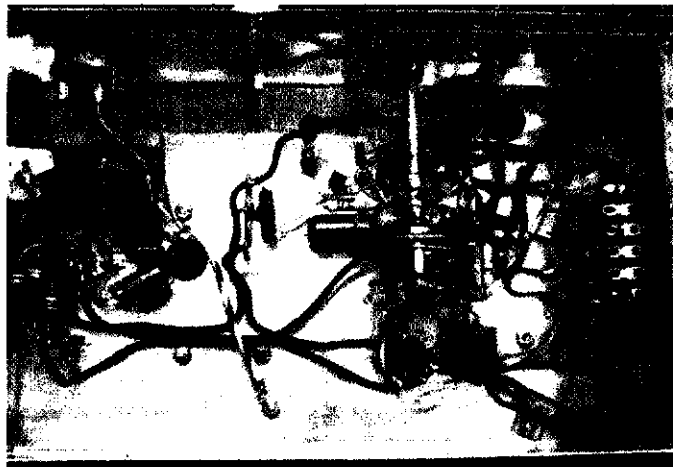
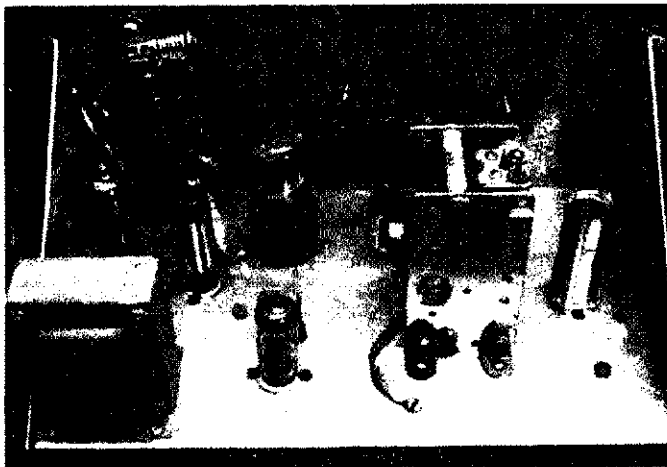
condensers, it was found difficult to arrive at the right bandspread and tuning required. For this reason a slug tuned coil was used—the slug being locked into place with paint when the unit was calibrated.

The frequency coverage is extended below the 3.5 Mc. Amateur band as it was found that with the non-linear condenser used, better bandspread was obtained as the condenser came out of mesh. The slug was therefore adjusted to bring the 3.5 Mc. position at approximately 20 degrees.

The output is to a pair of phones from the 6SN7 or 12AU7. One triode serves as a mixer and the other one as a resistance coupled amplifier. This is fitted with a gain control and was found to be quite useful when the instrument is used to monitor transmissions.

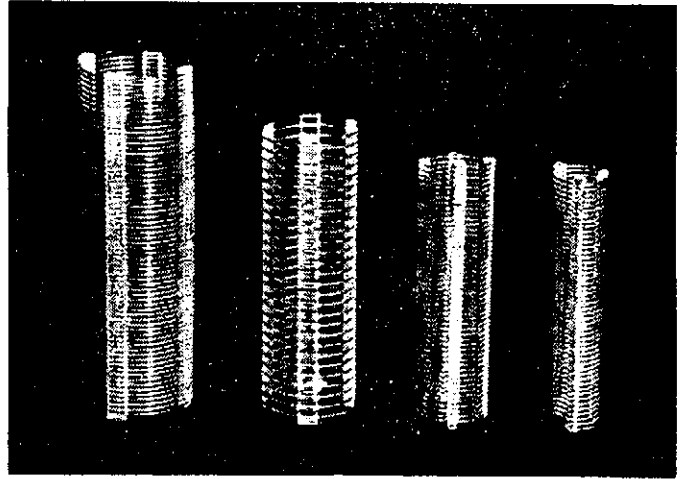
A conventional 150v. power supply and OA2 voltage regulator are mounted on the chassis—the opposite end to the oscillator components. When the unit is assembled, the power transformer is

(Continued on Page 12)



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2-16	⅝"	16	3"	No. 3007	6/3
3-08	¾"	8	3"	No. 3010	7/4
3-16	¾"	16	3"	No. 3011	7/4
4-08	1"	8	3"	No. 3014	8/5
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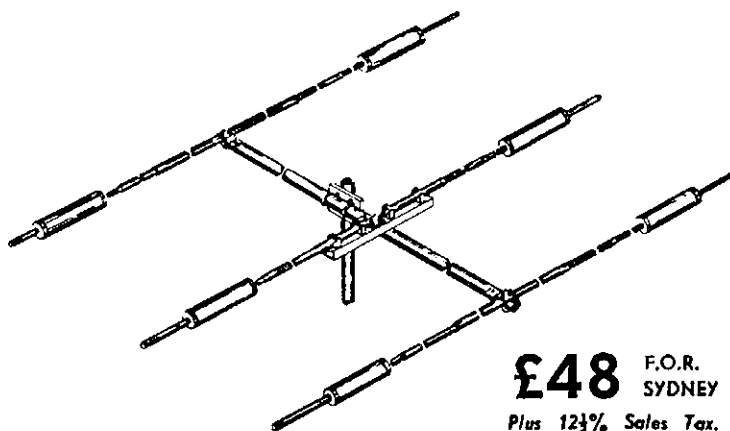
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SIDEBAND FROM THE START*

BY "VOX"

WHY S.S.B. AT ALL?

EVERYONE using the Amateur bands these days is conscious of an intruder breathing down his neck. Some regard it with suspicion, some with a sensation akin to fear, while some merely see in it the pattern of the future. This intruder, of course, is sideband transmission—to some the symbol of the sect that cry "Abolish the Carrier," and to others little more than another objectionable form of QRM.

Face the facts! They are there for everyone to see and understand, and we will try to sort them out and present them in a palatable way, mostly with the newcomer in mind.

First of all, we boldly project the neck into the cruel world and state that sideband is eventually going to sweep off their methods of phone transmission of the bands—and good luck to it. Secondly, we state categorically that nothing but good can come of this eventual result, so you had all better get well-informed on sideband matters right away. At present the ill-informed (and uninformed) are a pretty strong body, and their objections to s.s.b. transmission are mostly based on ignorance or misunderstanding.

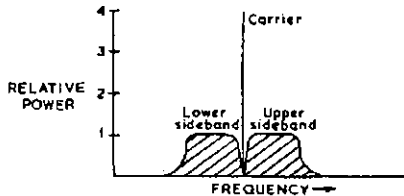


Fig. 1a: AMPLITUDE MODULATION

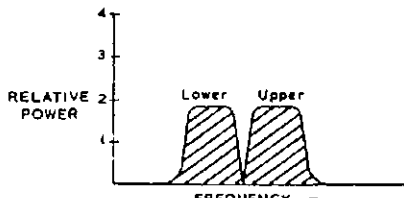


Fig. 1b: D.S.B.

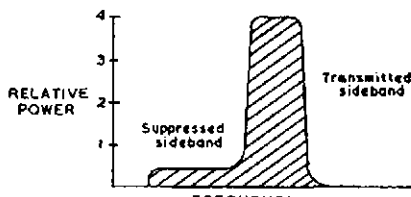


Fig. 1c: SINGLE SIDEBAND

Note: All diagrams drawn to same scale.

Comparing a.m., d.s.b. (carrier suppressed), and s.s.b. under relative power conditions. From the transmitter end, about 6 db. more talk-power is obtained with s.s.b. than from a.m. when similarly rated transmitters are used. As explained in the text, s.s.b. has many other advantages as well.

• In view of the correspondence in "A.R.," the following article is printed. It provides another viewpoint from overseas and may assist readers.—Ed.

HOW A.M. WORKS

Strangely, but truly, there is nearly as much misapprehension about the way amplitude modulation works as there is about s.s.b.! One still meets many people who honestly do think that the carrier-wave of an a.m. transmission is constantly bobbing up and down in amplitude, in sympathy with the waveform of the audio supplied from the modulator. And they quote the classic "envelope" diagrams to prove their point. The fact is, of course, that if you looked at the central region of an a.m. transmission with a scope and a sufficiently selective receiver, you would soon prove to yourself that nothing of the kind is happening. The function of the audio, as applied to the p.a. through the modulator, is to beat with the carrier frequency and therefore to produce side frequencies (or sidebands) on either side of it.

Modulate a 150 watt carrier with 75 watts of pure tone. Put the carrier on 3800 Kc. and modulate it with a pure tone of 1 Kc. Everything being technically perfect, the result of this would be that you are transmitting three separate signals—the original carrier, with its amplitude unchanged, on 3800; and smaller signals, also pure c.w., on 3801 and 3799 Kc. The original carrier is not bobbing up and down in amplitude at a frequency of 1 Kc., so get rid of that misapprehension once and for all. But one of the functions of your receiver is to combine these three signals (or, at any rate, two of them) so that

the beat between them produces the desired 1 Kc. tone in the headphones. The waveform after the detector will look like the classic "envelope" picture—but that is not at all what the carrier-wave itself looks like.

Having cleared this one, we can see that the only function served by the carrier-wave is to provide a signal that will beat with the "intelligence" (in this case our 1 Kc. tone) and make it possible for the receiver to re-create (resolve, detect or demodulate) that intelligence. The carrier-wave, therefore, does not "carry" anything; that term is a relic from the old days when no one understood very clearly what it was all about.

ECONOMY MEASURES

We are beginning to arrive at the fact that the carrier is an unnecessary encumbrance and an awful waste of power. Further proof? Read on.

Suppose, in the example we have just taken, that the only intelligence it was desired to transmit was this 1 Kc. note. In order to transmit it we have used a conventional a.m. transmitter and a conventional receiver, and there it is, reproduced just as sent. Now, any c.w. man could have told us that we were wasting time and power. You can transmit that vital 1 Kc. note merely by using an unmodulated transmitter putting out a continuous signal on 3800 Kc., provided that you use a b.f.o. at the receiving end. Set the b.f.o. precisely 1 Kc. off the receiver's i.f., tune in the signal accurately and there is your "intelligence." Instead of transmitting a so-called "carrier" and two sidebands, we have just transmitted a single signal (which we will no longer call a "carrier" since it manifestly has nothing to carry).

The important point to note in this little example is that the full power

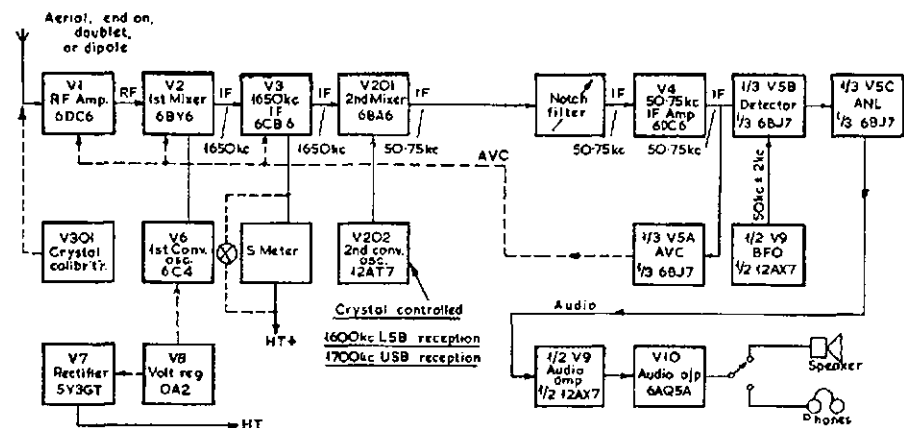


Fig. 1.—Block schematic showing general arrangement of the SX-111 Receiver, which is a double-conversion superhet., with a crystal-controlled second oscillator giving a final i.f. of 50.75 Kc. With a first i.f. of 1650 Kc., and selectable oscillators of 1600 Kc. (l.s.b.) and 1700 Kc. (u.s.b.), the 50.75 Kc. resultant is fed through a notch filter which moves the notch (maximum attenuation point) through the i.f. selectivity curve; this enables maximum suppression of an interfering heterodyne to be obtained with minimum distortion of the desired signal; the notch filter has a range of 4 Kc. across the i.f. selectivity curve. The crystal calibrator enables check points to be obtained at the band-edges and at each 100 Kc. mark on the tuning scale; a small variable capacity adjusts the first oscillator frequency for exact scale reading. When listening to a.m. phone, either sideband can be selected, which considerably improves the apparent selectivity. The electrical design of the receiver, and the variables under panel control, make it particularly effective for c.w. working.

* Reprinted from "The Short Wave Magazine," December 1960.

of the transmitter is now devoted to transmitting the actual intelligence to the receiver. The next step is purely one of imagination. Regard that transmission as if it were not an ordinary c.w. signal with the key held down, but the output of an s.s.b. transmitter modulated by a 1 Kc. tone. (There is no difference, of course. The output of such a transmitter, running at 3800 Kc. and modulated by 1 Kc., and transmitting the lower sideband only, would be identical with a c.w. signal on 3799 Kc.)

Your receiver, by use of the b.f.o., converts this single sideband into an audio signal identical with the modulation being applied to the s.s.b. transmitter. What was previously achieved by a "carrier-wave" and two sidebands has now been achieved by one single sideband, into which all the transmitted power can be steered.

In case there are those who still can't see that an s.s.b. signal from a transmitter modulated by pure tone is purely and simply a c.w. signal, let it be pointed out that many sideband operators produce c.w. by keying an audio oscillator fed into their modulator, and not by inserting a carrier and then keying the p.a. or an earlier stage.

This makes it easy to take in the next step. Instead of feeding this oscillator into the modulator of the s.s.b. transmitter, feed voice frequencies from a microphone and speech amplifier. The sideband will now become a complex group of sidebands, their frequencies differing from that of the non-existent carrier by the instantaneous speech frequencies being transmitted. Deal with this suitably at the receiving end (by supplying a "carrier" by b.f.o. or other means) and you will have your original message fully and faithfully reproduced.

In short—why use a large portion of your 150 watts in generating a "carrier-wave" that doesn't really carry anything, when the same object can be achieved at the receiver end with a very few milliwatts, or even microwatts?

If you are radiating 100 watts (which you should do with a 150 watt transmitter), which is better—to spend 66 watts on a carrier-wave and to split the remaining 34 watts between two sidebands, or to get virtually the whole 100 watts into one sideband? (The purists could pick holes in these actual figures, but this is addressed mostly to the novice and we want to keep it simple.)

ADVANTAGES

We are not going into circuitry in this first instalment. Sufficient to say that means are available whereby the carrier and one sideband are almost completely removed from the scene, and all the available power radiated in one sideband. The circuitry is not simple, but is logical, reliable and understandable by anyone who wishes to grasp it.

Right—you are now transmitting your intelligence with 100 watts behind it instead of 25 or less. Result, 6 db. gain at the receiving end. To this you can add roughly another 3 db. for the receiver itself, since it can be operated at half the bandwidth required for taking in both sidebands, as in the case of an a.m. signal. Advantage number one,

then—9 db. gain over an a.m. transmission. (This one produces interminable arguments, which we will deal with later—if we have to!)

Next, consider the modulation equipment in an a.m. transmitter. The anode voltage of the p.a. must be doubled on modulation peaks, if you are modulating it 100%. All components (including, of course, the p.a. valve) must be chosen with this requirement in view. Modulation transformers are expensive, heavy and space-wasting. Power-packs are notorious hogs of power, transformer and rectifier efficiency being what they are.

Much of the most bulky and wasteful part of an a.m. transmitter can be dispensed with when we change to s.s.b. Modulation is carried out at a low level. Power requirements are modest, since there is no datum line on which severe peaks are superimposed (the "datum line" in this case is zero). The valves and power-pack are only being pushed during actual peaks of speech transmission. Advantage number two, then—considerable economy in valves, components and space. (For a given input the power-pack for a sideband transmitter will probably be less than half the size of that required for a.m. equipment.)

NO PHASE DISTORTION

One of the irritations of a.m. phone working (particularly on DX) is phase distortion, or selective fading, which can render a transmission almost un-

! The 3 db. bandwidth advantage is very debatable.—Ed. "A.R."

intelligible under certain circumstances. These effects usually occur after dark, but can also happen over "awkward" skip distances at almost any time. They are due simply to the fact that every a.m. transmission consists of three separate signals—the carrier and the two groups of sidebands—all of which have to be received as sent out. If the carrier happens to arrive by more than one path (which often happens) the two received components may be shifting in relative phase and may easily cancel out at a given instant. This leaves the sidebands to fend for themselves at times, while at many other times the carrier is down in amplitude, which produces the effect of over-modulation. The nett result is severe distortion.

No such effect with our s.s.b. transmission! At times when a.m. phone is almost impossible to copy at all, you will hear s.s.b., over a similar path, crisp and clear with even the fading hardly noticeable. Advantage number three—and a worthwhile one for phone operators busy on the DX bands.

T.V.I.

T.v.i. troubles are minimised when a well-designed s.s.b. transmitter is used—not so much because of the mode of transmission as because of the actual design of the transmitter. A hard-driven Class C stage is the prime source of t.v.i. owing to its inherent tendency to spit powerful harmonics in all directions. Likewise, the chain of frequency multipliers so often used to drive it might almost be specially designed to produce harmonics—in fact, it is, for that's its job.

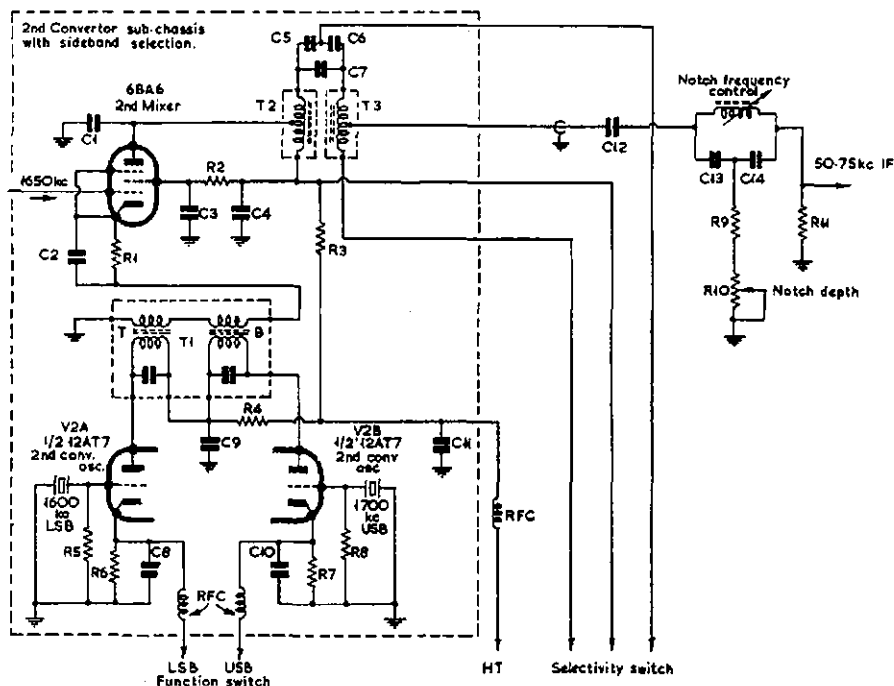


Fig. 2.—Detailed circuit arrangement around the second mixer and l.s.b./u.s.b. crystal-controlled oscillators in the Hallicrafters SX-111—and see Fig. 1. All values are given below, but it should be noted that T1, T2, T3 are factory-made items. The selectivity positions are 0.5, 1, 2, 3 and 5 Kc., the 2 or 3 Kc. settings being most suitable for s.s.b. reception.

- C1—100 pF.
- C2 C3, C4, C11—0.02 μ F.
- C5, C6—390 pF.
- C7—2.2 pF.
- C8, C9, C10—0.01 μ F.
- C12—180 pF.
- C13, C14—0.0075 μ F.
- R1—2,200 ohms.
- R2—120,000 ohms.
- R3—22,000 ohms.
- R4, R5, R6, R7, R8—100,000 ohms.
- R9—8,200 ohms.
- R10—5,000 ohms.
- R11—1 megohm.
- T1—1.6-1.7 Mc. transformer.
- T2, T3—50.75 Kc. i.f. transformer.
- X1—1600 Kc. crystal.
- X2—1700 Kc. crystal.

The sideband transmitter uses neither frequency multipliers nor Class C stages, since linearity is the prime requirement throughout. The v.f.o. is made to beat with fixed-frequency oscillators in order to give the final output frequency; and the final stages are usually linear Class B or AB2. From personal experience, the writer has found that a 150 watt sideband rig, working on c.w., produces no interference on a t.v. set which is normally almost blown to bits by a well-known commercial a.m. transmitter with a high reputation for immunity from t.v.i. And this in a fringe area with a pretty weak signal on Channel 1.

Any t.v.i. caused by a sideband rig is usually due to front-end saturation of the t.v. receiver, since the peak power radiated by the transmitter can be very high and can cause instantaneous "splashes" of great amplitude. This type of t.v.i. can only be treated by fitting a high-pass filter to the t.v. set and, if necessary, screening the i.f.s. But it is far less difficult to deal with than the business of a harmonic on 42 Mc. which gets into the set along with the t.v. signal and cannot be separated out. Advantage number four—a reasonable chance of far less t.v.i. trouble.

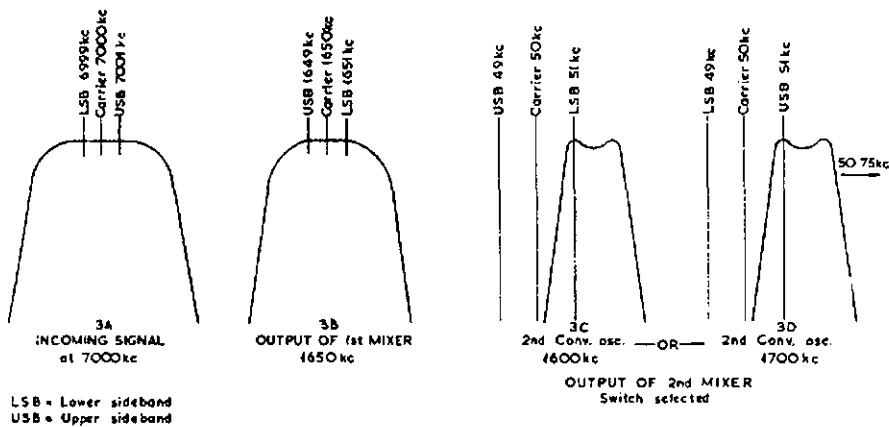


Fig. 3.—Derivation of the upper (or lower) sideband in the SX-111, with a signal incoming at 7000 Kc. taken as the example. This diagram should be read with Figs. 1 and 2, Figs. 3C and 3D above corresponding to V2A and V2B in Fig. 2.

ON THE BANDS

Now we come to the raging controversy of whether sideband signals cause less interference in the Amateur bands than a.m. transmissions. Well, there's not the least doubt about it, really. Of course, they cause less QRM—if they are signals from well-designed and well-adjusted rigs. But bad s.s.b. signals can cause just as much damage as bad a.m. signals, and it is not fair to compare a bad s.s.b. with a good a.m. transmission. We have the impression that there are fewer bad s.s.b. transmissions around than the many faulty a.m. efforts one hears, but never mind that one for the moment.

The main trouble, we are convinced, is lack of know-how at the receiving end. Many operators will always listen to a.m. phone with the front end of the receiver wide open, so as to make maximum use of the a.v.c., and with the selectivity control also as flat as possible, for intelligibility. Under these conditions, a sideband signal on a closely-adjacent channel may well cause "splatter" of some sort, since its high

peaks will beat the receiver's a.v.c. to it and will hit the thing at full gain. There's no carrier there to take hold of the a.v.c. voltage!

When you hear what is apparently splatter from a nearby sideband signal, turn down the r.f. gain, increase the selectivity, and nine times out of ten you will find that it isn't there at all.

Incidentally, the sideband operator has to become accustomed to this technique of listening—r.f. gain well back, plenty of selectivity and no a.v.c., and, of course, the b.f.o. on. Now, the interesting thing is that he will usually leave the receiver in this condition when listening to a.m. phone (yes—some s.s.b. men still do listen to a.m.!), and he finds readability improved in consequence! Furthermore, the effects of phone distortion can almost be removed by this means—leave the b.f.o. on, tune to zero-beat with the phone station's carrier, and listen on one sideband (which you can do on most modern receivers). If you have never tried this, a surprise awaits you.

So the sideband transmission must cause less interference, simply because you can park ten or more of them alongside each other and there will be no whistles between the lot of them.

ators on the band are not slow to tell them so! On the very morning of writing this we listened to an HB9 patiently explaining to a UP2 that he must turn his audio gain down—and down—and still more down. The UP2 was left with an almost perfect transmission—and one of far greater readability than he achieved by trying to screw things up too far. This, up to now, is a splendid characteristic of the sideband fraternity—they do tend to be perfectionists and they will not tolerate nasty transmissions in their midst.

DISADVANTAGES

We have to be fair, of course, and we are prepared to fall over backwards to find and state the disadvantages of s.s.b. as a mode of operation. (Though they may be classified as disadvantages, there will be many who won't agree that they are anything of the sort.)

The first is the relative complexity of the gear, as far as circuitry goes. The removal of the carrier and the unwanted sideband involves very good filtering, unless you use the phasing method, which also has its difficulties.

Transmitter stability must be good—not necessarily better than that of a really good a.m. or c.w. transmitter, but certainly better than the average. The power supplies must be "hard" as regards regulation and stability.

At the receiving end the technique may be a little difficult at first; and if you haven't a really good receiver, then you will have to build or buy one, or carry out fairly extensive mods. on the one you've got.

In short, to be a successful sideband operator one can probably say with fairness that your standard of technical know-how has got to be somewhat higher than the average.

We quote these as disadvantages, but surely this is nonsense—aren't they really advantages? To have stability and good regulation forced upon you—well, you should really have had them all the time, whatever mode you have been using! At the receiving end, if it takes s.s.b. to show you that your receiver wasn't all that hot—surely that is something to be grateful for? And to be forced to read up the subject may bring you in contact with some fundamental truths that you were not sufficiently familiar with in the first place.

And now we present a puzzle: Several DX enthusiasts have asked, from time to time, how it is that DX sideband stations seem to put in an even stronger signal than c.w. stations from the same part of the world, although they are certainly not using more power, and probably less. The only answer we can think of (and we hope it is the right one) is that the average sideband man will take a little more trouble over his whole station, and will probably have a properly-loaded transmitter, a properly-matched aerial system, and so on. [Underlining ours.—Ed. "A.R."]

Many of the keen c.w. men of many years ago can now be found on the s.s.b. sections of the bands, and they are the ones whose signals are outpointing the newer c.w. stations—and some of the established phone-only

(Continued on Page 13)

When two a.m. phones overlap each other, you have to copy one of them through the steady heterodyne and the monkey-chatter. With sideband you have only the monkey-chatter to contend with, and it's pretty easy to sort out intelligible speech from monkey-chatter—the human ear is highly adaptable to this sort of thing.

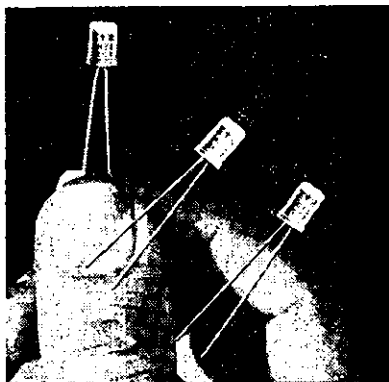
If you still need convincing, listen to the sideband stations between 14300 and 14350 Kc. at a busy time of day; spend twenty minutes or half an hour with them. Then move down the band and sort out the phone in the "squeaks-and-whistles" region, and see how you like it. We will say no more—try it yourself.

New sideband operators, particularly if they have built their own gear, will sometimes start up with a bad transmission due to excessive audio, insufficient carrier suppression and also poor suppression of the unwanted sideband. Under these conditions, their transmission will leave something to be desired, and can cause some interference to adjacent channels. The habitual oper-



NEW DEVELOPMENTS

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MINIATURE 1N429 ZENER REFERENCE ELEMENT

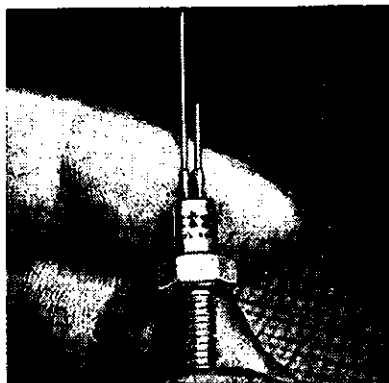
PROVIDES $\pm 1\%$ STABILITY FROM -55°C. TO $+100^{\circ}\text{C.}$

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of 1N429 diodes may be used in series to obtain higher voltage reference levels.

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Write for Bulletin XSR-256.



MINIATURE 1 AMP. CONTROLLED RECTIFIER

FOR COMPUTER AND CONTROL APPLICATIONS

Miniature silicon controlled rectifiers weighing as little as 1/10 of an ounce are capable of directly replacing mechanical relays where load currents of 1 ampere are required. Designated Types X1RC2 through X1RC20, these seven new units have peak reverse voltage ratings of 20, 30, 50, 70, 100, 150 and 200 volts.

The low operating current range of these thyatron-like devices enable them to perform highly efficient power switching on

such applications as computer circuitry, temperature control, servo-mechanisms, a.c. and d.c. motor control, airborne printed circuitry . . . while providing substantial savings in space, weight and response time over vacuum tube and mechanical circuitry. All units feature hermetically-sealed, all-welded construction, and measure approximately 15/16 inch in length, excluding leads.

Write for Bulletin SR-353.



MINIATURE HIGH VOLTAGE SILICON RECTIFIERS

REPLACE TUBE TYPES OZ4, 6X5, 6X4, 12X4

Two new high voltage silicon plug-in rectifiers equipped with tube bases allow direct replacement of electronic tube types 6X4, 12X4, OZ4 and 6X5.

Rated at 1,250 volts peak reverse voltage at 80 mA. d.c. output, the ST-8 rectifier is designed to replace vacuum tube types OZ4 and 6X5, while providing better surge current capabilities, less noise characteristics and high temperature operation on vibrator-type power supply applications such as auto radios, military and commercial portable radios, and other communica-

tion systems. Units have an operating temperature range from -65°C. to $+75^{\circ}\text{C.}$, and measure 1.10" x 1.40" (dia.).

The miniature 1N570, rated at 1,500 p.r.v. at 75 mA. d.c. output is designed to replace MIL types 6X4 and 12X4 vacuum tubes in a wide range of power supply applications, including radio and television, test equipment, computers and related data processing equipment. The extremely compact and rugged 1N570 measures only 0.845" x 0.710" (dia.), and has an operating temperature range from -65°C. to $+75^{\circ}\text{C.}$

Write for Bulletin SR-209B.



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NATIONAL FIELD DAYS CAN BE ... FUN!!

FOLLOWING the good time had by all during the 1960 N.F.D., members of the Elizabeth Amateur Radio Club decided to enter again this year. We had many discussions on who, what, and where—these being held at the residence of our illustrious President, "Tubby" Vaie, VK5NO.

The chaps all met at 0900 hours on a fine Saturday morning—Feb. 11—the cars loaded with rigs, bodies, chairs, spades, tents, wire, and all the necessary bits and pieces to make a Field Day. The convoy then set off for Black Top Hill (the name of which we found out afterwards!) We had obtained prior permission to use the site, providing we took adequate fire precautions—this we did by having five knapsack sprays on loan from our local E.F.S., and a special instruction to the President not to light his "straw burner" unless it rained! The site was well covered in long, dry grass.

Upon arrival we set up our three tents about 200 yards apart and under the shade of some trees. Last year we had only one tree stump within miles and no sky hooks for our antennae, so this year we made sure we picked a site with plenty of Mother Nature's masterpieces around. Having pitched the tents, Tubby and some helpers ran out the power leads, whilst the operators put up their antennae. There were, fortunately, no incidents during this procedure and soon the rigs were being assembled in their respective "shacks".

The first tent contained the 40 and 15 metre rig, loaned by Cyril 5DY (who was unfortunately away this weekend). It used a single 66 foot dipole and was operated by Ben 5BP and Pete 5HB (good c.w. chaps!) with occasional assistance from Ian 5QX.

The second tent contained the 80 and 20 metre rig (from 5FY with Clive 5PE's modulator). This rig used a double dipole (80 and 20 metres). The operators of this rig were 5FY and Jeff 5NQ with assistance from Don 5TM. (Did you notice, chaps, four good c.w. men as operators!!)

The third tent, known affectionately as the "palace", contained the v.h.f. rigs, one on 6 metres with a 4 element beam (from 5ZJM), and one on 1 metre with a 48 element stacked array. Ken 5ZCH was in charge of his own rig there, with plenty of assistants. The brew making equipment was also in the "Palace".

During the preparations, Tony Strong, one of our most ardent listener members, arrived in his car towing a large shrouded object—"The Donk". Where he managed to lay his hands on this beautiful 2 kva. machine we didn't enquire, it was there, every rusty piece "glistening" in the sunshine!

By noon the two h.f. rigs were rarin' to go, so with due ceremony the President, accompanied by rousing cheers, started her up—lo and behold she worked, and we had power (all 205 volts of it!) Tubby, his face wreathed

in smiles, was beside himself (that looks like two 5PS Warricks, side by side, if you can imagine it!) with joy. Away went the operators and the air was full of QSOs. Tubby, meanwhile, by means known only to himself and the donk, managed to squeeze 240 volts into the cables (providing the tea jug was off!). The v.h.f. tent was now in business, and you can imagine what they heard—now!

After lunch, the rigs were thoroughly checked out and a few QSOs made—yes, even a v.h.f. voice was heard from Adelaide, some 15 miles away.

All the tents were well equipped; tables (?), chairs, rigs, knapsack sprays, operators and oodles of peasty flies!



The Elizabeth Radio Club's 80 and 20 metre tent at Black Top Hill (S.A.) during the 1961 National Field Day.

Our 'Onorable President—the Tub—was general factotem, tea brewer, engine topper-upper, etc. A very good job he did, too, ably assisted by Peter Field, Tony Strong, Brian Cheland, Trevor Mell, Kevin Sweeney and John Messner—all up and coming members of the Ham fraternity. Tubby's speciality, of course, is his open wire, centre fed type, incinerator, which soon after Tubby had entered any tent caused all the flies to surrender without a struggle and made the c.w. men go on phone—by George, it's potent!

The Contest duly opened at 1730 hours (S.A.S.T.) and naturally the 40 metre rig was really going strong. 80 metres was pretty dead until a couple of hours later, when it too came good. The v.h.f. department was very slack, where do all the v.h.f. chaps get to on Saturday nights?

Naturally our contest expert—the President—was rushing from tent to tent, muttering queer numbers to himself and puffing away at his D.D.T. machine. Occasionally he would make a QSO and a couple of points, and then off to the next base, leaving a cloud of smoke behind him that would make a Naval destroyer blush with envy!

The site must have looked peculiar to any passers-by that night, a generator at the side of the road seemingly supplying a solitary 25 watt lamp on an overhanging branch. A further look would disclose a conical yellow shape (the 40 metre boys), a green rectangle (80 metres), and, of course, the v.h.f. "Palace" was illuminated like a fun fair.

By the end of the first section, everyone was satisfied that a useful score had been made, and were looking forward to the 'morrow.

Ben 5BP and a few of the younger members camped overnight to look after the gear.

The Sunday section went well, and quite a number of local mobiles appeared—Ian 5QX, John 5ZJM, Clive 5PE and, of course, our well known Federal representative, Les 5AX, from Gawler. Other visitors who looked in were Hugo 5ZDA, Dave 5DS and Pop 5LD. It appeared that no matter which band the locals tuned into, 5LZ/Portable was there.

At the end of the Contest we had made a better score than last year when we operated under 5DY/P call.

In general, the Contest went well, with more portable activity than last year. Many chaps didn't know the Contest was on—where, oh, where was the Contest publicity in "A.R."?? We, like many others, had to assume that the rules were the same as last year, and were very disappointed that "A.R." made only the briefest of mentions about the forthcoming National Field Day. (So was "A.R."—Ed.)

V.h.f. activity wasn't anything to rave about, some fifteen contacts only being made on 6 metres. (There must be more than fifteen v.h.f. stations in Adelaide!) One metre gave us a few contacts, so they all helped to swell the score.

We all had fun, and no accidents, or even humorous incidents, which is good for morale, but poor for news items.

See you next February, chaps, on the usual bands.

R. A. Catmur, VK5FY, Hon. Sec.,
Elizabeth Amateur Radio Club,
142 Woodford Rd., Elizabeth Nth.

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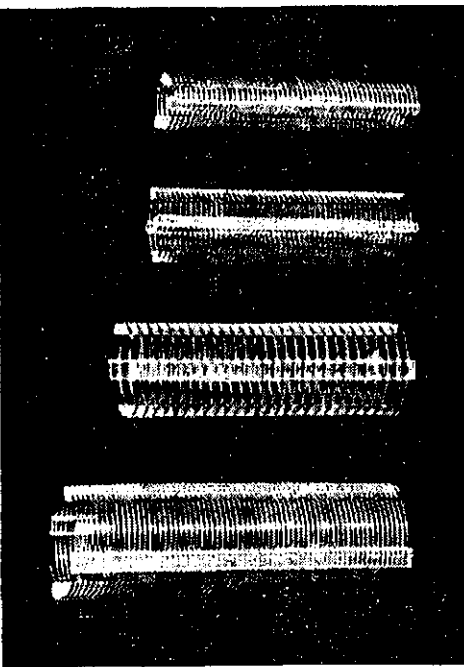
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Trade Review

"WILLIS" AIR WOUND INDUCTANCES

These inductances are wound on four polystyrene pieces, so making the coil rigid yet possessing low losses. They are available in ten diameters ranging from $\frac{1}{2}$ " to $1\frac{1}{4}$ ", with winding pitches of eight and sixteen turns per inch.

On an independent check on these coils, it was found that their Q factor was not less than 250, and this improved on the smaller coils at higher frequencies. They would be particularly useful in pi output networks or for general purpose coils, in v.f.o. or transmitter applications.



Bandpass units can be made by removing a few centre turns, as can link networks be formed by using a two-turn coupling link at the end. The whole coil system being rigidly held by the polystyrene coil bars.

They are moderately priced and make available to the Australian Amateurs means of constructing a professional-looking piece of gear.

A quality job to be fully recommended.

Our sample from William Willis & Co., 428 Bourke Street, Melbourne.

PLUGS

The same supplier has a most attractive range of two and three pin male and female shielded plugs, finished in polished chrome. They are small, attractive and functional, being well suited for audio or a.c. use. They would be particularly suitable for higher priced professional or commercial applications, yet they are not expensive. Further details are available from Magrath's.

A. & R. VOLTAGE DOUBLER TRANSFORMERS

These units, ranging from 80 to 190 mA. types, use two silicon rectifiers (Mullard type OA210, or International type SD94) in conjunction with two 100 μ F. 200 v. electrolytic condensers in a voltage doubler circuit. This provides a lower cost power supply than the conventional full wave gas filled rectifier type of supply. In addition, the voltage regulation is superior.

At zero load the voltage doubler has an output of 340 volts, yet at 190 mA. load the voltage has dropped to only 320 volts. Thus they are particularly suitable for Class B stages.

The unit tested was the type 2066 (320 volts output when loaded to 190 mA.). It was subjected to a 100% overload, i.e. 380 mA., for thirty minutes, at an ambient temperature of 100°F. and whilst becoming hot, it did not show any signs of distress. The maximum temperature rise is 45°C., fully loaded.

Due to the strong a.c. flux field surrounding the core, they must be kept away from other chokes or items affected by hum fields. In particular, they must not be mounted adjacent to tank condensers in transmitters. Otherwise they will produce an f.m. component in the output, due to their strong flux field.

Each transformer is accompanied with a circuit diagram, clearly showing the colour coding of the leads. The electrolytic condensers used in the voltage doubling circuit are special types and any recognised makes can be used.

These transformers are very well made units, with sturdy mechanical and electrical construction, both capable of withstanding much abuse.

Further details are available from A. & R. Electronic Equipment Co. Pty. Ltd., 378 St. Kilda Rd., Melbourne, and supplies are available from recognised supply houses.

TAPE DECKS

A special offer of Collaro tape decks is being made from Ham Radio Suppliers, Hawthorn, and further details can be obtained from their February advertisement on the inside front cover. Tests with one of these decks showed that they fulfill the maker's claim and as they have provision for adding an additional head to the deck, they can be made into a most versatile unit. They are possibly the best available tape deck today, and would only be surpassed by other units costing at least ten times as much. A most useful item which will amply repay the time taken to build up the associated circuitry, which then provides a complete and adequate tape recorder.

DYNAMIC MICROPHONE

Warburton Franki (359 Lonsdale St., Melbourne) have a very nice miniature dynamic mike that would be ideal for a mobile rig. The unit is about the size of a small egg and the price is very low. These units are just becoming available and from an inspection could well prove a very welcome addition to the Amateur shack. Drop a line to W.F. for further details.

KNOB

If you require a professional finish to your new rig then the new knob handled by J. H. Magrath, 208 Little Lonsdale St., is for you. This moulded knob of black bakelite is 1-5/16" overall dia. with an aluminium inner ring, which gives the whole unit the appearance of something from W. land. A moulded brass inserted into the knob has two grub screws which positively lock onto the shaft.

This is an attractive, functional and well constructed knob, and would be one of the best yet seen on the Australian market. Write to Magrath's for further details, mentioning you saw it described in "A.R."

MINIATURE MULTIMETERS

These miniature meters feature five d.c. and a.c. voltage scales at 3K ohms/volt, with three d.c. current ranges and one ohms range. They are very well made, with a very good meter movement which is critically damped so that it rapidly approaches the reading then stops without overswing. The meter is



very useful as a modulation meter which will read the average applied a.c., in addition they are very compact and robust so can be used in mobile or field day stations.

Supplies are available from Ham Radio Suppliers, 5a Melville St., Hawthorn, Vic.

AFDR1 RECEIVER

"A.R." has been privileged to review the AFDR1 Receiver. This is a completely new concept in Amateur-type communication receivers. It is fully transistorised and operates from four heavy-duty 1.5 volt batteries.

The first r.f. stage is aperiodic tuned and covers from 500 Kc. to 60 Mc., this in turn then feeds into the first mixer which is xtal controlled from the oscillator. In turn this feeds into a counter which registers the frequency on a decade scaler, calibrated in cycles per second. Provision is made to feed the xtal oscillator into a second mixer for comparison with the in-built 1 Mc. standard, or WWV. By this means the readout frequency is accurate to better than one cycle per megacycle, e.g. the maximum error at 60 Mc. is not greater than 60 c.p.s., by correcting the local xtal oscillators this error can be further reduced.

This receiver has no dial, the received frequency being directly read from the front panel decade scaler. Thus you can set your receiver exactly on a specified frequency, or conversely state the exact drift of the receiving station. This front-end uses fifty transistors, all in the frequency counting circuitry.

Two i.f. channels are used in parallel; one is broad banded, having a bandwidth of 3.8 Kc. at -3 db., and a response at -60 db. of 7 Kc. This is

(Continued on Page 12)

Trade Review

(Continued from Page 11)

achieved through the use of xtal coupled pairs using toroidal filters, which are also used in the second channel which has a bandwidth of 200 c.p.s. for c.w. use. The overall gain through this channel provides the sensitivity of this receiver, the first r.f. stage and first mixer merely providing enough gain to override the input noise of the first mesa type transistor. By these means a sensitivity of $\frac{1}{2}$ μ V. for 15 db. signal to noise ratio at 3.8 Kc. bandwidth at 500 mW. output is achieved.

Two detectors are used, one a conventional type diode for a.m. and a modified product detector for c.w. and s.b. is provided. The reception of upper or lower sideband is accomplished by shifting through an a.f.c. circuit the xtal oscillator frequency by 3.8 Kc. Upon special order the supplier can provide a synchronous detector for double sideband.

Conventional audio circuitry is used after the detectors, but it is unusual to see that the a.v.c. is derived from the audio for all c.w. and s.b. reception. Conventional delayed a.v.c. being used for a.m. In keeping with the sharp i.f. selectivity, the audio channel is provided with variable selectivity. One channel is 8 Kc. wide, for a.m. reception, the next covers 4.3 and 2 Kc., and a sharply peaked section is provided for c.w. To lessen operator fatigue, this peak at 1 Kc. can be varied ± 200 c.p.s.

Each band covered is selected by the appropriate xtal, and segments of 500

Kc. or 2 Mc. can be used, depending upon the xtal chosen. Front panel controls are bandchange, selectivity, broad tuning, a.m./c.w./u.s.b./l.s.b. and d.s.b., audio bandwidth, audio gain, a.v.c., and xtal standardisation.

Various accessories are available which include a pan adapter, timer, diversity plug, cathode followers, a universal power supply for use on 12 volts d.c. to 230v. a.c./d.c. with all intermediate voltages covered, a precision xtal calibrator which provides a frequency reference from WWV with the same accuracy as the latter, i.e. one part in ten million. This unit uses a one inch c.r.o. tube and compares the one second tick in a synchroscope circuit with a derived 100 c.p.s. pulse from the receiver's multivibrator. Thus after a 100 second comparison the in-built 1 Mc. xtal can be compared exactly with WWV.

The basic receiver weighs fifteen pounds, and occupies $1\frac{1}{2}$ cubic feet, the front panel being 18" long, with 12" depth and 12" high. The main space being taken by the decade counter frequency globes which replace the conventional dial.

This receiver is out of this world and the local agents are to be congratulated upon importing such a unit. The price is most attractive, initial shipments being quoted at £99/19/1, plus 25% sales tax.

★

OUR COVER PICTURE

The VK3ADW/P group on Mount Blackwood. Michael VK3ZEO secures the six element two metre beam to the Trig. Point. Michael VK3ZCZ and Keith VK3YQ offer advice.

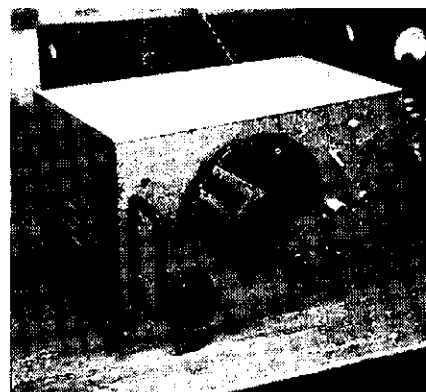
A FREQUENCY METER

(Continued from Page 3)

close to the louvred side of the case for maximum ventilation.

All leads, plugs and controls are on the front panel which is screwed to the metal case with a number of self-tapping screws. Fitted with handles and a bezel light, it is quite an attractive addition to the bench and very pleasing to the eye of certain gentlemen.

A Bendix frequency meter was used for calibration and in most cases another Amateur would be only too willing to help you out in this matter.



Where a meter is designed for large frequency coverage, calibration points are usually printed in a small book. In this case where the range is only $\frac{4}{10}$ ths of a megacycle, and taking the readings at 3.501 and the next at 3.502, the number is only 200.

Thus the dial reading can be typed against the frequency, on a single sheet of paper, taking four columns.

The crystal check point can be suitably marked and the sheet framed like a picture.

Frequencies are very easily read and working other than 3.5 Mc., a simple multiplication is all that is needed.

AUSTRALIAN RADIO AMATEUR CALL BOOK

1961-62 EDITION

The new edition of the Call Book will shortly be compiled and printed. In order that it may be as accurate as possible, every Australian Amateur is requested to immediately complete page 153 of the present Call Book and send a copy to "A.R." and the P.M.G.'s Department in the Licensee's State.

PLEASE DO THIS NOW SO THAT YOUR LISTING IN THE NEW CALL BOOK WILL BE CORRECT.

The Publications Committee also invites suggestions for improving the new edition of the Call Book. Write: Editor "A.R." P.O. Box 36, East Melbourne, C.2, Vic.

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PHUTILE PHONETICS—Flailing Fatuous Fone

By L. H. THOMAS, G6QB—DX Editor, "Short Wave Magazine"

THIS may be regarded as an Impassioned Plea or an Angry Tirade— whichever you like. But the writer has become so exasperated with some of the gibberish heard on the Amateur phone bands that he has to let the steam off before it starts coming out of his ears.

When will some of our phone operators learn sense? There seems to be a certain proportion of them who think it clever to surround their conversation with unnecessary verbiage and extraneous nonsense by using so-called "phonetics" in the most unnecessary circumstances.

We have always winced and gone slightly green at "Q R Mary," whoever she might be, but now it's "Q R Morocco" or even "Queen Roger Madagascar," and if anyone can see the necessity for spouting that lot on an overcrowded band, then we are extra dim. "QRM" is fine for the c.w. operator; as it stands, it's tolerable for the phone man; but "jamming" or "interference" would be better. (Yes, yes, we know . . . you use the Q Code because it's international and overcomes the language difficulty. That's why two G's working each other talk about "Queen Roger Morocco"! For goodness' sake let us grow up and talk an intelligible language—and down the drain with all Q-signals rolled off to sound clever. Don't try to tell us that "Your sigs are fading" is not more intelligible, even to a Uruguayan or a Latvian, than "You have some Queen Sugar Baltimore on you".

"I SPELL"

A recurring nightmare is to work a station whom you have already given Readability 5, Strength 9, who then tells you his name is Nebuchadnezzar (which you naturally get first time— otherwise he wouldn't be 5 and 9, would he?) and then adds the dread words "I Spell". You know what's coming; even if it were "N . . . e . . . b . . . u . . ." and so on it would be bearable, but it has to be "N for Norway, E for England, B for Boston" and right through the ghastly lot, followed, no doubt, by "I repeat". To those persistently driven up the wall by this kind of nonsense, we say, "Hit back! Invent your own alphabet, and let 'em have it."

We tried it once, with devastating results. As far as we remember, the reply went "The name is Freddy—I spell— F for Fear, R for Rear, E for Ear, D for Dear, D for Dear, Y for Year." Invent a better name than that, though, so that you can introduce "Q for Queer, C for Clear, L for Leer, M for Mere, N for Near" and many others. You can, with luck, deal with your own call sign in the same way and become Gear Three Peer Dear Queer—or something near. Almost as good for exploration is the Bog family, enabling you to become Gog Three Tog Dog Wog, or thereabouts.

FOREIGN PARTS

The really shocking thing is the use of place names, of all things, for phonetics. No wonder the newly interested S.w.l's. and the eavesdropping B.c.l's. think they have wonderful receivers. . . they hear Mexico, Germany and Canada all at once! Believe it or not, but we actually did hear a G station a few weeks ago declaiming thus: "CQ, CQ, CQ, this is Germany . . ." Cut him off there and there's only one interpretation. Of course it wasn't Germany at all, but only old G3 so-and-so; but of all the words to choose for "G" we can hardly think of one less suitable.

So we must tell all the listeners that when they hear Canada Ontario they are listening to Cuba; that Denmark London means Germany; that Yokohama Ontario is really in Roumania; and so on ad nauseam. Could it be more confusing and unnecessary?

Listening round the s.s.b. section of 20 one night we heard a weak station who was probably a good DX piece. But every time he signed he used long-winded phonetics and spoke so quickly that it was literally impossible to get his prefix. We finally switched off and never did gather who that man was. If he had spoken his call sign, as it appears on his license, just once, we should have got it. This is what we mean by the real futility of the so-called phonetics.

BE FASHIONABLE

Enough of destructive criticism! We offer a new phonetic alphabet which will put you right in the swim, among the Top People. Use only this one (it washes whiter than all the others) and you will stand right out on the band as something different (a moron, probably). But that's the thing—**Be Different**. Be a Beatnik if you like, but use our phonetics.

A for Able
B for Babel
C for Cable
D for Dear
E for Ear
F for Fable
G for Gable
H for Hear
I for Ipecacuanha ("I Spell")
J for Jeer
K for Khatchaturian
L for Label
M for Mabel
N for Near
O for Oesophagus ("I Spell")
P for Peer
Q for Queer
R for Rear
S for Sable
T for Table
U for Unintelligibility
V for Veer
W for Weir
X for Xylophone
Y for Year
Zee for Zed.

Good luck to you all and may you dodge the Queer Rear Near, nor ever suffer from Queer Sable Babel. (I will even send you my Queer Sable Label.) The name, of course, is Mabel Able Cable and the QTH Llanfairpwllgwyllgogerychwyndrobwilllantysiliogogoch . . . I spell! (No, you definitely don't— Ed.)

Up the wall, everybody!

— . . . —

SIDEBAND FROM THE START

(Continued from Page 7)

s.s.b. types, too. This is not a general rule, of course, and there are plenty of weak sideband signals to be heard when their c.w. counterparts are coming in more strongly. However, it's more often the other way round.

SUMMARY

Summing up the contents of this little lecture, then, we had better state briefly the advantages and disadvantages of an s.s.b. conversion at your station. In its favour are the following factors:

- (a) Up to 9 db. gain over a.m.—say two S points—with same power;
- (b) Equipment is less bulky and uses less mains power;
- (c) No phase-distortion or selective fading;
- (d) Less t.v.i. trouble;
- (e) Abolition of carrier-wave heterodyne interference.

Against it, if you like to consider these points as disadvantages:

- (1) Increased complexity and expense of gear;
- (2) Increased difficulty of operation, in the early stages;
- (3) Necessity for better receivers;
- (4) Rather more technical know-how necessary, or desirable.

Sort these points out for yourself and decide whether the whole business is a fad or a reality; and then, whatever your own decision, ask yourself whether you really believe that sideband is going to advance or retreat. There's not much doubt about the answer to that one. Sideband is a mode we are all going to have to live with, and those that get in early are going to be those who have most of the fun. Make up your mind whether your motto is going to be "Help Stamp Out Carriers."

(To be continued)

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SIDEBAND

Bud Pounsett, VK2AQJ
22 Seiffert Centre,
Queanbeyan, N.S.W.

NATIONAL FIELD DAY

Although I was unable to spend much time in the contest and worked but eight portable stations in about 45 minutes, it was very pleasing to find that not once was I answered with that familiar reply of previous years, "Sorry, OM, I can't receive s.b. with this receiver." How about some portable sideband stations in next year's contest, chaps? It is certainly worth some thought.

THE FINAL POWER SUPPLY

From the January issue of the "Sidebander," the magazine of the Single Sideband Amateur Radio Association, comes some interesting information you may wish to apply to your final amplifier power supply. This is the conclusion to a series of articles on linear amplifiers written by John Henly, W1EOR.

"The linear presents problems that are peculiar to its breed and power supplies must be designed to provide adequate regulated voltages to handle the difficult load requirements. The load current swings from a low level to some higher level at a syllabic rate. During this swing, the plate voltage must stay close to its value at the low current level if the amplifier is to be linear. For this reason, power supplies that are 'stiff' or have good dynamic regulation, should be used in linear service.

"One of the easiest ways to secure a 'stiff' supply is to use a swinging choke input with the largest output capacitor (in micro-farads) that you can find and economically utilise. At voltage levels up to 2,000 volts, electrolytic capacitors in a series parallel arrangement, each shunted by a 100K ohm, 1 watt resistor to prevent the possibility of an unequal voltage distribution across the filter string, will be an economical source of filtering. Another important feature of a 'stiff' supply is the bleeder resistor which will load the circuit keeping the no-load voltage from rising to a high level which would drop when a sudden load was applied. This fluctuation expressed in percentage form is the regulation of the power supply.

"Regulation in percent, equals (E out No Load minus E out Full Load) divided by E out Full Load, multiplied by 100.

"A good stiff supply has better than 10 per cent. regulation or, in other words, less than a 10 per cent. change in voltage between no load to full load current.

"The high current bleeder may not be needed in a linear amplifier for it is possible to use the idling current through the tube to provide the necessary no load current on the supply. A protective bleeder which will draw at least ten mls. should be included for safety even though the final tube idling current is used in place of the bleeder.

"The current rating of the power transformer used for a linear need not be capable of handling the peak current drawn by the amplifier if a large capacitor is used at the output of the filter. A rating of one-quarter of the peak current will be in most cases sufficient if the output capacitor of your filter is large enough to solve the following equation:

"C (mfd.) equals 400,000 divided by Zpp, where Zpp equals E (power supply volts) divided by Ip (peak plate current). The peak plate current is the calculated peak current, not the top of your plate meter swing. The amount of capacity needed for a reduction in output capability of the power transformer may be calculated using this general formula at any voltage as long as the peak current is known. This is a simplified 'rule of thumb' formula, but will hold for most commercial transformers presently on the market.

"Utilisation of bridge type rectifiers becomes very practical at all levels. Smaller rectifiers such as the 816 or similar mercury vapor tubes can be used successfully in these bridge circuits. By reducing the size of the unit's power supply components a desk top kilowatt rig is realised."

For those of you who may not know of the S.S.B.A.R.A., it is an Association with headquarters in New York and members all over the world. If you would like a sample copy of the "Sidebander," let me know and I will

be pleased to send one along. The S.S.B.A.R.A. is an organisation of licensed Amateurs dedicated to furthering s.s.b.

ARSSA

In the Jan. issue, mention was made of the ARS5 and ARSSA sideband generators available from Don Haberecht, VK2RS, of Albury. This month we have the circuit which Don suggests could follow the ARSSA unit which has low level output on 80 to 10 metres.

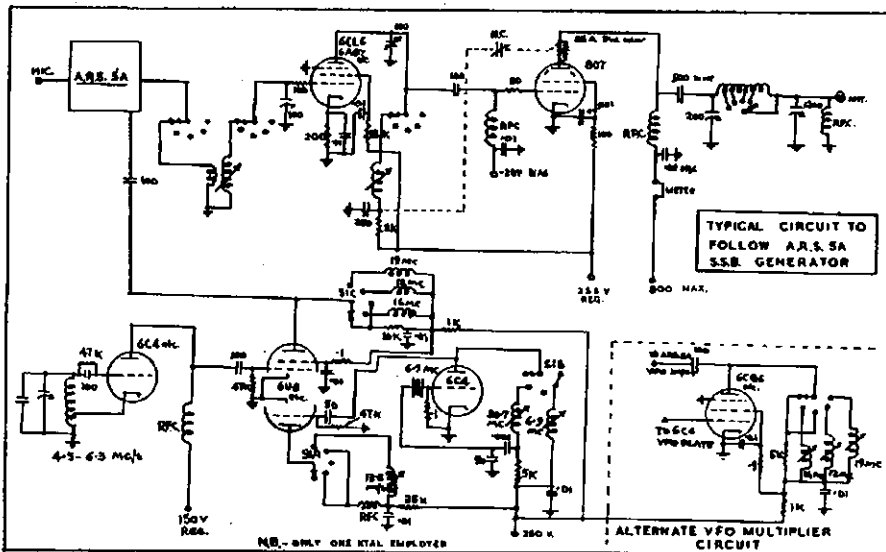
The way in which output is obtained on the various bands is rather ingenious and will be of interest to all users of 9 Mc. sideband generators. As will be seen from the circuit, the 6U8 tube is used as an untuned buffer between the v.f.o. and the ARSSA mixer (a 6BE6) on 80 and 20 metres, but on 40, 15 and 10 metres, the 6U8 is a mixer. The 6.9 Mc. crystal oscillator signal beats against the v.f.o. signal to produce the required injection frequency at the ARSSA. This dodges the rather undesirable practice of doubling and tripling the frequency of the v.f.o.

For 80 and 20 metre operation a 9 Mc. xtal oscillator signal is heterodyned against the 5.3 Mc. s.b. signal and for 40 metres the second harmonic of a 6.2 Mc. xtal oscillator is used. This latter mixing occurs in a separate chassis to the exciter, the exciter having low impedance output at 5.3 Mc.

S.B. S.W.L.

Again from Afton, L2136/VK4, of Atherton, North Queensland, comes a report on some interesting sideband stations heard in Feb. Afton used a quad to catch these goodies, but is in the process of erecting a Mosley TA33 beam. Here are some of the more interesting calls taken from a very imposing list:

EP4X, FL9, FL8ZA, FL7RT, LUSEQ, OD5CW, SVIAE, UA0LA, UA4FG, UB5FJ, UA3FU, W5ACN/Aero Mobile, ZS7FS—these were on 20 metres, and for 15 metres Afton heard: UA1AB, W0EZW, ZL2ASH. Seems as though North Queensland is a good place for Hams to migrate to. Watch out for local QRM, Afton.



This practice has caused many a sidebander considerable trouble trying to eliminate drift, especially on 40 metres where the v.f.o. frequency is usually tripled. This system of Don's eliminates the problem. Using only one crystal makes it very attractive. A word of warning, put the 6.9 Mc. oscillator in a shielded compartment, it has a fundamental and harmonics very close to the lower band edges. The 6CB6 stage is an alternate v.f.o. multiplier, but I prefer the v.f.o./xtal oscillator combination for stability.

VK2AQJ

Here at Queanbeyan, work is progressing on the new transmitter. The exciter section is completed and has been in use for some weeks. I was lucky enough to have a mechanical filter sent to me by KATLB and this has been put to good use. The general design is very straight forward and attention has been paid to good layout with plenty of shielding.

The crystal oscillator uses a 12AU7 followed by a 7360 balanced modulator tube. The 7360 tube does everything that R.C.A. claim. The carrier suppression is very good and easy to adjust. An EF86 and 12AT7 take care of the audio requirements while a "sure-fire" vox circuit is used. Following the mechanical filter is a 6BA6 amplifier at 455 Kc. which was included to provide automatic load control (a.l.c.) at a later date. A 12AT7 is used as a balanced mixer to convert the 450 Kc. s.b. signal to approximately 5.3 Mc. by beating against the signal from the 6BA6 v.f.o. tube.

"The v.f.o. LC circuit is removed from the exciter chassis by about 6 feet of twin coaxial cable to give adequate stability. It was found desirable to tune the plate circuit of the balanced mixer from the front panel as the use of a reasonably high Q circuit here restricted the bandwidth somewhat. Output from the exciter tended to drop off if a shift of 100 Kc. or so was made. High Q is desirable here—the unwanted frequencies being close to the wanted 5.3 Mc.

W.I.A. D.X.C.C.

Listed below are the highest twelve members in each section. New members and those whose totals have been amended will also be shown.

PHONE

Call No. ries	Cer. C'tnt- No. ries	Call No. ries	Cer. C'tnt- No. ries
VK8RU .. 2 251	VK8KW .. 4 202	VK4HR .. 12 192	VK3BZ .. 3 176
VK6MK .. 43 243	VK4RB .. 50 171	VK4RW .. 23 164	VK3EE .. 10 163
VK6AB .. 45 243	VK3GB .. 50 171		
VK4FJ .. 21 221	VK4RW .. 23 164		
VK3WL .. 14 211	VK3EE .. 10 163		
VK3ATN .. 26 204			

C.W.

Call No. ries	Cer. C'tnt- No. ries	Call No. ries	Cer. C'tnt- No. ries
VK3KB .. 10 287	VK4HR .. 8 218	VK3XU .. 48 213	VK7LZ .. 17 212
VK3CX .. 26 275	VK3RB .. 18 210	VK3YL .. 39 203	VK5RX .. 23 195
VK4FJ .. 29 284	VK7LZ .. 17 212		
VK3NC .. 19 236	VK3YL .. 39 203		
VK3FH .. 15 226	VK5RX .. 23 195		
VK3BZ .. 6 222			

Amendment:
VK3ARX 66 137

OPEN

Call No. ries	Cer. C'tnt- No. ries	Call No. ries	Cer. C'tnt- No. ries
VK2ACX .. 6 289	VK3BZ .. 4 231	VK3HG .. 3 225	VK3WL .. 45 225
VK4FJ .. 32 287	VK3HG .. 3 225	VK7LZ .. 23 223	VK3XU .. 61 221
VK6RU .. 8 285	VK3WL .. 45 225	VK3XU .. 61 221	VK3KW .. 13 216
VK6MK .. 74 247	VK7LZ .. 23 223		
VK3NC .. 77 236	VK3XU .. 61 221		
VK4HR .. 7 233	VK3KW .. 13 216		

New Member:
VK5NQ .. 81 102

Correspondence

Any opinion expressed under this heading is the individual opinion of the writer and does not necessarily coincide with that of the publishers.

BOSS HULL MEMORIAL V.H.F. CONTEST

Editor "A.R.," Dear Sir,

In the rules for the 1960/61 Ross Hull Memorial V.h.f. Contest, the reason for holding such an event was given as "... to perpetuate the memory of the late Ross Hull whose interest in v.h.f. did much to advance the art." Is it logical therefore to suppose that Ross Hull would desire the major VK v.h.f. contest to assist in further advancement, the art of communication at v.h.f.? I think it is. Do the present rules allow for this? I think not.

Under the existing rules, activity is increased but what is produced? Tired operators and very little else. Surely the contest should encourage the opening of new paths, the use of more bands and the working over longer distances. Very little advance has been made in this direction over the last three years on the two most densely populated v.h.f. bands.

In encouraging this "right" sort of activity I feel it should be done in a manner that allows a contestant who picks his operating time intelligently to compete on an equal basis with the more fortunate types who can spend unlimited hours on the air.

These are unrealistic ideals you say! Perhaps, but I feel we can approach more closely to these ideals by a change of rules. However, before submitting definite proposals, let us consider some pertinent facts. Are 50 Mc. and 144 Mc. so different as some say as far as propagation is concerned? I think not. In general, the longer the distance involved the harder it is to make the contact. Only one mode of propagation deviates and that is the so called sporadic E. Normally occurring on 50 Mc., it allows stations about 800 miles apart to work quite easily but with the ease decreasing as the distance figure moves away from the 800 mile mark in either direction. Such modes as T.E. scatter and F layer refraction occur occasionally on 50 Mc. and rarely, if ever, on 144 Mc., and they allow contacts over a 3,000-mile range to be covered but such contacts are not usually easy. Thus, the general statement relating contact difficulty and path distance is applicable to these modes.

Another consideration is the state of affairs brought about by current techniques. It is possible because of practicable antenna sizes and tubes available, to work somewhat greater distances with comparable ease on 144 Mc. than on other v.h.f. bands within the range 100 to 300 miles. It is my contention that these factors can be allowed for by using a scoring system based on distance of contact path rather than on the arbitrary boundary (call area) system prevailing. Such a system is possibly the most practicable and hence desirable one for h.f. contests but, in my opinion, is most unsuited to v.h.f. contest needs.

I suggest a scoring table as follows:—

Distance Between Stations	Points per Contact				Highest
	50 Mc.	144 Mc.	288 Mc.	576 Mc.	
Over 1 and up to 10 miles	0	0	0	0	1
" 10 " 25 "	0	0	0	1	3
" 25 " 50 "	1	0	1	5	4
" 50 " 100 "	2	1	3	10	15
" 100 " 200 "	5	2	5	15	20
" 200 " 300 "	10	5	8	20	"
" 300 " 500 "	3	8	15	"	"
" 500 " 1000 "	1	15	"	"	"
" 1000 " 5000 "	5	"	"	"	"
" Greater than 5000 "	10	"	"	"	"

* Points to be set down by F.C.C. when contacts over these distances are made.

† Moonbounce contacts to be evaluated by F.C.C. when made.

A possible point for criticism may arise from the Contest Committee's chore of having to check logs. The job would be made easier by making it necessary for stations to exchange the distance figure involved in the contest as well as the usual cyphers to make valid contacts. The figures so exchanged would not have to be exact as the proposed table deals in quanta of miles.

A point mentioned earlier concerns the duration of the contest. I suggest that contestants be allowed to choose their own operating period of say, one week, within the months Jan. and Feb. This allows the time-pressed operator to pick the time best suited to himself and of course those who spend long hours on the band could submit their best week of contacts.

If the table were to be used, only two transmitting sections would be necessary—open and phone only. C.w. only is not justified yet as there are no exclusive c.w. operators on v.h.f.

Finally, since I propose that bands above 300 Mc. be definitely included in the contest, I feel the name should be changed to the Ross Hull Memorial V.h.f./U.h.f. Contest.

Have "A.R." readers any comments for or against the foregoing? You may have different ideas on the figures set out in the proposed table. If the Federal Contest Committee is given sufficient time, maybe we will get new rules for the next contest. Sending ideas along in October or November helps nobody.

—David Rankin, VK3QV.

SCHEMATIC HANDBOOK

Editor "A.R." Dear Sir,

After reading the "Surplus Schematic Handbook" by "CQ," I would like to offer a suggestion, for what it is worth. Would it not be possible to have a similar publication featuring disposals equipment of Australian origin?

Quite a large number of sets such as AR7, AR8, No. 11, No. 122, etc., just to mention a few, have found their way through disposals to the Amateur fraternity at large.

The first thing that one does normally, after obtaining a piece of disposals equipment, is to try to obtain a schematic circuit of the set. This is not always easy, even for the more common pieces of equipment.

In my humble opinion you would be doing Hams generally quite a service with such a publication. If this would not be possible, surely it would be feasible to print regularly in "Amateur Radio" copies of the circuits of equipment of Australian origin.

Well now that I have had my say, what do others think about it?

—Lionel L. Sharp, VK4NS.

MORSE CODE

As many letters have already been published on this subject, the Publications Committee is of the opinion that enough has been written to indicate the Amateurs' feelings on this matter, therefore correspondence is now closed. Acknowledgment is made of the receipt of

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letters, in reply to VK3BG, from: J. C. Redman, VK2JE; Frank Hine, VK2QJ; George Downing, VK3GD; S. J. Lloyd, VK3AST; Fred Jenkins, VK3WS; A. C. Rechner, VK5ZCR/T; Bob Elms, VK6BE; and D. Grantley, LZ9Z/L3068.

U.S.S.R. CONTEST

To mark the occasion of Radio Day the U.S.S.R. Federation of Radio Sports is sponsoring on 30th April, 1961, the traditional competitions of short wave wireless operators.

AFDR1 RECEIVER

Supplies are available through April Fool Day Enterprises, local agents for Lunar Manufacturing Company, Mars. Special discounts are available for collecting these units direct from the makers.

TECHNICAL ARTICLES

Readers are requested to submit articles for publication in "A.R.," in particular constructional articles, photographs of stations and gear, together with articles suitable for beginners, are required.

Manuscripts should preferably be typewritten but if handwritten please double space the writing. Drawings will be done by "A.R." staff provided that the article is illustrated.

Photographs will be returned if the sender's name and address is shown on the back of each photograph submitted.

Please address all articles to the EDITOR "A.R.," P.O. BOX 36, EAST MELBOURNE, C.2, VICTORIA.

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VHF

David Tanner, VK3AAU
C/o. British Nylon Spinners,
Bayswater, Victoria.

Things are apparently on the improve on the bands since the quiet period after the Ross Hull Contest. JAs have started to re-appear so the new gang may find some new interests to keep them going. There has also appeared a new batch of full tickets, yours truly included, so we may possibly see some c.w. activity. We have received news of the allocation of the t.v. channels. As I have it, we keep both 6 and 2 metres unaltered, Channel 1 being 56-63 Mc. and Channel 5 in the f.m. band, and a new one—5A, 137-144 Mc. I hope to be able to confirm these from more official sources. This will probably give our v.h.f. bands a bit of a lift and give the boys an incentive to build gear which they won't have to modify later. By the way, my call sign is now VK3AAU, so you might find me snooping on the h.f. bands collecting dope and working DX.—3AAU.

NEW SOUTH WALES

General.—The V.h.f. and T.v. Group has been active as usual, with attendances at meetings down a little but still quite encouraging. The number of younger members attending is extremely good and indicates plenty of new blood to fill the bands in future years. To this end, the management committee has started the year 1961 with lectures directed at basic information—receiver and transmitter theory and practice for v.h.f., test gear, etc. Quite a deal of information has been provided including some in roneoed form. We have had several requests for this information to be made available to members who have missed the meeting, and also to country members. This suggestion is being considered by the management committee and, although it has several hitches including the cost, which someone has to bear, it is hoped that a plan can be derived to provide a loose-leaf folder to be added to at future lectures. Taking things into my own hands (this is not Group policy), I believe it would be a good idea if such information was exchanged between v.h.f. men all over Australia. Some comments from other V.h.f. Group scribes would be welcome. ("A.R." would be pleased to publish any articles forwarded.—Ed.)

The major coming event is the Autumn Field Day to be held on Sunday, 16th April. This year, the day will be non-competitive and will take the form of a get-together via 2 mx with the large group of active v.h.f. operators in the South West Zone. The Sydney gang will take up vantage points in the highlands of the s.w. corner, and further details will be given via the W.I.A. Broadcasts before the day.

50 Mc.—Two of our regular operators on this band, 2ZCF and 2ABR, report nil activity since the New Year openings already reported in Feb.—"A.R."

144 Mc.—Several new stations have appeared, and 2ZJC is looking for contacts on 147 Mc. from Kurrajong. There has been considerable comment on press announcements of t.v. channels adjacent to and in the existing 144 Mc. band, contrary to information given earlier in the year. It is hoped that something concrete and official is announced soon.

The February night hidden tx hunt, with Barry 2ZAH as the fox, was won by Paul 2ZPJ with Neville 2ZNM second and no third. A very cunning spot only three miles from the start had the hounds well and truly lost, although at times they were only 100 yards from the transmitter.

288 Mc.—At last we are able to report signs of activity on this band, though only in the rumour stage. Bob 2ZAR hopes to have pictures soon, with a QQP06/40 as the final r.f. amplifier. The camera work is being done by John 2ZAV. Best of luck and I hope the rumours bear fruit, as this band has always been in the doldrums in VK2. These two enthusiasts are well equipped to start Amateur t.v.

576 Mc.—Best DX was the recent contact from 2ATO portable at Valley Heights to 2HO at St. Ives and 2ZAH at Lane Cove.—2ZAG.

VICTORIA

The V.h.f. Group meeting was held on Feb. 15 in the rooms with some 12 members present. Kel 3ZFG gave a brief talk on his DX-pedition to "Alice" VK8. Discussion took place

on the various aspects of QSLing, with an article to appear soon in "A.R."

After general business, David 3QV gave us an excellent discourse on computers-electronic. All present were suitably awed by the details involved and everybody appeared to have a good grasp of the subject, possibly that accounted for the lack of embarrassing questions that might have been asked later. Thanks David.

50 Mc.—Two openings during the month have saved the band from oblivion for those looking for DX. Feb. 3, at noon, VK4 and again in the evening with VK4, 7 and 5. Then again on 19th Feb. we had VK4 in for quite a time during the day from 11 a.m. until 3 p.m.

The Field Day saw quite a few stations out in the field. Those worked were 3ADW/P, at Mt. Blackwood in Bacchus Marsh, full of top brass; 3CS/P, Woody Hill, in Donnybrook; 3ZKK/P, You Yangs; 3ZJS/P, Bass Hill, in Loch, had more success here than at Korumburra; 3ASC/P, Wantirna; 3GFP, Croydon, had no luck on Sunday at Arthur's Seat; 3ALZ/P, Mt. Ridley, were all active during the day.

144 Mc.—Two mx Field Day portable stations were located: 3ASC/P, Wantirna; 3ADW/P, Mt. Blackwood; 3CS/P, Woody Hill; 3ZCG/P, Bass Hill; 3ZDE/P, Mt. Dandenong; 3ZGG/P, Mt. Donna Buang; 3ZHT/P, Mt. McDonald; 3ABK/P, in Geelong; 3APC/P, Crib Point; 3ZEZ/P, King Lake; 3ZIW/P, Mt. Dandenong. These were supplied by 3QV.

288 Mc.—Activity has jumped on this band amongst the "non-stabilised" gang. 3ASG at Preston is active using 7193s p.p., RL18 super and 11 el. yagi, and is usually active listening from 7.30 p.m. onwards on 6 mx to arrange a contact. 3ZEC at Essendon has worked 3ASG and 3ZGP is getting started slowly after re-vamping some old gear. Have 955 super, 7193s p.p. and a rather inefficient 8 el. yagi and 16 el. phased array ready to try out. 3AUX at Esterwick has had two-way on 288 with 3ASG with quite good results.

3ZBN is re-building and there are others on the way or contemplating building gear. Promises to be quite interesting a time on 288 this year. Can't say what the stabilised boys are doing but know that 3AUX has worked across to 3ABK, 3AAK is without a beam as his mast is horizontal instead of vertical. 3CS has worked quite a few of the others. More news when we know what is going on.—3ZGP.

SOUTH AUSTRALIA

50 Mc.—Quite a decline in 50 Mc. DX has been noticed over the last month, there being only an occasional VK4 or VK2 opening for the whole period. JAs have been non-existent and nothing at all has been heard from ZL. Local activity, however, has been maintained at a reasonable level, particularly on Fox Hunt and Scramble nights. Crossband working is becoming more popular again and Rick 5ZPQ and John 5ZDZ have been working duplex 50 to 576 Mc.

Les 5ZAG is a recent new station on 50 Mc. and a welcome is extended to you, Les. Several VK5s who may now have worked into VK8 to complete their 50 Mc. W.A.S., may apply for the certificate. The address is: Mr. A. Hilsloak, W.I.A. Awards Manager, 1 Macfarland St., Branswick, N.10, Vic. Extra stickers are also available for extra countries worked.

The V.h.f. Group monthly Fox Hunt was held on the 18th, with Neil 5ZAW as 6 and 1 mx fox, and Col 5RO as 2 mx fox. Keith 5MT was first home on 2, followed by 5BQ on 6. There was only one 1 mx entry, being Ian 5ZDM and John 5ZDZ. The second event was quite a long one and Garry 5ZFM was first. John 5ZCV and YL, Christine, did not make the last event due to the excellent view of the city lights obtainable at the finish of event number 2. John 5L, I believe, re-located the large mobile accumulator used to power the mobile equipment, to prevent further trouble from short circuits.

Mobile activity should receive a boost soon when one of our most active 6 mx stations, Garry 5ZFM, is heard in his new car. Gilbert 5GX has not been heard mobile for a while due to work involved in changing QTH. The new location has some elevation, so Gilbert's signal from the base station should be much stronger over Adelaide. John 5ZBA is coming up with a new mobile tx, running higher power and should be heard more regularly soon. A few 6 mx mobiles participated in the National Field Day and had many contacts. Garry 5ZFM was portable at Mt. Lofty, Ken 5ZCH/5LZ was portable at One Tree Hill, Neil 5ZAW was mobile in the suburbs and your scribe portable at Ashton.

Propagation conditions are improving on 2 mx, Hughie 5BC having been heard and worked by Bob 5ZFG and possibly some of the other VK8s too. No sign of Stuart 5ZDG from Whyalla yet. Mick 5ZDR has paid him a

visit to urge him to stoke up the gear. What about it "Stu"?

5BC and 5AW have also been heard working each other and stations in VK3.—5BQ.

WESTERN AUSTRALIA

Apologies for no v.h.f. notes for some months now, however what with making arrangements for his wedding and then the honeymoon, and now married life, 6BE has not found time to write them.

60 Mc.—Activity during the past months has been varied. The openings to the east have not been as numerous as in previous years. Whilst the stations from VK2, 3, 4, 5 and 7 were heard and worked quite often, it is regrettable that once the Ross Hull Contest concluded Eastern States contacts seemed to cease. However the band was open several times and we were able to hear VK4s working VK2s and 3s, both sides of the contact being copied. This would be off the side of those beams. We were unable to make ourselves heard.

Kevin 6ZCB was operating portable from Mannagin during the contest and totalled up a very nice score. Bob 6ZBY was also around quite a deal. Incidentally, Bob passed his c.w. in January and now operates under the call sign of 6RG. Congratulations, Bob, but please remember 6 mx occasionally and don't forget that the ratings for a 6146 in c.c.s. are lower than for i.c.a.s.! Roy 6ZBU started off well in the Ross Hull but due to an unexpected working trip to Kulin, was unable to complete the contest. Roy also sat for the c.w. in January but as yet does not know the results. Here's hoping. Bob 6ZCF received a pass in c.w. and is waiting for a new call sign. There may be others who were successful that I do not know of, if so, congratulations to all. Brian 6ZBJ, who is now living in Geraldton, broke through to Perth on 6 mx on 26th and 27th February with 5 x 9 sigs.

Activity on 288 and 576 has been quite noticeable and several stations have conducted very interesting checks. Stan 6ZAS, Kevin 6ZCB and Jack 6BU intend going down south at Easter to conduct checks on 50, 144, and 288 Mc. Good luck, chaps.

The West Australian V.h.f. Group station took part in the National Field Day and have submitted a very nice log. All bands from 3.5 to 144 Mc. worked. More of this later when we write an article on the subject. An item of great interest is the fact that Bennie 6KJ watched a full programme of t.v. on Channel 9 which was being transmitted from South Australia. Bennie lives in Albany.—6ZBZ.

TASMANIA

This year's "Athol Johnson Memorial Contest" for intrastate operating was very successful, there being a marked increase in activity over last year's contest. Portable/mobile stations over this period were 7ZAK, 7ZAS, 7ZAX and 7ZAO. Bands in use were 6, 2 and 1 mx. Longest distance worked was from 7ZAK portable at Mt. Wellington to 7LZ Launceston (100 miles) on 144 Mc. It is expected that Alan 7MY will finish up on top. Fourteen stations participated.

The February meeting of the V.h.f. Group consisted of a visit to a local transmitting station and was very well attended. A Fox Hunt is planned for April 18 as part of the Institute fund-raising programme. Although both 3.5 and 144 Mc. will be used, we hope that as many as possible will make use of the v.h.f. band and prove its worth.

50 Mc.—Jack 7JB is constructing 50 Mc. receiving gear by the use of which we hope to have V.h.f. Group news included in the 7WI broadcast. This should enable v.h.f. operators in the north to be kept in touch with what's happening down south. Things have been rather quiet DX-wise, but we weren't completely left out. Feb. 1 and 3 brought good openings to VK2, 4 and 5; the 17th and 18th being the only other openings. Rather patchy on 17th, but came good the following day with VK2 and 4. A foreign f.m. station was heard on 16th at 1500 hrs. on 48 Mc., no Amateur signals heard however.

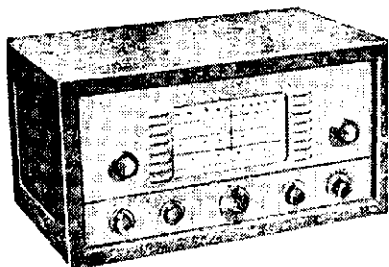
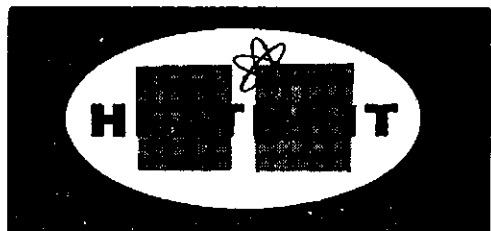
Locally, quite alive. Michael 7ZAV was heard for a week or so, but is heard now only when Channel 6 is off the air; has t.v.i. in a week signal area.

144 Mc.—This band is at last showing promise. On 25th, Barney 7ZAK heard a carrier believed to be Col 7LZ in Launceston. This is the first time for quite a while that sigs from the north have been heard in Hobart. No contact was made but it should only be a matter of time. 7ZAV in New Norfolk has gear operating and is building a 10 element Yagi. 7MY provides a good signal there over 35 miles of "difficult" terrain.

288 and 576 Mc.—No new stations are active, although 7MY is building crystal controlled gear for both these bands.—7ZAO.

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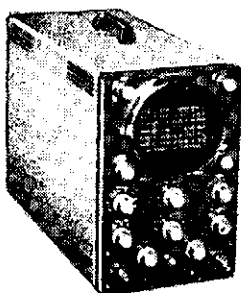
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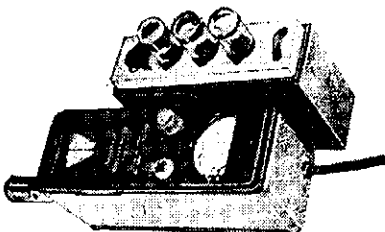
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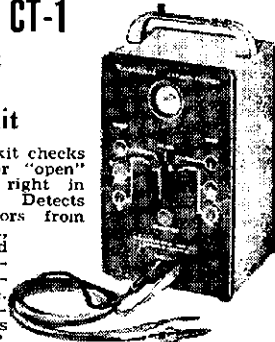
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S W L

Maurice Cox, W1A-L3055
Flat 1, 37 Boyd Crescent,
Olympic Village, Heidelberg,
N.23, Victoria.

On 4th and 5th Feb. this year, the VK3 S.w.l. Group held its first S.w.l. Convention at Shepparton, 112 miles north of Melbourne. What a success it was. Do you know, there was only one thing that didn't come, you! What a shame, you would have enjoyed yourself (excuse me you other VK S.w.l.'s, this is directed to the VK3 Group only).

To think that out of 100 listeners in VK3 only nine could get together at Shep., rather disappointing don't you think? I mean to say, it was arranged for you, so that you could all hear and see something concerning radio and that's exactly what we did. Do you want another one next year?

We had a visitor from ZL land, Barry Thomson. He came all the way from Sydney just for the week-end and couldn't thank us enough for inviting him. By the way, Barry has 241 countries confirmed in 6½ years of listening. How about that, eh? He uses an Eddystone 750.

We all left the rooms at 1315 E.A.S.T. and arrived at Shepparton at 1715 hrs. Ron Young got us lost (that is, Dave Fraser and I). Ron wanted to go on to Benalla, but after a few miles we enticed him to turn back for a mile or so and cut across country on to the main road to Shepparton and eventually arrived there. After booking into our hotel rooms, tea was had. Then Ron, Dave and I went to a drive-in theatre while the rest of the gang went out a few miles to hear 50 Mc. DX. Nothing was heard at all, much to their disappointment. John Donald enjoyed himself at a dance, don't know what time he went to bed. He must have had a nice QSO with that YL.

Next morning after a very nice breakfast, we waited for our worthy organiser Ian Woodman. He arrived just after 10 a.m., so we proceeded towards Mooropna and ended up in a dried-up creek bed to hear the 3WI Sunday morning broadcast. We heard 7WI OK, 5 x 7, but do you think we could hear 3WI, not on your life. It just wasn't there, not even the carrier. Then at 1100 hrs. in came 2WI, so we listened to them.

By this time the weather was getting rather warm. So we decided to head for the lake and lawns. We settled down to listen to Eric Trebilcock; he spoke to us for one and a half hours on his Acting QSL Manager's job and his life history.

The following is some of the points he mentioned. Eric started s.w.l. in 1926 and learned the code, used the buzzer and sander; he received practise from ships on 600 metres. He passed the code at 25 w.p.m., through the G.P.O., was at it every day at work and home. Since 1928 he has lived in 18 QTHs, two years in each State except VK6 land. Eric told us he has never used a rx with more than 5 tubes in it and has never used a rotary beam. His antenna has always been a long wire and states that to get anywhere in listening, you must persevere. He first listened on battery-operated rx's and what a drain on the pocket. (He never had time for YLs, DX was better. Who's he kidding, hi!)

In the old days Hams used to transmit on the b.c. band playing music; they would announce their call sign and frequency and ask for reports (they don't know now, Eric, do they?). They had quite a lot of listeners.

When Eric joined the W.I.A. he was in VK5 and his certificate (associate) is No. 5. He showed it to us, the writing has faded somewhat, but it's still the same certificate as now issued. Eric sends out 2,000 reports per year and spends five minutes on each report—please take note you s.w.l.'s.

In general, Eric says that the general trend in Hams is that they are not interested in QSLing (what a shame). He goes on to say that he has had more luck with DX stations in getting a QSL when Amateurs who have worked the station can't get a card (good for you, Eric). He gets about a 50 per cent. return.

Eric recommends to all s.w.l.'s and those who intend to do s.w.l. learn the code. He says and he would know that there are more Amateurs using the code today than either a.m. or s.s.b.; there are more contacts made on c.w. than on phone.

Eric has one pet aversion, and that is that s.s.b. stations do not give their call signs often enough—it's just "over" or "break". I agree with him, it is most annoying to hear s.s.b. stations have a QSO for such a long time, and not announce their call signs. If a.m. stations and c.w. do, why shouldn't s.s.b., anybody would think they were on a telephone.

After lunch, we travelled for a couple of miles and for two hours we had explained and shown to us Radio Australia, the most popular short wave broadcast station in the world for the past few years. At the moment great changes are taking place, which I do not think I can divulge. On the whole, all of us thoroughly enjoyed the tour of inspection. The S.w.l. Group would like to thank the P.M.G. Department for allowing us to visit Radio Australia, and our thanks go to the officers who showed us around.

This month I am going to omit the VK s.w.l. news and correspondence, because I want to write to you all on how I QSL an Amateur station. I am doing this because quite a lot of s.w.l.'s have written to me since the Jan. issue, when I enclosed the letter from WOZTL—so here goes.



Some of the members present at the VK3 S.w.l. Convention at Shepparton. Left to right: F. Thorn, M. Hilliard, E. Trebilcock, R. Young, J. Donald, C. Cook, M. Cox, D. Fraser, and B. Thomson (from ZL).

"HOW I QSL"

By Maurice Cox, W1A-L3055

Fellow s.w.l., over the years the s.w.l. has become quite a nuisance to the Amateur by virtue of the fact that in many cases the reports are valueless, of no interest, and contain no useful comments. In other words, they are only card-cragging.

The Amateur, whilst carrying out his hobby, does a useful and worthwhile job, so let us try to be equally as useful in our section of Amateur Radio.

Don't have a lavish card printed, only to come to rest in a waste container, because this is where most of them finish up. Amateurs do not collect s.w.l. cards, and unless you make your reports worthwhile, all cash spent will be down the drain.

An Amateur QSL is an acknowledgment of a well composed and useful report, and as cards cost money, he is not going to send them to every Tom, Dick and Harry who writes to him. Some of these chaps receive many s.w.l. reports each month and they will not QSL unless you earn it, I repeat, earn it!

We ask you to help us get for the S.w.l. the recognition he deserves, not the bad name of the past. Forward only the best possible reports, and then you can feel satisfied that you are doing a worthwhile service to Amateur Radio and thereby improving Ham and S.w.l. relations.

I would like to add just this. If you report well, you listen well, and when you have eventually your own station, you will be, I am sure, a good operator.

The following is what I put on the back of my QSL card to the Amateur. (This card is made to a North Dakota station.) QTH: Flat 1, 37 Boyd Cres., Olympic Village, West Heidelberg, N.23, Victoria, Australia. To Radio WOZTL your 14 Mc. phone signals received here at 1350 GMT, 0750 approx. C.S.T. your time 2350 E.A.S.T. (my time) on 15/3/60 (my date), 14/3/60 your date. You were calling CQ and then you worked VE3BPA. You were readable 5, strength 9, QRM at times by W0SFE, who was readable 5, strength 9, QRN rather bad, QSB nil. Wx here fine and mild night, temp. 62 degrees F.

Other stations audible on the band at the same time were WQPQ at 5 x 8, W0SFU 6 x 9, WORAZ 5 x 9.

My receiver is a National HRO 50, 11 tubes using earphones. Antenna 68 ft. window, N. x S. 37 ft. high. I hope this report is useful. Do you need further reports? Please, if you think this report warrants it, QSL direct or via the W.I.A. Bureau, 73, Maurice R. Cox, W1A-L3055.

The following is what I put in the letter or in the official VK S.w.l. Report form and is as follows: There are two examples, first one to VE7JB:

"Dear Sir—We heard your beautifully strong modulated signal in the early hours of this morning. We were greatly surprised to eventually discover that you were in VE land. We honestly thought it was one of our own local VK3s. On looking at a map of the world centred on Australia, we were receiving you from the back of your beam. Would we be correct in saying this, sir? Firstly, we heard your QSO with VE3EI and you mentioned that the summer was getting monotonous. No snow was left and it may hit the lumber trade. Also you have a Ranger tx. Roland got you VP8AO, and that QSO ended at 1220 E.A.S.T. You then made contact with VE3AXW and you QSYed down to his frequency. There was some teletype on this freq., but you overrode it. You asked him if you could make a phone call into Toronto and the number was Howard 65131 and asked for Lois. Just then VU3DW (Dancing Witches, as he says) tried to QRM you but you held up with your signal.

"There was some fading which was slow and deep. Not much QRN. Some of the stations that tried to QRM you were HL2AO, KAZKS and VS2DW. They were on the side of your freq. but with your great sig. strength it was only at times we were able to hear them. Your modulation was excellent. I could not fault it in any way. I hope this report is of help to you. All the very best of DX, 73, M. R. Cox."

One other example is to VK4HC: "Dear Henry—We heard your QSO with HB9ET this evening and thought you may like a s.w.l. report on your signal. To begin with, we heard you mention the following details to HB9. Kurt was your first HB9 and you would like to QSL your QTH in Ipswich. You are running 65 watts, a 2 el. rotary beam 40 ft. high, 813 in the final, pair of 80's in Class B, rx is a BC348. You also have a SX25 rx working at 75 per cent. You transmit wholly on 20 mx, but hope to go on all bands soon, when you have re-built. You are new to the game, only four months on the air. So much for your QSO, Henry. Regarding your modulation, to me it was not so good. It sounded distorted (and I was listening with cans), when you breathed out there was a crackling sound as if you were speaking too close into the microphone. There was also a hum on your signal which faded with the QSB.

"Henry, I hope that this report is of value to you and that I haven't been too critical. Congrats. on your first contact with an HB9. I heard him at 3 x 4."

Well there you have it, my friends, tell them something of what they talked about and that is definite proof to them that you heard them.

DX LADDER

	Con- firm.	Hzd.	Zon.	No. of Conf. Cards
L3042 Eric Trebilcock	261	275	40	6577
Rod de Balfour	122	180	—	—
VK4 C. Thorpe	85	137	34	422
L2022 D. Grantley	70	218	34	—
L3074 M. Hillard	55	195	24	145
L3055 M. Cox	29	195	19	82
L3015 M. Ide	28	86	—	—
L3065 I. Thomas	16	126	13	30
VK4 A. Westcott	15	143	—	—
L3072 T. Heywood	12	80	11	16
L2211 C. Abernethy	13	31	4	—
L5031 C. Hetherington	96	5	5	—
L3088 D. Grantley	4	130	—	10
L5020 F. Aslin	4	40	4	—
L2057 R. Wood	3	3	3	3
L2159 R. Thompson	2	73	2	—
L2052 T. Mills	2	14	2	—
L3006 I. Woodman	1	4	1	—
L5026 G. Smythe	1	28	1	—
L7013 N. Fisher	—	22	—	—
L2185 A. Chatto	—	79	—	—
L2158 B. Vleck	—	79	—	—
L2204 S. Ferry	—	35	—	—
L3077 D. Fraser	—	69	—	—
L2011 G. Albeck	—	18	—	—
L2155 P. Irvine	—	5	—	—

Before I close, I want to thank all who have written to me with information regarding themselves and their gear and photos. Next month I will answer all the letters through this column plus other features.

73, best of DX, Maurice, L3055.

DX

John C. Finnell, VK2ZR
15 Summit Avenue,
Earlwood, N.S.W.
Phone: UW 4248.

In compiling the notes this month I have had to depend, mainly, on information sent in by other Amateurs and S.w.'s, as I have not been so active for a few weeks. Due to circumstances beyond my control I can't see how I will be able to find time to be very active on the DX bands during the rest of this year. Any items of DX news, band conditions, etc., you may have would be appreciated, so please send them along each month.

Most reports say the bands were not as good as they were this time last year, but on looking through the lists a lot of good DX has been worked and heard. The trend of activity seems to be moving toward the lower frequencies. Good reports of contacts on 160 mX have been received from those countries who are permitted to use this band. This is an indication of what is happening as we move away from the big sunspot period and it now seems certain that the 80 and 40 metre bands will be much more in demand over the next few years.

Kure Island—about 200 miles north of Midway Island—has come into the DX picture over the past few weeks. KH6ECD has been active from that spot on a couple of occasions for about three days. The big excitement over these transmissions is the possibility of Kure becoming a new DXCC country. If you have missed out on these transmissions so far, all is not lost, for there is a strong possibility of a permanent station on the island at a future date. The new call sign will probably be KK6CG. These DX-peditions used s.s.b. and c.w. on 7, 14, 21 and 28 Mc. It is understood that a permanent station would run about 500 watts.

QSLs for the KH6ECD contacts should go to KM6BL (Ted Woods, Navy 3080, Box 18, F.P.O., San Francisco, California).

Tanna Tuva—Recent operation from this locality by UAOKYA and UA3FE/0 on s.s.b. was the first time this mode of transmission had been used from this spot. Although Tanna Tuva has been removed from the official DXCC country list, the Zone 23 makes it a very good one for W.A.Z. Reports indicate that this s.s.b. station will next appear at UMFZ. The most used frequencies are within 10 Kc. of 14300 Kc. Listen for them between 1100 and 1300z.

Rul CR10AA, the only Amateur operator in very rare Portuguese Timor, has been inactive for many years. Rul has been away from Timor, on leave, but will return this month and there is a possibility of him coming on the air again soon. If he goes back to his old job in Dili, he will be using a low powered battery rig, since no a.c. is available. However, if he gets a prospective new job at a transmitting station on airfield at Baucau, he will have a 220v. a.c. power source available, as well as a variety of rhombics and large antenna masts.

Chuck VK8TB is planning a trip to Timor in the near future. There is a licensing snag, however, as all foreigners are unable to get a license. If you are a resident this ban does not seem to apply. Chuck thinks there is a good chance of him getting permission to operate CR10AA's station. So there seems to be a glimmer of hope for many of us to get a chance of adding CR10 to our DXCC list.

Steve VK2VK, of Tweed Heads, is now VK-0VK at Wilkes Base in Antarctica. (3ARX)

A well known DX'er, Fred Lutz (DM3RM), would like a young VK lad or girl age 15 or 16 years, whose Dad is a VK, to write to his daughter. His daughter is learning English and letters from Australia would help her in these lessons. Address in the first instance, write to Fred at Altenburger Strasse 21, Schmollin (Bz Leipzig), German Democratic Republic.

Danny Weil, in his attempt to circumnavigate the world, has possibly come to a full stop. After a series of heartbreaking events, the Yasmine III, with Danny and his wife, Naomi aboard, were towed into San Diego Harbour (California).

A good (heavy) pat on the back for a couple of VK7's who sat in the middle of the 7 Mc.

z zero time—GMT.

c.w. band on phone working each other while the band was wide open to U.S.A. in the A.R.R.L. Contest.

Nauru.—A Victorian Ham who is a doctor has gone to Nauru and the boys are hopeful that he will get on the air soon. Rumour has it the home call is VK3AMK, but cannot verify as yet or ascertain the VK9 call sign. (3ARX)

Ron VK2ZRF is now on Lord Howe Island. He expects to be active on 50 Mc. very soon.

Signals from the U.S.S.R. are still coming through with good strength on 14 and 7 Mc. bands. The best times from my location in Sydney is 1100 to 1300z. Some of the rarer prefixes such as UG6, UM8, UJ8, UJ7, etc., are frequently heard.

ACTIVITIES

Laurie VK2AMB was active on two bands but found the DX scarce at the times available for operation. On 7 Mc. c.w. he worked KH6ECD on Kure Island and KC8USH. Those worked on 14 Mc. c.w. were FB8CE, UB5KED, and UB5DV. Heard: FR7ZD, FB8CQ, EPIAD, SV1AO, BV1USA, 5ASTO, MP4MAH; phone heard: ZE7JR, VK0BH, OA1X.

Frank VK2QL had a number of QSOs on 3.5 Mc. c.w. and among others worked VR2DK, JA8LN, W8HOC, W6JPP; heard: ZS6AJH, DL4DG, DL6ST, UB5BL. 7 Mc. c.w. worked: KP4CGA, G5VB, CN2BK. 14 Mc. c.w. worked: EPIAD, 8J1AD; heard: ZP5LS, MP4MAH, HS2M. Best time for 7 Mc. DX was from 0630 to 0800z.

VK2ZE had only 12 QSOs for the month and included LA3DB, VK0VK, UA0TN, VU2EA, UA0KKC, KL7CUK, all on 7 Mc. c.w.

Rick VK3ARX stayed on 14 Mc. c.w. to work the following: CT1HX, FK6AN, ETJUS/ET2, LZ2FA, SM5VK/BQ5, UW8KCA, SV0WR, VF6LN, 5ASTA, 801MT, 9UBMC. He heard and called XW8AQ, ZP5LS, ACSFN, UA2KAE, UF2KA. Rick is building a fixed 8JK beam this month to see if they are as good as the one he had 25 years ago.

Hal VK4DO says "conditions were very changeable; sometimes good and sometimes bad. QRN was troublesome all the month." However, he ran up quite a good score. 14 Mc. c.w. worked: W/K, KH6, JA, DJ3NWA, DJ4AY, DL9RK, F8FE, F8WK, FZ2, G2BB, G3NAN, G8PP, HB9MU, ITIAQ, IJZL, JZ0PO, KW6DF, LU2ACH, OKIADN, PYSKW, PY2AB, PY2VB, SP6ADZ, UAOKVA, UAOKOA, UAOKZA, UAOKKD, UA3AF, UA1KAG, UA6AF, UA6UF, UB8KAB, UB8KEP, UB8JX, YV1AD, YV5BA, Y03AM, Y07DL. 14 Mc. c.w. heard: CT1DJ, DL1EE, EA8BW, EQ5X, ET2US, G4OI, G8CJ, HC1LE, HC2CB, I1MIL, I1TTF, I1ZIE, LU2DAW, LU8FAZ, LZ1KSZ, SM7WT, SPAJF, UB5KAS, UB5KCF, UB5KSR, UF6KPA, UL7KKB, UR2KAN, VE0NN, YS1O, YV5AXA, ZB2I, 9U5VL, 5N2LKZ, 5N2RSB. 14 Mc. phone: I1A0Q (band very poor and noisy). 21 Mc. c.w. worked: W/K, DJ2AA, DJ2FW, DL1GV, DL1DX, DL1JF, DL4NAC, DL4BS, DM3ZDO, E1A, G2FFO, G3IU, G3ZY, G6VQ, I1ANN, OE3UP, OE7GF, OH1VA, OH30D, OH2PM, OH7NL, OK1KJQ, OK1RX, UA1KAS, SP8JA, U8KAD, VS1FE, 4STL8; heard: DJ4TJ, DJ6TN, G2BB, HASKFR, SM5EC, SP8SG, UA9VS, UJ8KAA. 21 Mc. phone worked: W/K, AP2MR, CR9AN, CR9AI, KR6LZ, OH2PM, UR2BU, 9M2DQ; heard: G2DX, VS8CL, VS9MB. Long path openings in the afternoon to Europe and East Asia accounted for quite a number of the above contacts.

Alan VK3CX has been to Sydney and Hobart in recent weeks and met several of the locals; hence no report of activities from his home station.

Eric BEK8-195 has again, this month, heard lots and lots of good DX. 7 Mc. c.w.: DJ2KS, DJ2RE, JA1AEA, UA3KND, UB5FP, Y07Z. 14 Mc. phone: HL9KS, VK0FZ, 9N1MM, VK8EW, VE0NN. 14 Mc. c.w.: BV1USA, BV3HPT, DU1CV, FA8RJ, FB8XC, FK8AW, FK6AL, HC1LE, KB6BC, JZ0FH, KR6MS, KW6DF, KV4AQ, KW6DG, MP4AC, VK0BH, VK0VK, IJ2Z, UJ8KAA, UP0LB, VR2DK, VF9EP, VS1DN, VS8EP, XZ2TE, YV1AD, YV2BJ, ZK1AR, LA7RF/M, LA1SH/M, 9M2CF, UQ2AE/MM, and VE0NN.

Don L2082 is spending more time listening to the various bands and is of the opinion that 15 and 10 metres will not be of much use for the next four or five years. Also the 20 metre band is not as good as it was. However, the 40 metre band is picking up and with the help of 80 will carry a big share of Amateur activity over the lean years. He has heard three new countries this month—UG6, FF4 and CP1 to take his score to 218. The following have been heard—3.5 Mc. c.w.: OK3KCA, FG7, W/K, JA. 7 Mc. c.w.: JASHD, KR6KF, JA1EUV, LZ1KBA, VE5GF, W7ALL, UA0KZZ, DU7SV, UA0KCA, HASKFR, 4X4DU, UB5KCF, UG6KAA, UL7L, UA9DQ. 14 Mc. c.w.: VE0NN, UL7KAA, BV1USA, JZ0PH, UB8KAB, ZCASS, OK1KKG, UM8KAA, ON4VS, HC3U, KV4CI, FFAAL, UJ8KAA, VS8EP, HM1AP, HS1R, XZ-

2TH. 14 Mc. phone: CP1BH, DU6TV, XW6AL, VU2HS, 4S7YL, T1ZES, KC8CJ, OA4DT, YN5ANX, 9M1MM, VP8GV, VS1FZ, and on s.s.b. HC1KE. 21 Mc. c.w.: DL1DX, ON4TJ, UB5AQ, DL6QR, ON4RN; phone: VF9PJ, KR6DO, CR9AI, GZFDQ, GW2CCU, OH5NW, VS8CL, ZS5TG. 28 Mc. phone: W8, KG6EF, KH6ARG.

QSL Situation

Ray Jones is back home and again doing the Federal QSL job. The VK3 Division of the W.I.A. has asked Eric BERS-185 to manage the Inward QSL Bureau which, for the time being, he has accepted. Thus, these Bureau chores are in very capable hands and efficient services are assured.

QSLs received during the month: BERS-185: BV3HPT, KM6BV, UC2AG, VP9QQ, VR3KD, VR3X, XE1PT, YV3ED, VK2ZE, V-83 cards which included OD8LX, HCL1JU, VS9OA (Oman), JZ0FO, KV4CI, UT5CC, 4X4JL, LA8GF/P (Spitzbergen), VQ2CZ, UT8KAD, ZB1JB, UD6BB, ZE4JS, UN1AE, IT1AQ, VK2QL: CR6CV.

I wish to thank Don Chesser, of Kentucky, for several news items taken from his DX magazine, also those in VK-land who sent in notes. 73, John.

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NOTES

NEW SOUTH WALES

HUNTER BRANCH

The first meeting for 1961 took place at the usual rendezvous when films by courtesy of 2RJ and 2VO were projected by the honorary of that profession, 2AKX. Those present were 2CS, 2ZL, 2AKX, 2QB, 2AYL, 2ZNV, 2ANA, 2RJ, 2ZK, 2XT, 2AQR, and associates Sutherland, McLachlan, Foster, Gray, Finch, Bailey, Munn, Stobbs, Mullins and Finlayson. Stuart 2AYF, alias 2ZDF, was an absentee due to mother-in-law trouble. Our old friend, Tom Davis, has had an oscillating appendix removed and is now quite well thank you.

There has been some shuffling around going on at commercial station 2KO; 2MS is now chief engineer, whilst Ken 2KG is to be chief of the new i.v. station NBN. Ken's son, I believe, is starting work under the eagle eye of Harold 2AHA. Haven't heard, but was told that Jim 2ZC is again active, but I did hear John 2XQ tell someone or other that his great uncle brought Wal 2AXH into this world—frankly John, I think you are game mentioning that fact.

Your official branch station 2AWX is now again in full swing and the operators for Feb. were 2CS, 2AYL and 2AQR. One broadcast night a "caller-backer" gave 2CS the report that he was the best signal on the band—of course the reporter, 2NA, is only a newcomer—anyway, Lionel didn't come back, he apparently had fainted.

The lifting of the foreign language imposition has made 2ZL happy as his contact quota has risen—chiefly because the boys were frightened to work one with such an accent. During the month Lew 2AWS called on 2ZL as also did 2AMA, however Clem doesn't think much of Bill's geography and no doubt will stick to a map in future. Lew did the R.I. act on Bill with horrible results. No doubt you have all heard how Bill is conquering his t.v.i. troubles—he invites as many mobblers around then walks up and down his lane so that his irate neighbours can see that it is not 2ZL causing the trouble.

Ernie 2PF is home again after quite an op. They had to take at least 34 stitches out of his throat—no he doesn't live at Kings Cross. Charlie 2ARV is in bed with a broken leg, apparently he plays bridge. Cripes, if I got one of those they would shoot me as I work and eat like a horse. Geoff 2VU is still looking for Newcastle boys on 144—on that frequency. Stan 2AYL does the monitoring on Monday nights and reports back to 2AWX their reports, chiefly from Max 2ZMO and Ian 2ZIF. No your Secretary, Gordon, and myself did not win the lottery, it was only a fever. Congrats to the working-bee of two the other Saturday at Atchison Street—of course there were others, but they were too busy buying disposals.

Next Branch meeting will be on April 14 at the University of N.S.W., Tighe Hill, and 2XT's social as usual will be the fourth Wednesday, 26th.—2AQR.

intervals. Climate and conditions in Tarawa on the Gilbert Islands seem to be ideal for Chas. and Audrey as they are prolonging their stay in that area.—3AKW.

MOORABBIN AND DISTRICT RADIO CLUB

On Sunday, March 12, members journeyed to Mt. Dandenong and were down over the transmitting stations of HSV7 and GTV9. The visit proved very enjoyable and the hospitality of Peter 3AWA of HSV7, and Mr. J. Young of GTV9 was much appreciated by members.

Our Crazy Whist nights are proving very successful, as are the Barbeques. On Friday evening, 7th April, at 8 p.m., we conduct our first 80 mx Transmitter Hunt for the year. Operating on 3527 Kc. on that evening, a c.w. signal will be heard signing "V V V VK3APC . . ." This is our automatic sender, and you will not be able to make contact, hi!

On Monday evening, 10th April, by the courtesy of Mr. Cecil Beaurepaire, we visit Olympic Tyre and Rubber Co. works. We are looking forward to a very enjoyable evening because, after viewing some movies and then being shown over the factory, we are being entertained to supper.

In all, the Club is steadily progressing, and the theory class should be terminating very shortly. Sixteen members are still enthusiastic.—3L.C.

FEDERAL QSL BUREAU

Your long-standing scribe is pleased to be back on the job once again. The overseas tour was a huge success and the rich experiences and widening of horizons will long remain in my memory, together with recollections of many fine Hams encountered on my travels.

In retrospect, two salient thoughts emerge; firstly, that nowhere is real unfettered freedom enjoyed as we know it in Australia, and secondly, that all things considered, there is more value for money in Aussie and the difference is not fractional! Furthermore, the insidious demands for gratuities practiced generally in Europe and most other places is repugnant, and constitutes a moral blight on the countries concerned.

I cannot allow this opportunity to pass without publicly thanking Eric Trebilcock, BERS-195, for his spontaneous offer to "stand in" as Federal QSL Manager during my absence. The large number of eulogistic comments from world-wide sources is sufficient testimony as to the manner he performed the duties of the position.

Eric BERS-195 liked the duties of Acting Federal QSL Manager so much that he has now taken over the position of Inward QSL Manager for the Victorian Division in succession to Noel VK3ZO.

Ted VK5JE visited Melbourne and Hobart as a member of the S.A. Postal Institute team journeying to the Annual Carnival held in Hobart in March.

Over the past 10 years, I have frequently lauded the artistic talents of Jose Gimenez, EASBA. His artistic embellishments to his QSLs make those cards extremely desirable. A recent bunch to hand leaves no doubts that his art is improving with the passing years.

Russ VK9XK expected to button up in Port Moresby around early March. Recent advises indicate however that his relief will not arrive until the end of April. Russ is doubly cheered off by the fact that he had dismantled antennae and packed all his gear, prior to receiving the deferment news.

—Ray Jones, VK3RJ, Federal QSL Manager.

QUEENSLAND

TOWNSVILLE

February being a very poor month for the Amateur bands, and it very hard to give any news. Although quite a large number hold an Amateur license in Townsville, as the Call Book shows, there does not seem to be the activity of a few years ago. Just cannot say why, even the local ragchews are not in evidence. 4GD and 4EL can be heard almost every night on 28 Mc. talking about their pet projects, in fact seem to have this band to themselves for no DX coming through. Eric, after a session with Len a few night ago, tuned to 21 Mc. and heard an opening, and promptly went on c.w. to work many Europeans; frequent monitoring of his QSOs did not show any new countries, hence I stayed on phone.

Bob 4CR is disposing of his gear and hopes to leave shortly for VK3 to become a disciple of the "one eyed brethren." Claude 4UX brought up the gang from Ayr to the last meeting of the local radio club and had he not done so, the meeting would have been a fiasco. Apparently the locals are just too tired to come along; just pay their dues and never take an active part.

The local Z boys are not so active on the 50 Mc. band because of conditions, so it is to be hoped the band soon opens, either north to Japan or south to the other VKs, and let us hear some activity.

Now that a small wet season has arrived, everyone hopes the noise level will abate and allow us to work the chaps with the weak signals below 59. Cannot remember the noise level being so fierce in the past. When are the commercials going to vacate the 14 and 21 Mc. bands? In fact they seem to be on the increase.

An article in the local press of Feb. 21 created a large interest to the readers, and in fact, I have been asked many questions why we cannot have it here. It was an "Associated Press" release, dated New York, Feb. 20, "Short Range Two-Way Radio Boom," referring to the Citizen Band in U.S.A. and the 22 channels in use on 27 Mc. The article pointed out its extensive use and that 178,000 licenses had been issued in the past two years and now getting applications of 10,000 per month. If granted here, we could not hope for these figures, but think of the tremendous boost it would give to the commercial manufacturers' business in building these sets and help them out of the doldrums at the present time.

Stan 4SA's article in Feb. "A.R." on his "Pilgrimage for Progress" in Queensland is very timely and it is noted with regret that Townsville, the largest city in the north, did not have a public meeting and liaison formed with W.I.C.E.N. committees as formed in other towns. See that Rockhampton meeting was called by the Mayor and held in the Town Hall. After reading the article, I was reminded of the popular pop tune, "Hang down your head, etc."

Don 4PW, note that Jim 4ZO has new gear and available if required to follow in your footsteps if the bad winds and floods trouble the district. 73, 4RW.

FEDERAL AWARDS

D.X.C.C.—The Mali Federation (FF8), comprising areas previously known as Senegal and Fr. Sudan, was formed as from 20/6/60 and given separate listing in "A.R.," Sept. '60. After a short period, this Federation changed to Senegal Republic and Mali Republic (formerly Fr. Sudan). Both Republics will now be given separate D.X.C.C. listing as from 20/6/60.

Kaliningrad Region (UA2), situated on the Baltic Sea between Poland and Lithuania, forms part of European R.S.F.S.R. from which it is sufficiently removed to justify separate listing as outlined in "A.R.," Oct. '60, page 26, for any post-war contacts.

Amend D.X.C.C. Countries List published in "A.R.," Jan. '61, accordingly.

50 Mc. W.A.S.—Congratulations to Geo. VK-5GG (ex-VK5ZGA) who has been issued Award No. 19 with the additions of Papua, New Zealand and Japan, and to Bill VK5ZAX, who has been issued No. 20 with the addition of Papua.

W.A.V.K.C.A.—Mainly as a result of recent activities in the Northern Territory, further Awards were issued during Jan.-Feb. as under:

- No. 148—W9LIL, Tom Taylor.
- .. 148—W1VG, "Pete" Morrow.
- .. 150—W6GMC, Milton Smith.
- .. 151—W4IMI, Ken Cole.
- .. 152—K6CQM, Bob Murphy.
- .. 153—W9GFF, Bud Frohardt.
- .. 154—W2IF, H. G. Mustermann.
- .. 155—W3LE, Louis Bremer.

—Al L. Kissick, VK3KB, Awards Manager.

VICTORIA

EASTERN ZONE

Now that everybody is getting back down to earth after the Xmas holidays, activity is on the increase throughout the Zone. Stan 3ZAB has now moved his shack outside. Cliff 3AIT has now the a.c. power on, and is busy building up power supplies. David has been very active down on 10 and 20 mx, as well as joining in the 2 mx bi-weekly nets with 3ZDF, 3ZQA, and 3ZCG—where is the rest of the net.

Peter 3ZDF and George 3ZCG both have been working the Es DX on 6 mx. George 3ZCG also runs skeys with Melbourne stations every Wednesday evening at 2000 hrs. K on 1 mx.

Don't forget your next Convention will be held in April at Yarram.—3ZCG.

WESTERN ZONE

Have been pleased to hear of two new Hams in this Zone. One who has been in Amateur Radio for some time is Murray 3AMP, and he is now residing in Warracknabeal. Murray is not on the air yet but we expect to hear his well modulated signal in the near future. The other is Neville Maddern, who has just been allotted his call sign of 3AAQ. Neville's home town is Jung (near Horsham), but at present he is employed on one of the large broadcasting stations near Bendigo.

Vic 3AEQ, of Murtos, is now on the air with his new rig, sounds very nice too. Local boys have been contacting Chas. VR1B at regular

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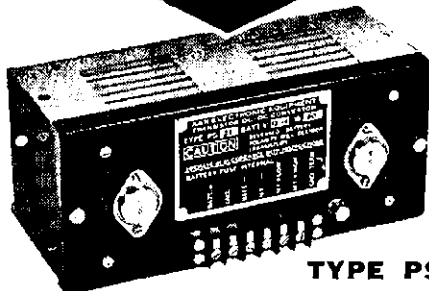
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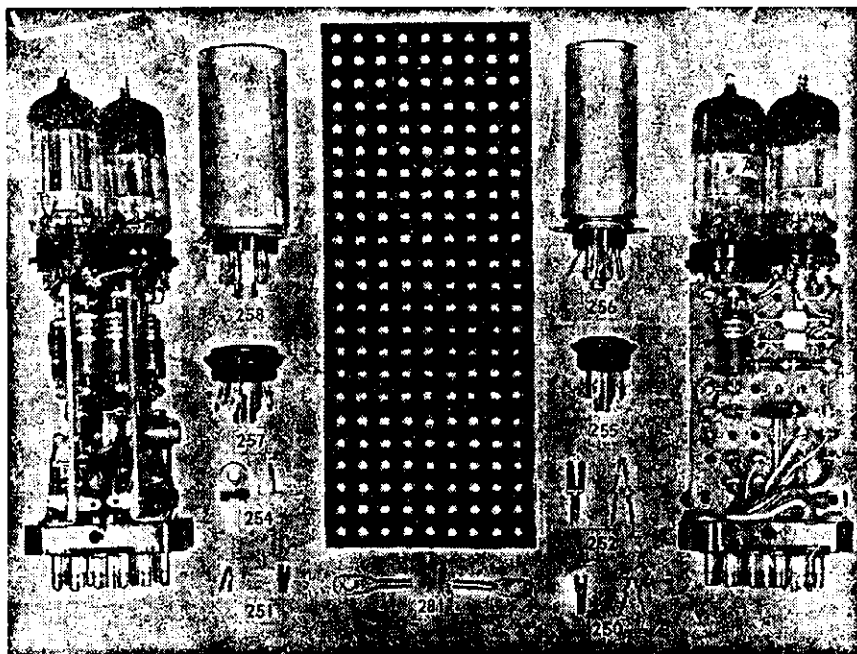
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SOUTH AUSTRALIA

The month of February saw in VK5 the holding of the Annual General Meeting, together with the usual monthly general meeting, all on the one night in the club rooms, to a very responsive and large audience of members. Now, I have said before, and I will say again, and nobody has a chance to stop me, that anybody who turns up to a general meeting and an annual general meeting all held on the one night, should have their bumps read. However, the VK5 meetings of this nature have, throughout the passing years, come to mean good entertainment, plenty of laughs, rude and coarse interjections, to say nothing of the revealing of past history of all who stand up on the floor to have their say, by their opponents. This year to add to the general enthusiasm of the membership, the Council added several new angles to the meeting, which to say the least, were a huge success.

Firstly, they fixed it so that the public address went on the blink and nobody could hear a word that was said, then they pushed the business on with a rapid-fire, changing the motions to amendments, then back to motions and back to amendments of the motions, until at the finish nobody knew what was what, or who was who. I for one was completely befuddled, and once found myself seconding a motion for Tubby 5NO, when in fact I meant to second it for Johnny 5KO. This suited everybody fine, and after my somewhat weak explanation was heard in noisy silence, pandemonium broke loose, and I was told the truth about myself in no uncertain manner from all directions.

It was announced by the Chairman, Lloyd 5OK, that owing to circumstances beyond Council's control, or perhaps it was magpies on the line, that only seven members were wanted for Council, and not nine as originally announced, and legal opinion had stated that it would be OK to carry on. This was tossed about by everyone for about a half an hour and then became a motion of the amendment which was the original motion, or something, and the voting was checked by the two scrutineers, Jim 5JK and Bruce 5OR. The result was: Brian 5CA, Doc 5MD, John 5JC, Ian 5QX (an ex-VK3), Rex 5DO, Keith 5KH, and Phil 5NN—and if I might say so, a very good Council indeed.

The Secretary and Treasurer were then asked to retire from the meeting whilst the question of honorarium was discussed. This matter took quite a time, due to everybody wanting to show their appreciation of the two hard-working gentlemen by increasing the honorarium to astronomical figures. The matter was at last satisfactorily settled, and after considerable delay the Sec. and the Treas. were finally located and forcibly dragged back, to face what they by now thought was a hostile meeting, only to be overwhelmed at the generosity of the members. Rumour has it that they were finally discovered at the shop opposite the meeting rooms, quaffing bottles of coke and sipping ice cream on the strength of the coming honorarium. Mind you, you all know what a fickle jade rumour can be!

Moving from the annual meeting to the general meeting did not take long, and a few skirmishes took place, mostly important only to those engaged in them, and then Brian 5CA stole what was to have been my thunder, and proposed the vote of thanks to the VK5 President, Lloyd 5OK, who unfortunately could not see his way to serve for his second year. The members showed their appreciation in no uncertain manner and Lloyd, his voice shaking with suppressed emotion and tenseness, thanked them from the bottom of his heart. I know, I know, but it looks good doesn't it?

A couple of more skirmishes occurred and then the meeting closed at the witching hour of 11.15 p.m., although the lights in the hall did not go out until nearly midnight. Every-

one had a rattling good time. Tubby 5NO was bobbing up and down all night like a cork, with motions and amendments galore, and apparently thoroughly enjoyed himself, and to conclude this very short description of the meetings, I can only say that everybody echoed the sentiments of one of the hysterical members who stated that it was a pity that annual general meetings only came once a year.

No visitors' book was produced and therefore I cannot tell who were visitors and who were not. However, I can assure you that two notable visitors were confusion and bedlam, and I can also assure you that had a deaf-aid salesman been present at the meeting, he would have made a fortune! Summing it up, it was good to see the number of members who got to their feet and had their say, were roundly insulted and then sat down, because after all, everybody who has paid the necessary fees is entitled to have their say and express their enthusiasm for their Division.

It would appear from my personal observations that if one cares to rise on Sunday mornings at the ungodly hour of 8 a.m., one will be rewarded with the regular contact between Rex 5DO and one of the wise men from the East. The topics that they discuss in this QSO are many and varied, in fact Rex had me in tears as he described his falling eyesight the other morning. I checked over my spare white sticks and guide dogs with the idea of being of some help to the poor old chap, when I realised that he was somewhat exaggerating and after a couple of stiff glasses of water I regained my normal composure.

Heard Lance 5XL and Wally 5DF in QSO the other Sunday morning before the W.I.A. session, and have never heard such strong signals from them before. Strangely enough some ten minutes later they had dropped off noticeably in strength and by the time the session had started they were back to their usual signal strength. Just goes to show.

Brian 5ZCX just back from Wilkes was heard from the shack of Joe 5JO recently, and was heard talking to Lance 5LD about his sojourn at Wilkes. Was amused to hear him say that when he got tired of human company he always had the huskies to talk to. I could have used a couple of huskies myself at the annual general meeting! I might mention that he had pushed his bike from Henley Beach up to Joe's to hear the W.I.A. session, so he is still as keen as ever. He is married, too, by now, and please Brian, always remember those classical words, "DX before Dishes!"

Dave 5DS, Doctor Mac to you, was heard on 7 Mc. the other Sunday morning with his usual good signal and cheery personality. This joker has the biggest following among the gentler sex who listen in from the kitchen to their better-quarter's contacts on Sunday mornings. Why? Well, they lap him up, especially when he says with that broad Scotch accent of his, "Well, OM, will cross to you for a wee small sporran!" Nobody wants to mother me, more likely want to smother me.

Tom 5TL has deserted me completely these days but as I heard Keith 5KH say that Tom is about to take his annual two years' leave, I suppose I will have to forgive him. Lionel 5LB also heard on 7 Mc. the other Sunday, although I say that with my fingers crossed. The last time that I said I had heard him on 21 Mc. I was subjected to derision and insults, so much so, that this time I checked him on the wavemeter, the oscilloscope, the t.v. set, and even rang up Somerton frequency measuring station as a further proof. So, I again say, Lionel 5LB also heard on 7 Mc. the other Sunday. Now get out of that one!

Bumped into Lance 5LD and his charming XYL the other afternoon as I was holding up a shop window that some chap asked me to do until he returned. His XYL used to be one of my keenest readers some time ago, but as she did not allude to my humble efforts in any way this time, I can only conclude that my pen has lost its cunning and my Bon Mots fall on barren ground.

This paragraph will take some believing, but going on my unblemished record for telling the truth and never, never attempting to exaggerate, I will now suitably introduce the subject to a long waiting world. Preceded by a forty-two gun salute, a fanfare by forty-one heralds, and frenzied cheers from the population of Lucindale, the unofficial mayor of that thriving country town in the S.E. of VK5 steps into the spotlight, and unfurling his banner, states in a voice that can be heard as far as Mount Gambler, "Oyez, Oyez, I, Arch 5XK do hereby state that I have no grizzles, I think the VK5 Division is tops and without doubt the W.I.A. session has no superior!" As true as true, so help me, Why? Because the appeal over the W.I.A. session for a xtal suitable for Arch to enter the Field Day Contest brought forth such a response that he is thrilled

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VK3VW	9 3	VK3GM	12 1
VK5GG	19 3	VK3ACL	14 1
VK5RY	2 2	VK3ZD	16 1
VK4HR	4 2	VK2HO	17 1
VK5LC	1 1	VK3ZE	18 1
VK6DW	3 1	VK3ZAK	20 1
VK3RR	6 1	VK3ABC	8
VK3HT	7 1	VK3WH	13

to the backbone. Think of it. Arch without a grizzle. I never thought the day would come that such an event could happen. How did you go in the contest, Arch?

Frank 5MZ, who spends most of his spare time in breaking a leg or an arm, chopping off his toes, or gashing his elbows, was caught rehanding the other day sitting in the wading pool of his grandchild, attired in trunks, fins, snorkel, goggles and water wings, demonstrating to all and sundry the finer points of skin diving. Frank, please be careful, rumour will get round that you are becoming one of Comps 5EF mob.

The Elizabeth Amateur Radio Club entered a station in the recent N.F.D. Contest in the multi-operator section and the following members pulled their weight: 5NO, 5NQ, 5BP, 5HB, 5FY, 5TM and 5ZCA. Mobbles to visit them, whilst they were in action, were: 5ZJM, 5PE, 5QX and 5AX; other visitors were 5DS and 5ZDA. Club members in Tony Strong, Peter Field and Layton Catford assisted whenever called upon. I believe they polled a good score for VK5 and the Club, beside which a jolly good time was had by all.

Ian 5QX has been recently very busy digging his garden and if the white ant rumours can be believed, he has been putting an earth mat down. Personally, I think that he has been burying some of his VK3 secrets well and truly, and so it should be now that he has qualified for VK5 naturalisation. Clive 5PE, Don 5TM and Jeff 5NQ have been busily engaged in the activities of the Elizabeth E.F.S., and I hasten to add that although 5NQ is now a fireman, there is no truth in the rumour that he will attend fires only at residences that possess at least one Morse key.

Tubby 5NO has not been heard on much of late and I can only hazard a guess to the effect that with "Fred" at home and the better three-quarters, Joyce, with the dishes, Tubby does not get much chance to get near the rig. Fred, by the way, is the nickname of 5NQ when he is at home. May I once again quote that quotable quote, "DX before Dishes," and if that is borne in mind we will all be able to rejoice and rejoice. Oh go on, it's not that bad.

Steve 5HA has been heard on the air recently which means that the available kc's at Elizabeth are getting less and less. Ben 5BP has dismantled his rig and has it packed away ready for his departure from VK. By the time that this is printed he will have left en-route to ZL, ZS and finally G land and he will be missed from the ranks of the Elizabethans. Bon voyage, Ben, which freely translated for you ignorant peasants, means in Egyptian, "Goodbye and God Bless You Ben, here's hoping that we see you again soon." What a bore it is to be educated.

Harry 5EU can often be heard on 21 Mc. and my spies tell me that he has a "thing" in his shack which looks for all the world like a Morse key. A close watch is being maintained on the position. Pete 5HB is putting on an f.b. signal from the Grove with his QRP rig. He has moved into the recent QTH of Ken 5BS. They must reserve it for the c.w. men! Keith 5EJ is heard on the air every other week-end, which means to my keen anylit-anilyt-anilytic-well it means to my mind that he only gets away from Woomera every other fortnight. I didn't spend a year in M12468 for nothing. Another well known old Amateur, and I use the word "old" only in Amateur years, looks like coming back to clutter up the bands—none other than Ray 5FF. Shades of 5WC. Don 5TM is mainly on 50 Mc. these days, which means of course that he is out of my clutches as regards these notes. I only write about the d.c. boys! D.c., wouldn't it?

Don 5FY, the enthusiastic and capable Secretary of the E.A.R.C., is still running his 50 watts (so he says) of c.w., and my local spy (who although right on the ball must remain nameless) tells me that he has switched his allegiance from dipoles to 66 foot Zepps. Oh the record, did you notice the smoke rising from his head at the meeting when the final honorarium was arrived at. The subscriptions of the E.A.R.C. look like rising sharply to take care of the germ of an idea which was obviously coming to life in his head at the said meeting!

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Cyril 5DY has been up north quite a bit lately, so his dulcet (whatever that means) tones have not been audible to his myriads of listeners. Pardon me going all lyrical, eating onions always affects me that way. Peter Field, L5099, can be seen and heard on the air from most of the shacks at Elizabeth at various times and Layton Catford (ever heard that name, Catford? He is the nephew of that Bod who asked for a spoon to stir his tea at the Xmas Get-together, also a son of that disturber of the ether at Clare, 5XL) is studying hard for his ticket. Don 5KD is reported as likely to be moving Interstate soon. No mention of which State, and all I can say is I hope that it will not be VK3, I have been told that a VK5 walks in fear of his life in VK3. True as true.

By the way, if you are interested in securing the Elizabethan Award, the following list of call signs might help: VK5s DY, EJ, EU, EV, FY, HA, HB, HU, HV, KD, NO, NQ, PE, PF, QX, TM, ZAK, ZCA and ZJM. 500 pounds reward will be paid for the capture of these desperadoes, breathing or unconscious, sorry, sorry, wrong page. These 19 gentlemen are made up of 10 phone types, six perfect gentleman, one Donald Duck, and two miscellaneous, seldom heard.

At this time of the year it is my sad duty to pay to the appropriate authorities the sum of one pound for the purpose of retaining my call sign and the benefits thereto. Now if I wish to renew my wireless license, my t.v. license, pay my telephone bill, buy stamps, postal notes or any of those chores associated with the P.M.G.'s Department, I simply call into any post office, big or little, and pay up and smile, a sickly smile mind you, but at least the whole sad business is simple. But, can I pay my Amateur license so easy? No, and a thousand times no. I must go into the city to the G.P.O., I must go to a special section, at last I can pay up. Now why? I suppose there is a perfectly good reason for this, but again why? I hope this meets the eye of my old palsy-wally Maxwell 5ZS, and possibly he will make it agenda item 10000000002. I know he will fight for me because he will remember how I fought for him, or against him, when he wanted that filing cabinet for F.E., many years ago. All right, let's drop the subject, but seriously, why can't we renew our licenses like the others associated with radio and t.v. After all, a lot of us find it difficult to make the city during the week days.

My spies tell me that Ted 5JE, Doug 5KK and Tom 5TL have been sighted in VK7. Putting two and two together and making it six, I presume that they are in the party of P.M.G. sportsmen from VK5 who are out to do battle with their counterparts in that fair Isle. One thing is certain, with Ted moving around in that area the whole of VK7 will be parked on 7 Mc. in the future! Les 5AX heard on the W.I.A. call-back throwing out his chest on the strength of a 5 x 8 report from Keith 5WI. The signal from Les was well above normal, too, and there is no doubt that the Gawler boys know all the tricks about good signals.

Talking about tricks from Gawler, Comps 5EF also heard on the W.I.A. call-back. I rushed out to my special s.w.b. room, turned this, turned that, pulled this and pulled that, but nary a bit of intelligence could I get. You can imagine how I felt later when I heard that he was on a.m. and not s.s.b. The depths to which he will sink just to trick me! Fred 5MA was another surprise heard calling 5WI the other Sunday morning. First time that I have ever heard him on 7 Mc., nice signal Fred, some more please.

The notes next month will be written by someone unknown to me at the moment, and purely as a means of protection for my hitherto unsullied name, I would suggest that absolutely no notice be taken of anything that is written concerning me. What do I care anyway, I will be on holidays. (Only once a year does fortune smile on us.—Ed.)

TASMANIA

February and early March has been remarkable for the amount of mobile and portable work. The National Field Day Contest was well patronised, both from portable and fixed stations. I heard the following portable stations taking part: VKs 7CH, 7LJ, 7JO, 7JB, 7TT and 7YY. We have also had mobile marine stations active at times other than the contest period, when Snowy 7CH and Ken 7KA both put out good signals while afloat. It is good to hear Bob 7OM back on the bands again, now that he has replaced his burnt-out modulation transformer by a power transformer, which works really well. Terry 7CT is also back on the air, after establishing himself in his new QTH in Bellerive, and he is putting out a very strong signal, especially on 80 mx.

At the Divisional March meeting, we were fortunate to have another address from Mr. Dowden, of the Ionospheric Prediction Service station here in Hobart, who lectured us on noise on low radio frequencies, illustrating the techniques very lucidly on the blackboard.

About the end of Feb. we had several visiting Amateurs within our Division, 5ZCN, 5JE and 5KK. We hope you each enjoyed your stay with us, chaps.

The March Council meeting will be the last such meeting to be attended by Joe 7BJ, at least for the present, as Joe has decided to refuse nomination as a candidate for the next Council. We on Council will miss you, Joe. You are the undoubted expert on our Constitution, and your long association with the management side of our Institute has left you with a great knowledge of its affairs and such knowledge will be sorely missed in the immediate future, as will your penetrating approach to present issues. We hope you will stand again in the not too distant future, Joe.

The remaining item is to some extent a personal one. I am privileged to be your Federal Councillor for the ensuing year. I hope you will be satisfied at the end of the year that your selection was the right one. I shall have to lean upon Ted 7EJ for a while to learn the ropes of this office. I would also like to pay a tribute to Ted for undertaking the office of Federal Councillor for the past two years, despite the demands of business, which undoubtedly made attendance at the Convention last year considerably irksome, to say the least. It is sacrifice such as that which makes our Institute what it is.

Ken 7KA has a fresh interest, he is undertaking the construction of a Tamar class dinghy, best of luck with it Ken. Ken is also doing his own cooking during the middle of March while his XYL is in Melbourne.

Charlie 7KS is building up portable gear for the h.t. hunts, now a feature of our activities. By the way, remember the mobile fox hunt on Tuesday night, 18th April; the money raised is for the new club rooms. 73, Ian 7ZZ.

HAMADS

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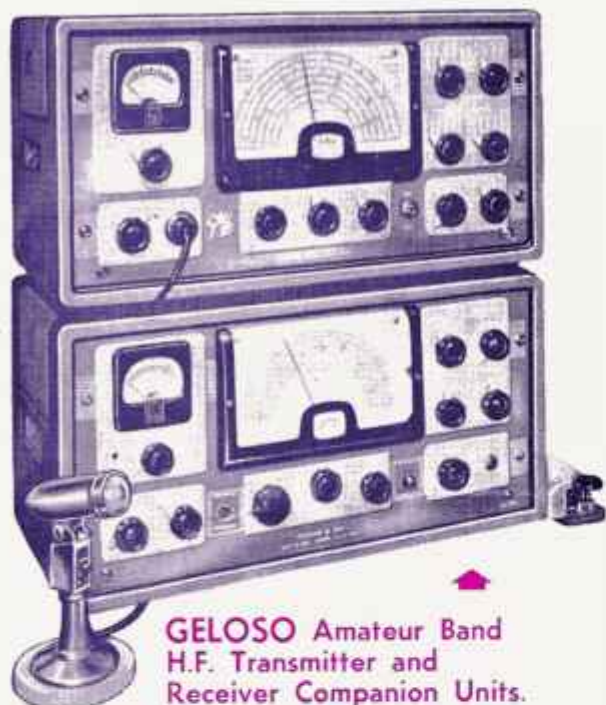
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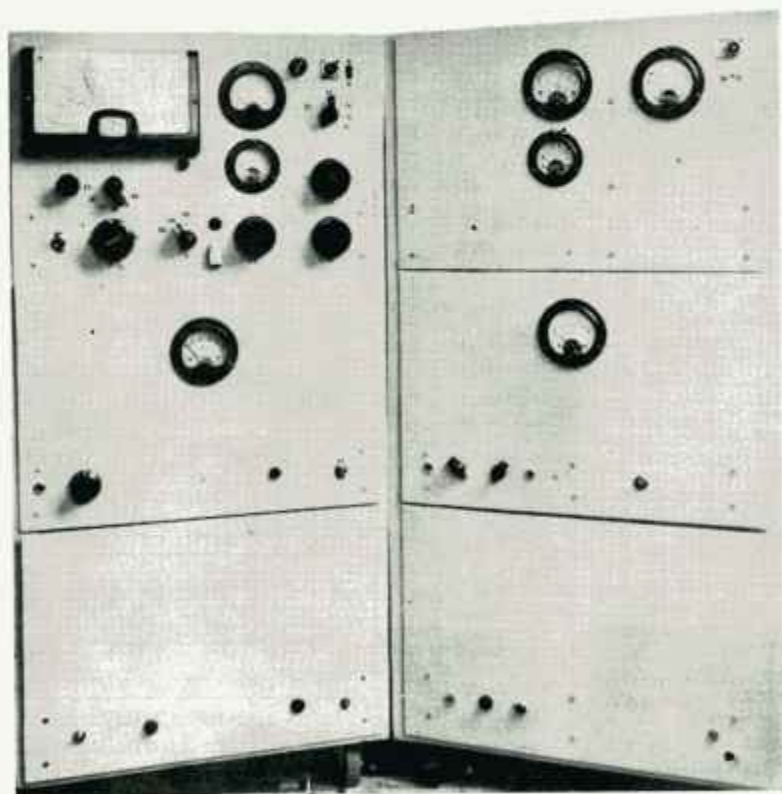
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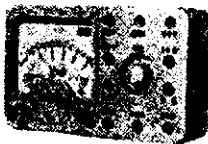
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1K4	5/- 5a £1	7F7	5/- 5a £1
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EDITORIAL

★

MEMBERSHIP REMINDER

EVERY so often, at the risk of
belabouring the point, readers
are asked "Are you a member of
the Wireless Institute of Australia?"
Because you are not does not make
it mandatory that you should be, for
it is not the Institute's policy to
unionise Amateurs in the sense "You
be a member or else."

Nevertheless, to the right thinking
Amateur, his hobby is available to
him because he is represented offici-
ally by an organisation pledged to
speak for him and generally look
after his interests. Without repre-
sentation he would be battling up
hill to protect the frequency alloca-
tions used by the Amateur Service
all over the world.

When membership grows in an
organisation like ours, then better
facilities can be made available. The
W.I.A. already provides a technical
publication; up-to-date annual call
sign book; provides for QSL card
distribution to members; arranges
lectures, picture nights, social nights,
field days, contests, A.O.C.P. classes,
slow morse transmissions; it main-
tains liaison with the licensing
authority to bring about better con-
ditions for the Amateur as the art
dictates changes; liaison on a world-
wide basis is carried on with Amat-

eur Societies through the Interna-
tional Amateur Radio Union; branch-
es and zones are organised for the
Amateur who lives in the country;
affiliated clubs are also fostered and
encouraged to become part of the
W.I.A. organisation; disposals equip-
ment is made available to members
in the States of Commonwealth
where this is possible; a library of
technical publications is available
for the use of members.

All these things are available to
members, only because the W.I.A. is
an organisation with a purpose—to
look after the interests of the Amat-
eur Service in Australia and encour-
age young people to take up radio
as a hobby in the national interest.

This purpose can only be ex-
panded and maintained by member-
ship without which no organisation
can exist. If the W.I.A. did not exist,
you might not have an Amateur
license today. Give us your support
as an Amateur, a Short Wave Listen-
er or an interested party. You will
find the membership information
freely available upon application to
the Secretary of the W.I.A. Division
in your State.

Could we suggest you obtain a
membership form and join now?

FEDERAL EXECUTIVE.

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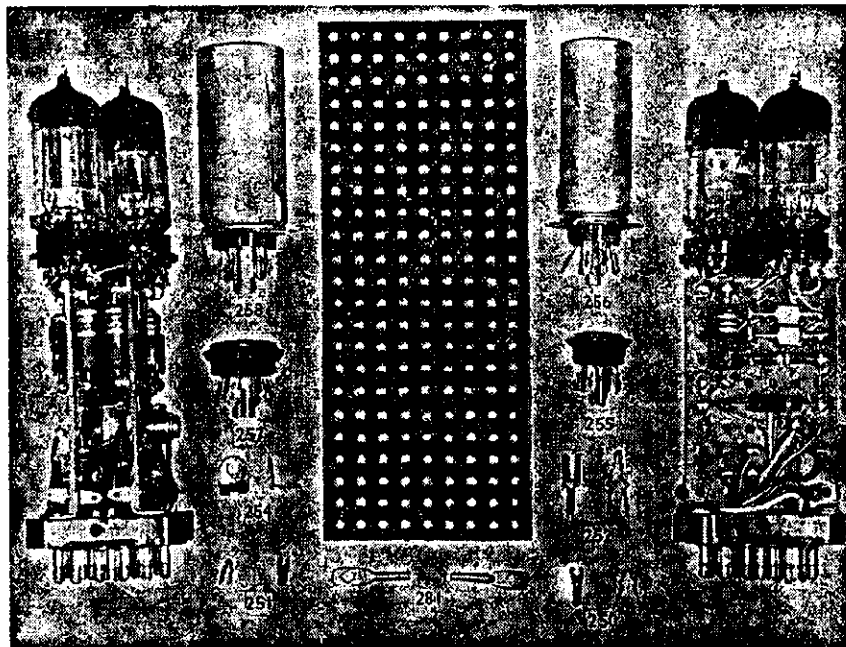
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MODULATOR DESIGN WITH OC26 TRANSISTORS

A. ROUDIE,* VK3UJ

THE application of transistors to low power modulators can result in smaller transmitter power supplies, thus reducing the cost of transmitters designed to operate from storage batteries. The additional increase in overall efficiency may also be considered a worthwhile improvement.

A transistor modulator requires only a fraction of the space taken up by a comparable valve unit and allows full use of the high voltage power supply for the r.f. section of the transmitter. Among the advantages of a modulator of this type are compactness, high overall efficiency, no warm up time, and low quiescent current when not modulating.

The design to be discussed will modulate a transmitter r.f. output stage having an input of up to 25w. at any desired impedance level, depending on the number of turns on the secondary of the modulation transformer.

The design investigated is required to modulate a p.a. stage of 25w. anode input from a 325v. rail, i.e. modulating impedance:

$$Z = E^2 \div W$$

$$= 352^2 \div 25$$

$$= 4,225 \text{ ohms.}$$

The power output required from the modulator is, of course, 12.5w. for 100 per cent. modulation. (With sine wave input.—Ed.)

The push-pull Class B "Super Alpha" configuration has been chosen for this modulator because of the savings in components and ease with which the penultimate stage operates. An added advantage is that only input and modulation transformers are necessary—no separate driver transformer is required. Some 9 db. of feedback is applied (with nominal transistors) which not only enhances the frequency response and minimises distortion, but reduces the effect of transistor characteristic spreads. Fig. 1 details the schematic of the prototype modulator.

Peak current rating of the OC26 is 3.5A. and the "knee voltage" approximately 1V. Assuming a 12V. supply rail, the load per transistor may be determined: $RL = Ec \div Ic = (12 - 1) \div 3.5 = 11 \div 3.5 = 3.15 \text{ ohms.}$

Rcc is thus $3.15 \times 4 = 12.6 \text{ ohms}$ (assuming Class B operation).

Output transformer impedance ratio is $4225 \div 12.6 = 335$. Output transformer turns ratio is $\sqrt[3]{335} = 18.3$.

For a peak collector current of 3.5A. a nominal OC26 requires an input base current of 140 mA. At a collector-emitter potential of 1V., the base-emitter potential under these conditions is some 800 mV.

The OC74 transistor can supply this peak drive power for an input of 1.4 mA. at a base-emitter potential of 330 mV. approximately. The peak input impedance looking into the OC74 is thus: $Z = E \div I = (800 + 330) \div 1.4$ which equals 800 ohms approx., i.e. an

The above article was published by Mullard-Australia Pty. Ltd. in "Mullard Outlook," Australian edition, May-June, 1960.

Extracts from this are relevant to the circuit design and operation only, and those parts to do with transformer design are omitted as it is felt that few Amateurs are interested in making their own transformers. Full acknowledgment is given to Mullard-Australia for the extracts and circuit diagram reproduced.

average input impedance would be almost twice this figure—say 1,500 ohms.

The microphone input transformer may be designed to match the 50 ohm source impedance of a carbon microphone to this value:

$$\text{Impedance ratio} = 1,500 \div 50 = 30.$$

$$\text{Turns ratio} = \sqrt[3]{30} \times 50 = 5.45.$$

Neglecting input transformer losses, the primary input requirements become:—

$$V_{\text{peak}} = 1.13 \div 5.4$$

$$I_{\text{peak}} = 1.4 \times 5.4 = 7.8 \text{ mA.}$$

With 9 db. of negative voltage feedback applied, $V_{\text{peak}} = 0.21 \times 2.82 = 0.59V$.

Assuming an input transformer efficiency of 80 per cent., $V_{in \text{ peak}} = 0.59 \times 1.2 = 0.71V$.

The input power is thus: $P_{in} = 0.71^2 \div (2 \times 50) = 5 \text{ mW.}$; $P_{out} = 15W$. Therefore power gain: $(15 \times 1,000) \div 5 = 35 \text{ db. approx.}$

Input sensitivity is $0.71 \div \sqrt[3]{2} = 0.5V$. r.m.s. (into 50 ohms), which is conveniently supplied by a carbon microphone.

The tertiary feedback turns may be determined by considering the voltage gain from input to the primary of the modulation transformer.

$$\text{Input voltage (without feedback)} = 0.71 \div 2.82 = 0.25 V_{\text{peak}}$$

$$\text{Output (primary) voltage at 15W. into 12.6 ohms} = \sqrt[3]{15} \times 12.6 = 13.8 V. \text{ r.m.s.} = 19.4 V_{\text{peak, say } 20 V_{\text{peak}}}$$

$$\text{Voltage gain (without feedback)} = 20 \div 0.25 = 80 \text{ times.}$$

$$\text{Feedback Fraction } -B = (A - M) \div A,$$

$$(80 - 28.5) \div (80 \times 28.5)$$

$$= 51.5 \div 2280$$

$$= \text{one-fortieth.}$$

The tertiary turns are thus $120 \div 40 = 3$ turns. (Primary turns 120 total.)

No allowance has been made in this calculation for the loading of the tertiary winding or for coupling losses. In practice, it was found that four turns were necessary to obtain 9 db. of feedback, but at least the approximate calculation performed above serves as a guide.

MEASURED PERFORMANCE OF THE PROTOTYPE AMPLIFIER

- Maximum power output at onset of clipping: 15.6 W.
- Power frequency response at 10 W. (150 c.p.s. to 18 kc.): ± 3 db.
- Total harmonic distortion at 1,000 c.p.s. and 10 W.: Less than 0.85%.
- Total harmonic distortion at 1,000 c.p.s. and 15 W.: Less than 1.25%.
- Total current drain at 15 W. (sine wave): 2.1 A.
- Total current drain at 15 W. (average speech peaks): 0.6 A.
- Power efficiency: 60% approx.
- Total quiescent current at 25°C.: 60 mA.
- Stability factor 25-55°C.: 6 approx.

(Continued on Page 7)

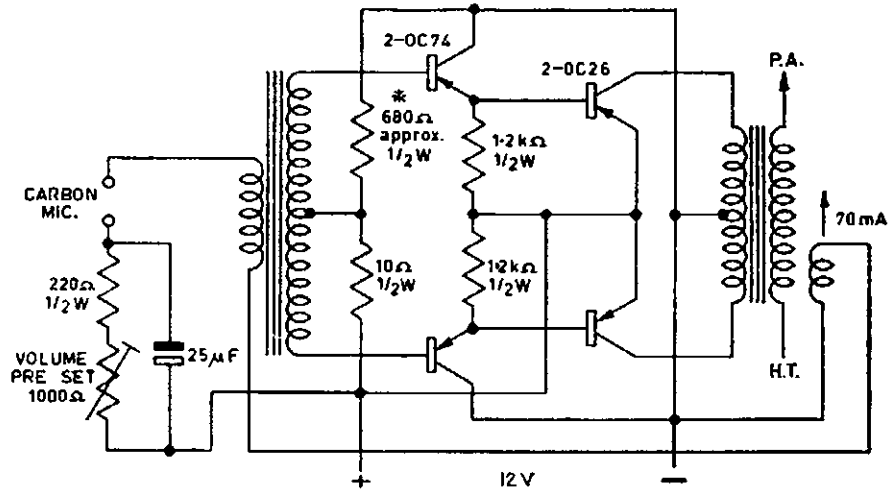


FIG. 1

* Adjust base bias for total quiescent current of 40mA not including microphone current.

* Croydon Way, Croydon, Vic.

A 72 Mc. V.F.O. FOR 144 Mc. DRIVE*

Using the Kalitron Circuit for High Stability

BY "OXO"

THE unit to be described is the outcome of a successful attempt to avoid any possibility of generating harmonics falling in Bands I. or III. of the television spectrum when transmitting on frequencies in the 144 Mc. Amateur band. Many arguments for and against v.f.o. control are heard, each of which has its points, but so far as the writer is concerned its use is confined to the convenience of shifting frequency in the event of another station operating on the chosen frequency.

In addition, by monitoring the band prior to switching on the transmitter, it can be set up on a clear channel, thus avoiding the necessity of purchasing a number of crystals in the hope of achieving the same result.

Finally, one has that sense of achievement which follows the design and construction of a v.f.o. for v.h.f. operation which is as stable as any of the lower frequency crystals used for controlling 144 Mc. transmitters and better than some of them, judging by reports from various stations on which the utmost reliance can be placed.

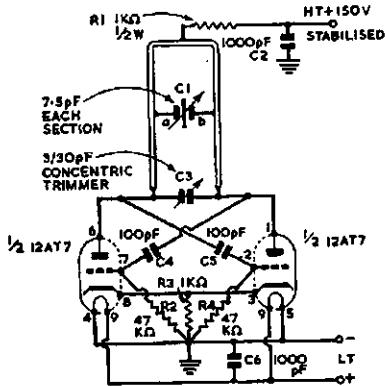


Fig. 1.—The circuit diagram of the Kalitron v.f.o.

For the purposes outlined above a maximum change of 100 Kc. either way is all that is necessary. The oscillator does, however, enable the whole of the two metre band to be covered.

In passing it should be mentioned that, prior to the construction of this v.f.o., a Clapp circuit with a fundamental frequency of 8 Mc. was in use which was in operation only when transmitting. This had one disadvantage, however, as with its attendant multipliers a harmonic reared its ugly head on 194 Mc. producing, of course, t.v. on Band III. The harmonic was suppressed to the satisfaction of the G.P.O. engineer but not to the complete satisfaction of the writer. A band III. t.v. set working in the shack with transmitting and band III. aerials ten feet apart showed slight traces of cross hatching although it was not discernible on a television set next door.

It seemed, therefore, that it would be better to start at some frequency which even at the worst would not produce a harmonic in television bands at all, and 72-73 Mc. was chosen for the following reasons:

- (a) No possibility of harmonics in band I.
- (b) No possibility of harmonics affecting i.f.s. of band I. or band III. receivers.
- (c) No possibility of a harmonic falling in band III. (Third harmonic above 216 Mc.)

The writer is indebted to G. W. Slack (G5KG) for suggesting the basic circuit of an oscillator which is reputed to have a high degree of stability. It is a twin triode push-pull circuit, very reminiscent of the multivibrator, and glories in the title Kalitron. It comprises very few components and is one of those delightful circuits which function not only in "breadboard" form, but repeats the performance when re-engineered for final use.

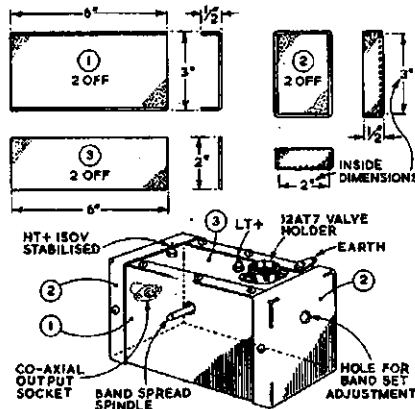


Fig. 2.—Details of the construction of the copper or brass box. The thickness of the material may lie between 16 and 22 s.w.g.

THE CIRCUIT

As will be seen from the circuit diagram (Fig. 1) the valve used in the prototype is a 12AT7. The cathodes are strapped and biased by a 1,000 ohm resistor which is not by-passed. This introduces negative feedback to assist stabilisation. The anode tank circuit comprises a hairpin loop of 10 s.w.g. silver-plated copper wire (part of an ex-Service inductance). The band-set capacitor is a Philips concentric trimmer of 3 to 30 pF. capacity and the bandspread capacitor a split-stator (also ex-Service) with two stator and two rotor plates in each section, giving an approximate capacity of 7.5 pF. per section. The condenser is connected midway along the hairpin inductance. The rotor is not earthed.

CONSTRUCTION

The assembly is mounted rigidly in a copper box, one end of which has a coaxial socket to which is connected a loop lying parallel to the cold end of the anode tank and about 1/2" away from it. Details of the box are given in Figs. 2 and 3. The constructor may have other ideas on the design of a suitable box, but the one described was composed of odd pieces of material which happened to be available.

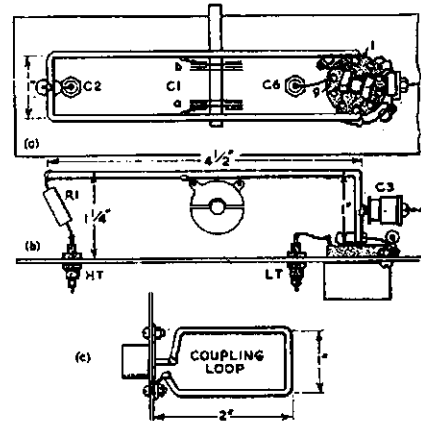


Fig. 3.—Diagram (a) shows a view of the underside of the top plate of the box, and (b) a side elevation. The coupling loop (c) is mounted approx. 1/2 inch underneath the tuned circuit.

The various parts of the box are held together by PK self-tapping screws and the valve-holder, together with the feed-through by-pass capacitors, is mounted on the top plate (Fig. 3). All earth returns are made to this plate with the exception of the output link which is mounted on one end of the box as already described. The main point to bear in mind is rigid mounting of components with connecting wires

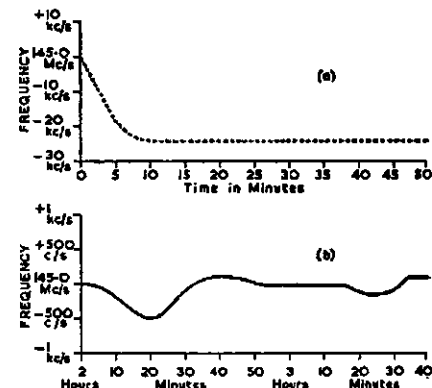


Fig. 4.—(a) Initial warm-up drift measured at 145 Mc. The ambient temperature varied between 65 and 70 degrees F. during the test. The h.t. supply was 150 volts stabilised by a VR150/30. (b) Variation in frequency after a two-hour run.

* Reprinted from R.S.G.B. "Bulletin," Sept. '58.

as short as possible between these and valve-holder contacts, etc.

The assembly of the items on the top plate is first completed, together with the bandspread capacitor. One side of the box is then fitted and the fixing screws inserted to fix the end plate of the capacitor. Then the base and re-

The maximum deviation is minus 500 cycles with no tendency to depart permanently from the set frequency, and could well have been due to slight variations in the voltage of the l.t. supply. In both instances the measurements were made on the second harmonic of the oscillator at 145 Mc.

BUFFER AMPLIFIER

The 72 Mc. oscillator is followed by a two-stage buffer amplifier. Mullard EF50s were used in the original but the constructor may use other types depending on the valves available. With 150 volts stabilised h.t. at 4 mA. on the v.f.o. and 285 volts at 20 mA. on the buffer stages, a drive of 2 mA. is available at the grid of a 5763, which is used as a doubler to 144 Mc.

The buffer amplifier follows normal practice for v.h.f. amplification and the actual circuit in use is shown in Fig. 5, together with a component layout sketch in Fig. 6. The frequency of the oscillator may be changed by at least 100 Kc. in either direction without necessitating retuning of the buffer circuits or loss of drive, but greater changes will call for readjustment of the tuned circuits of the amplifier. This slight disadvantage could, no doubt, be overcome by adding a further buffer amplifier stage and broad banding all tuned circuits but was not thought necessary for the writer's requirements.

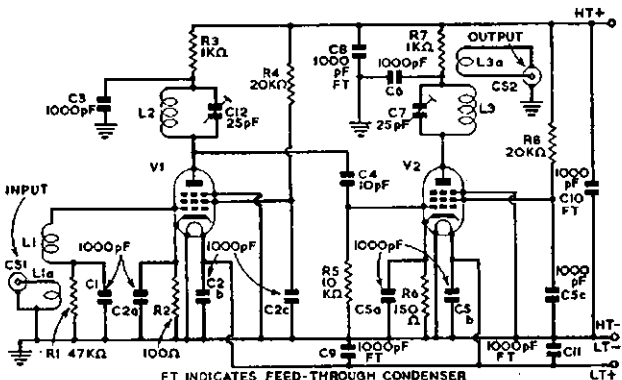


Fig. 5.—Circuit diagram of the buffer amplifier for use with the 72 Mc. Kallitron v.f.o. V1 and V2 are both EF50s. The physical layout used by the writer is shown in Fig. 6. The oscillator is connected to this unit by a short length of coaxial cable.

maintaining side and the ends are attached and the job is complete.

The connection for the h.t. negative and earthed side of the heater supply goes to a tag under one of the screws fixing the valve-holder, which should be p.t.f.e. for optimum results. A screening can is provided for the valve.

A slow motion drive will be required and it is recommended that this be coupled to the bandspread condenser by means of a flexible coupling.

FREQUENCY STABILITY

Some idea of the order of frequency stability to be expected from the oscillator is given by the graphs in Fig. 4, from which it will be seen that (graph a) the frequency remained substantially constant after rather less than ten minutes from a cold start, l.t. and h.t. having been applied together 20 seconds before observations commenced.

Graph (b), drawn to a much larger scale, shows the random variations in frequency noted during a period of one hour 45 minutes after the oscillator had been in operation for two hours.

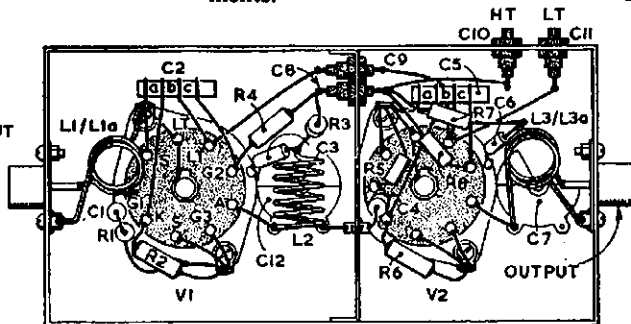
METEOR SHOWERS

For the information of those Amateurs interested in communication from meteor scatter propagation, we publish the names of the meteor showers and their times of occurrence during the year:

Quadrantids	Jan. 1-4
Cygnids	Jan. 17
Aurigids	Feb. 5-10
Boötids	March 10-12
Lyrids	April 19-23
May Aquarids	May 1-6
Herculids	May 11-24
Pegasids	May 30
Scorpiids	June 2-17
Pons-Winnecke	June 27-30
Cygnids	July 14
Capricornids	July 18-30
Persheids	July 25-Aug. 4
Aquarids	July 26-31
Persheids	Aug. 10-14
Cygnids	Aug. 10-20
Draconids	Aug. 21-31
Persheids	Sept. 7-15
Aurigids	Sept. 22
Quadrantids	Oct. 2
Giacobinids	Oct. 9
Arietids	Oct. 12-23
Orionids	Oct. 18-23
Taurids	Oct. 31-Nov. 6
Leonids	Nov. 14-18
Andromedes	Nov. 26-Dec. 4
Geminids	Dec. 10-13

The above information was taken from a lecture given to the VK3 V.h.f. Group by VK3ARV.

Fig. 6.—Layout of the INPUT buffer amplifier. The copper or brass chassis measures 6 in. by 3 in. and has a bottom cover plate.



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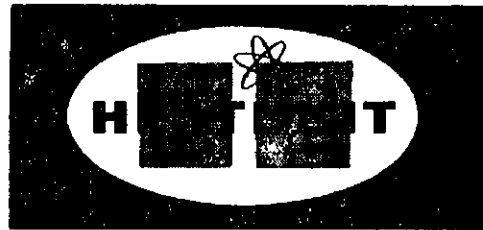
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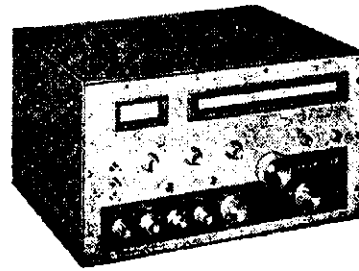


"APACHE" HAM TRANSMITTER KIT (TX-1)

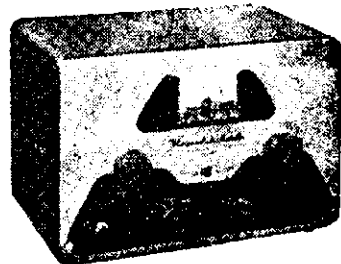
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"MOHAWK" HAM RECEIVER KIT (RX-1)



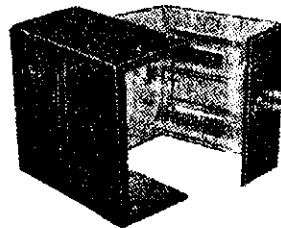
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MODULATOR DESIGN

(Continued from Page 3)

NOTES

It should be noted that the OC26 output transistors employed have a frequency cut off of 4.5 kc. The phase shift and drop in a' gives rise to a decline in transistor efficiency which causes an elevation of junction temperature. To help stabilise this run-away condition at the higher frequencies, a base leak of 12K ohms has been used with the OC26s. Nevertheless, when checking for maximum power output at frequencies above 1 kc. a current meter should be inserted in series with the supply for visual indication of run-away, and drive power only applied for a brief period.

There is not sufficient sustained high frequency power in normal speech to precipitate this form of instability and hence the performance of the modulator does not suffer as the power level in speech (even female) declines rapidly as the frequency increases above some 800 c.p.s. Similarly, the response of the carbon microphone falls rapidly above 2.5 kc. Nevertheless, as an added precaution when testing the modulator, an 0.47 μ F. condenser in parallel with the 50 ohm source impedance audio generator is recommended to synthesise the high frequency roll-off of the microphone.

After construction, the unit should be tested for proper operation by connecting a dummy load to the output of the modulation transformer and checking the variation whilst speaking into the microphone. Do not, under any circumstances, try to operate the unit without a load, as this may damage the output transistors. A modulation percentage test may be made when the modulator has been connected to the transmitter.

It is desirable to use an oscilloscope for this purpose in order to achieve the optimum setting for the pre-set volume control.

FOOTNOTE BY EDITOR

[In constructing a similar modulator it is suggested that the OC26 transistors be mounted on a heat sink of 16 gauge aluminium and at least 6" x 3" in size. The transistors require to be insulated from the heat sink using the mica washers and other mounting parts supplied.

Transformers suitable for the modulator are being manufactured by A. & R. Electronic Equipment Pty. Ltd., of Melbourne, and can be procured through their Distributors in all States.

The input transformer, Type IT631, is designed for use with a carbon microphone, the impedance of the primary being 50 ohms and secondary 1,500 ohms c.t. The core material is "Alphasil" grain oriented steel.

The modulation transformer, Type MT26, is provided with a 120 ohm c.t. primary and a secondary of 7,000 ohms, tapped at 4,000 ohms. This allows for typical operating conditions such as:—

Input to r.f. amplifier stage—

300 V., 75 mA., 22.5 W., 4,000 ohms.
320 V., 80 mA., 25.2 W., 4,000 ohms.
400 V., 57.5 mA., 23 W., 7,000 ohms.
420 V., 60 mA., 25.2 W., 7,000 ohms.

This transformer also incorporates a grain oriented core.—Editor.]

A V.F.O. FOR 9 Mc. S.S.B.

The author of this article, which appeared in Feb. '61 "A.R.," points out that the output circuit of the second 1625 tube can be much simplified, as shown in Fig. 1.

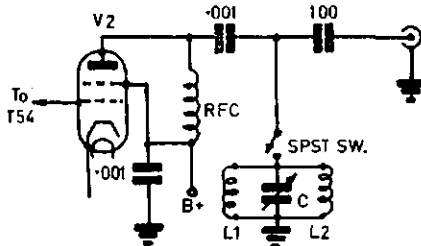


Fig. 1.

L1 tunes 16 to 20 Mc. (for 7 and 28 Mc.)
L2 tunes 12 Mc. (for 21 Mc.)

For 3.5 and 14 Mc. operation, the switch is opened and 5 Mc. output is fed straight through—giving 9 Mc. s.s.b. minus 5.5 Mc., equals 3.5 Mc.; or 9 Mc. s.s.b. plus 5.3 Mc. equals 14.3 Mc.

For the other three bands close the switch and the capacitor, C, peaks the appropriate coil.

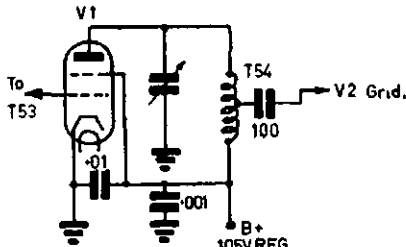


Fig. 2.

Unfortunately an error appears in the circuit shown at the bottom of page 5, Feb. '61 "A.R." The condensers C65 and C67 are grounded in the transmitter, so the circuit should be as shown in Fig. 2 herewith.

AMATEUR IN EXILE

Out in the garage, or under the short leg of the kitchen table, or gathering dust on top of the transmitter rack, have you a copy of "Call Book Magazine" published in 1936, 1937, 1938, or 1939? If so, would you like to gladden the heart of an ex-SP? W. Nestorowicz, ex-SPIEG, would just about give his right arm to see in print the old call sign. You can contact him at 46 Rabaul Road, George's Hall, via Bankstown, N.S.W.

★

COMMONWEALTH TECHNICAL TRAINING WEEK

The Amateurs of Canterbury (England) are operating an Amateur Station Week during Commonwealth Technical Training Week (May 31 to June 3, 1961) and have requested, through the R.A.A.F. Radio Apprentice School, "Frognaill," Canterbury (Victoria), for Australian Amateur Stations in the Canterbury (Melbourne) area to look out for the G station.

Commonwealth Technical Training Week is organising a technical hobbies exhibition in Canterbury (England) and the following G calls will be transmitting from the Amateur station at the exhibition site: G2QT, G3FUN, G3HTU and G3LIG.

Mr. D. J. Bradford, Secretary to the Exhibition Committee and himself a Bachelor of Science, informs us that 15 and 20 metres, between the hours of 0900 and 1100 GMT, would seem the most likely period for making contacts with VK3s.

Mr. Bradford has been advised that there is also a Canterbury in Sydney, so VK2 please take note and look out for the G calls listed above.

Apart from the desire to make contact with "Canterbury Hams," the exhibition station will be pleased to contact any VK Amateurs.

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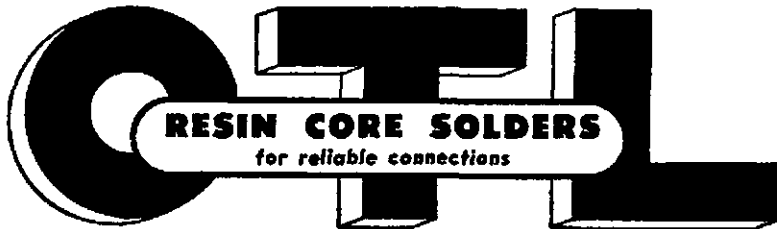
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Vol Molesworth, VK2VO

THERE'S an old gag in Amateur Radio—"The gear looks an awful mess, but it works". A rather different approach is adopted by Vol Molesworth, VK2VO. He says his equipment looks good, even if it does not work very well.

Judging by the S9 signals Vol puts out on 40 and 2 metres, this is obviously a joke; but there is no doubt his shack has a "studio" appearance.

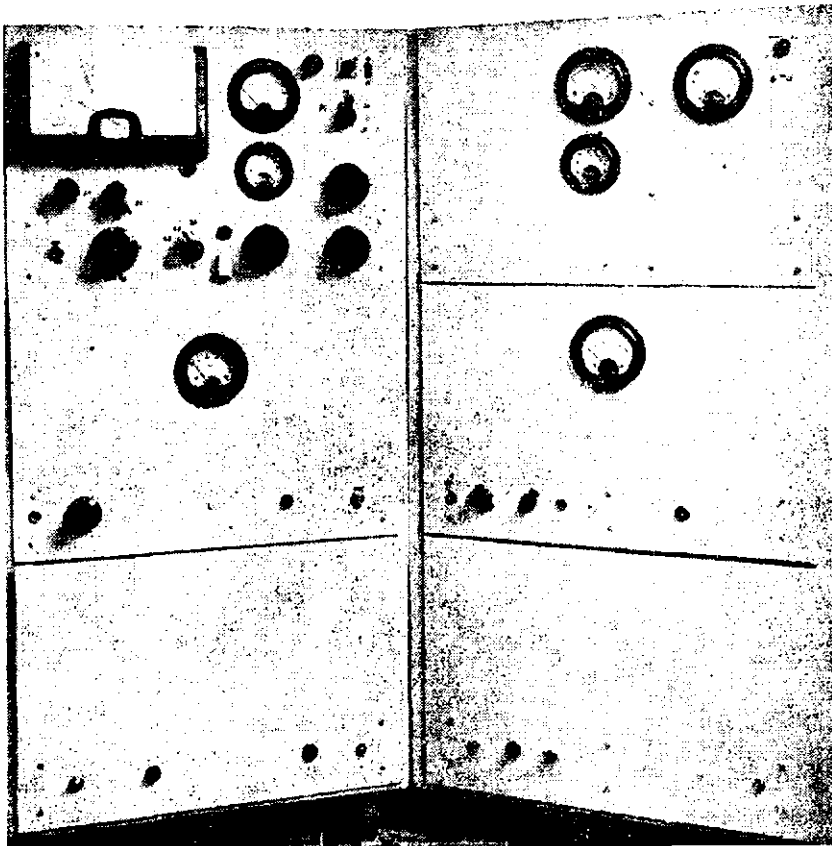
Vol lives in a three-story house in Jersey Road, Woollahra, in the eastern suburbs of Sydney. The whole of the top floor is devoted to his two main interests—study and radio.

One room is lined with books and is furnished with a couch, armchair, and desk. The other room is the "shack". It is painted out in duck-egg blue, with a canyon rose ceiling.

Along one wall runs the workbench, with pegboard backing to which tools and meters are conveniently clipped, and drawers below for storing components.

Along the other wall runs the storage and operating bench. This is masonite topped, and features doors each painted a different colour.

A photograph shows the "operating" end of this bench. Main receiver is an AMR300, on top of which sits the 2 metre converter and an 8" speaker. On the right of the receiver is a compass indicator and push buttons for remote control of the rotatable four-element 2 metre beam; on the left is a small 18½ watt 2 metre transmitter.



The two main transmitters, shown in the other photograph, are built in identical cabinets, with rubber feet for easy manoeuvrability. Each cabinet contains three compartments, the 18" x 12" front panels being sprayed grey.

On the left is the lower-bands transmitter, with a Geloso six-band exciter driving an 807 buffer, driving a pair of 807s in parallel. Pi-coupled output is used to centre-fed dipoles on 40 or 20 metres. The centre compartment houses the modulator (a pair of 807s in AB2) and the lower one the power supplies.

On the right is the high-power 2 metre transmitter, crystal-locked, running a QQE06/40 with 75 volts of fixed bias. Beneath it is a modulator running a pair of 807s in AB1, with in-built tone oscillator, and on the bottom the power supplies.

Vol entered Amateur Radio in 1959 by way of the correspondence course offered by the N.S.W. Division of the W.I.A. After three months as VK2ZDD, he took out the full call sign.

A newspaperman for 20 years, Vol is now Publications Officer for the Electricity Commission of N.S.W. He holds a Master of Arts degree (in Logic) from the University of Sydney, and is a Councillor for VK2 Division.



THE NORTH COAST AND TABLELANDS (N.S.W.) ZONE CONVENTION

URUNGA, 1961

The thirteenth Annual N.C. & T. Zone Convention was held at Urunga during Easter week-end and was attended by 37 licensed Amateurs, six associates, and 14 XYLS, whilst several Amateurs passing through Urunga spent a few hours with us.

Notable among the visitors was our Divisional President, Bill 2YB and Councillor, Harold 2AAH. Don 3ALQ from Melbourne was again present, and Claude 4UX from Ayr paid a second visit and was accompanied by 4ZDG.

The full attendance list was as follows: Rod 2ACU, Noel 2AHH, Assoc. Norm Dash, Hugo 2WH and Jean, Don 2ASW, Graham 2ARR, Bob 2IN and Daphne, George 4GG, Claude 4UX, Bill 2AEY, Tas. 2GV, Col. 2ACK and Beryl, Ern 2FP and Muriel, Assoc. Norm Moody, Les 2RJ and Sylvia, John 2ATI, Dale 4ZDG, Frank 2ACQ/P and Ethel, Bill 4WS and Hazel, Bob 2WQ, Assoc. Snow McCauley, Bob 2AFP, Major 2RU and Ruth, Bill 2XT, Ian 2AXI and Gillian, Rupert 2AUK and Loretta, Crieff 2XO and Jean, Lionel 2LS, Terry 2JS and Elsa, Brian 2ZCQ, Assoc. Fred Reid, Bill 2YB and Verna, Harold 2AAH, Jim 2PH and Edith, John 2ZBM, Ray 2SB, Mac 2ADV, Ken 2PY, Chris 2QS, Don 3ALQ, Norm Bartlett, Assoc. Dave Harding, Jack 2ADN.

The Convention commenced on the Friday night with a meeting chaired by the Zone Officer, 2AHH, who outlined the programme and then invited questions and discussions on subjects concerning the W.I.A. or Amateur Radio in general. Divisional President, Bill Lewis, answered a barrage of questions of various subjects including disposals, the Dural equipment, 14 Atcheson Street, and general policy matters, whilst Councillor Harold Burtoft gave an interesting address on transistors and outlined proposals for produced tapes and slides for use by country members.

It was very pleasing to have Bill and Harold present, for as the Convention is a W.I.A. function, it gave members an opportunity of discussing their various problems with them at first hand.

Even though the Convention is a regular W.I.A. function, and one may reasonably expect the Council to be represented, it was very pleasing to see Bill and Harold present, for besides enjoying their company, it gave members an opportunity of discussing Institute affairs at first hand with two of the seven charged with the management of our organisation. We trust they have returned to Sydney with a better knowledge of the requirements of country members, or perhaps judging by some of the remarks on Friday night, they may be more confused than ever, hi!

It is very difficult to recapitulate and put on paper the "atmosphere" of the Convention without writing a book.

Suffice it to say that everyone had a good time and will be coming next year if they are able. If you want to find out about the "doings," I suggest you talk it over with someone who attended. Ask about the demonstration of recording equipment by 2ARR—especially the "stutter" machine; ask 2SB what happened to the 3-ton truck he took up to his first floor flat in Kings Cross; ask Rod Pike where he spent Sunday night; ask Ruth Collett (XYL VK2RU) to take you for a row sometime. I could mention dozens of incidents but space just will not permit me.

The winners of the various competitions were presented with the prizes at a concert in the Urunga School of Arts Hall, after which the Progress Association provided an excellent supper. A sale of disposals equipment followed, and the evening concluded around the output end of a 9-gallon wave-guide.

Competition results were as follows:

144 Mc. Hidden Tx Hunt: 1st, Major VK2RU; 2nd, Noel VK2AHH.

Gerry Challenger 7 Mc. Hidden Tx: 1st, VK2FY, only one to arrive.

144 Mc. Hidden Tx: 1st, Les VK2RJ; 2nd, Noel VK2AHH.

Urunga Scramble: 1st, Don VK3ALQ; 2nd, Noel VK2AHH.

Longest Distance Travelled: Claude VK4UX.

Boat Race for Ladies: 1st, Mrs. VK-2PM; 2nd, Mrs. VK2RU.

Raffle: Transistors, VK2IN; Book, VK-2WH.

No Convention can possibly function without organisation and work by many people. Rod VK2ACU was the organiser and he was ably assisted by Crieff VK2XO, Brian VK2ZCQ, Fred Reid (Assoc.), and Jack VK2ADN, whilst Assoc. Norm Dash acted as Convention Registrar-Treasurer-Secretary, etc. Not to be forgotten are the efforts of Jean Retallick (XYL VK2XO) and Betty Pike (XYL VK2ACU) who did so much to entertain the ladies and among other jobs such as supper on the Saturday night. Thanks are also due to many local people and organisations for the co-operation they always readily extend to us.

The Urunga Go-Kart Club was good enough to allow us to drive their karts and what a sight it was! They tell me Bill Lewis is going to hand in his driver's license after his experience on the go-karts!

Our thanks are also due to the Ducon Condenser Co. for making samples of their products available to members.

The Urunga Convention next year will be bigger and better than ever before, so keep your eye on these pages and your ear on VK2WI for further news.

—N. A. Hanson, VK2AHH, Zone Officer.

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V.h.f. activity these days as far as I'm concerned, only takes up a small amount of time on the air, but also a reasonable amount of listening on various bands and writing of letters takes place. I have been conviving with a gent in VK4, one 4BZ, discussing various aspects of our hobby, and in particular the Ross Hull Contest. It would appear that at least the VK4s and VK3s are very much in agreement on most of the points of dissatisfaction about it. The VK4 boys have forwarded some ideas to the F.C.C. for their digestion and this, combined with efforts of 3QV, could very well provide the basis of much more widespread interest in the Contest. I hope my friend 4ZFG will print the VK4 ideas when he can find the space.

Another dragon which rears its head is c.w. There appears at least to be a revival of the use of this ancient art. It might be an idea if some of the old-timers with full calls got themselves a bit of practice before they are embarrassed by some of the ex-Z calls who still frequent the v.h.f. bands. I can now send c.w. on the mobile s.s.b. rig on 6 mx, so if anyone wants some practice just let me know.

One of the sections of the Amateur Code is "An Amateur is progressive. Surely if this is so, we are expected to keep abreast of, if not ahead of, the present state of the art and not use decadent techniques. An example of this is a recent contact between 3CS and 3ALZ on 288 Mc. The distance is about 8 miles across town. The rx at 3ALZ was a crystal locked converter of modern design fed from a 16 ft. long yagi. The tx at 3CS was a slightly modified 522 with the final 832A tripler delivering about 2 watts to a ground-plane in the shack. The signal at 3ALZ was S9, which should serve to illustrate the effectiveness of stable equipment compared with the mod. osc. super-regen. combination. By the way, if anyone wishes to modify a 522 for 288 Mc., a letter to either 3CS or myself will produce the necessary dope to occupy you for a half evening job.

Getting back to the 522, it is interesting to note the specifications of the 522 rx in the article by 2ACV. In particular, I would like to compare its performance with a good converter using say a 6BQ7 or 8CW7. The 522 has a sensitivity of 3 to 6 μ V for a 10 db. S/N ratio. A converter for a similar S/N ratio has a sensitivity of 0.05 to 0.1 μ V. From this you can see that an S9 sig on the good converter would only be about S3 on a 522 rx, so you can see its limitations for weak signal work.

To find out what the other fellow has achieved, we would like to start a distance and DX worked column. For 6 mx we would like to know what number of countries you have worked, for 2 mx and above we would like the best distance you have worked and also the number of States. I will put them in when I get enough.

VICTORIA

The March meeting of the V.h.f. Group was held on 15th. It got away to a flying start with an excellent illustrated lecture by Kel 3ZFG on his DX-pedition to Alice Springs. It was unfortunate that the conditions at the time were so poor, but Kel hopes to repeat the venture next year and provide VK8 for some more of the boys on 6 mx.

The meeting then elected new office-bearers for 1961. They were Len 3ZGP, President; John 3ZCO, Secretary; and Kel, 3ZFG, Vice-President. A special vote of thanks was passed to Bob 3OJ, Herb 3JO and Bob 3ZAN for their good work in the past and everyone showed their appreciation of jobs well done. Further elections were held over to the next meeting. Future activities of the Group are under review, so your interest would be appreciated and your attendance at the meetings could help formulate a policy that may affect you. All meetings are held at the rooms, 478 Victoria Pde., East Melbourne, on the third Wednesday of the month.

50 Mc.—DX was totally lacking during March. Even local activity has been at a low ebb. A great deal of discussion has taken place over the t.v. allocations, but it appears that we

have 50 and 144 back in our grip again due to a reshuffle of t.v. frequencies. The Easter week-end produced some out-of-band signals and at least 3AZY worked some weak JAs.

144 Mc.—A project aimed eventually at contacting VK6 has been conceived by Peter 3ZDO and moves toward better converters, more power, as well as the use of c.w., and larger antennae have already started. 5AW is still making appearances, but a high noise level at his QTH stops him from hearing all he would like to.

288 Mc.—Activity on this band is relatively quiet, the prime movers are still pushing signals in various directions to those interested. 3CI in Nagamble and others in that area are building crystal controlled equipment and a crystal converter of 3ALZ has had the cobwebs removed prior to being sent to 3CI. 3AHL is constructing a sideband rig for 288 and apparently has a small amount of energy on that band. A small amount of animosity appears to exist between the mod. osc. boys and the crystal controlled boys.

576 Mc.—Tests took place on Easter Sunday between 3QO and 3AUX/P at Ceres Lookout, Geelong. Due to some unidentified wog inhabiting 3QO's tx, the test was terminated. 3ALZ is building a crystal controlled converter for this band but no further news in that direction.—3ZGP.

QUEENSLAND

Contrary to popular opinion, this is not a DX paradise, not at present anyway. The JAs have been few and far between, the signals are not very good and only a few so far have been workable on phone. However, c.w. is the preferred mode of operation under these conditions and the only way of getting a solid QSO with a JA. Easter Friday I worked five, three of which were on c.w., around 2-2.30. JA7, 8 and JA1-3 also audible. Russian t.v. signal about S8, HLKA fairly weak. Easter Saturday weak JA1, JA3, worked one on c.w. Sunday about the same. Monday night, however, the Pacific Island stations below the band were really thumping in, but nothing on the Ham band. They have been in pretty frequently at night from about 1830 to 1900 hrs., but so far no KH6. Maybe it's too late for them as it's midnight there.

However, with the lack of DX on the band there has come a little lethargy and it's nearly getting to the stage where you have to arrange a sked to get a contact. Have a few new calls on the band, 4ZEL and 4ZEX, while 4ZAX has returned from VK5 and should be on the air soon. 4ZCN has returned from extended holidays in VK2 and is now active on 6 and 2 mx. 4ZCH at Ipswich is pretty active on 6, working into Brisbane on most nights when there is activity. 4PU and 4ZBS of the near north coast are occasionally audible at good strength when coastal tropospheric conditions are better than usual.

4ZCX on the south coast comes on at times when work and conditions permit. 4ZBZ working on 2 mx gear, but is having trouble with a long yagi. 4ZAP hopes to be back on 6 soon from a new QTH, also talking of mobiles. 4ZDJ heard frequently from high spots mobile with female voice in the background. 4ZAS active on both 6 and 2. 4ZNS now has four element beam up and is very active. 4ZAA returned after temporary absence. 4ZBT motor bike mobile.

It looks like we'll have to scare up some DX somehow, we can't let the local t.v. viewers get complacent about their t.v. due to inactivity.

Very good news on the band allocations; maybe F.E. are not so bad after all and I will get down on my hands and knees and apologise forthwith. It has taken a long time, but I do believe it is only because of the amount of work the v.h.f. boys have put into it themselves, very much to the good—viva la 50 Mc. and 144 Mc.—4BZ.

SOUTH AUSTRALIA

50 Mc.—No DX has been worked on 50 Mc. this month; however, conditions may be changing as Graham 5ZAP heard a JA7 on Good Friday at Angaston. He gave a call on his mobile tx, but no contact resulted.

On the 12th, a Scramble was held and Garry 5ZFM distinguished himself by winning all three. A second series of Scrambles was held on 2nd April when Garry, as previous winner, officiated as M.C. Results were 5BQ first in the first event, Eric 5KZQ first in the second event, and Doug 5DD first in the third event. Amongst the competitors was Al 5ZCR stationary-mobile.

The monthly Fox Hunt was held on 19th with Col 5RO 2 mx fox and your scribe 5BQ 6 mx fox. Four events were held under excellent weather conditions and the last two fox locations were made difficult, but everyone managed to locate it. Winners of the var-

ious events were Garry 5ZFM, Keith 5MT, Graham 5ZAP and Mick 5ZDR.

Local activity is fairly constant at the moment. Neil 5WVX (ex-5ZDH) since receiving his two-letter call has migrated to 20 mx to do battle with the DX on that band. No doubt he will soon come under the notice of our celebrated Divisional scribe.

Eric 5ZDQ has been heard testing his new mobile on the bench and should be working in his car by the time these notes are read. Garry 5ZFM has been active on 6 and 2 mx mobile, and has a fine signal.

A picnic for the V.h.f. Group was held on the 19th and several mobiles, including Stuart 5ZDG from Whyalla, drove to Sellicks Beach for the occasion. Unfortunately the Mobile Scramble was not heard, but there was much activity, in spite of the fact the weather was rather poor.

144 Mc.—Two mx DX has been good at times and as Garry 5ZFM has been in close touch with developments, some notes extracted from his log should be of interest. On March 8, Garry worked 3NN, 5AW and 5ZCR (at Mt. Gambler), and was heard by Ron 5ZER at Mt. Buninyong, Victoria. From Mt. Lofty he worked Herb 3NN on the 12th. Later in the evening your scribe journeyed up to Lofty, but only heard David 5AW and could not make contact with him. Keith 5MT has worked into VK3 regularly also, and from his home location. He also worked 3NN on the 12th.

No contact has been made with Hughie 5BC since March 15, also skeds have been made since the middle of Feb. On the 19th, 5ZFM, 5ZFG and 5BQ made a trip to Mt. Barker and worked 3NN. Attempts failed to work 5AW and 5ZCR although they were heard.

Mt. Barker summit was the scene of a v.h.f. expedition and barbecue on Easter Sunday. Two mx skeds were made with 5AW on 40 mx but contact with him was not possible. However, 3NN and 3ZEA were worked by 5ZFM and Garry was heard at Serviceton and Mt. Buninyong by 3ZER. Amongst those present enjoying the sausages and chops were Ron 5MK, Doug 5KK, Brian 5TN, Bob 5ZFG, Al 5ZCR, Garry 5ZFM and your scribe and KYL.

Nell 5ZAW has recently installed a new 10 element for 2 mx as also has Col 5RO. John 5ZCJ has been active on 2 and has worked 5BC, so as the activity is now on the increase, all we want are the openings.—5BQ.

WESTERN AUSTRALIA

[The following, although not official Western Australian Division W.I.A., notes, is published for the information of readers.—Editor.]

The V.h.f. Group held its meeting on 27th March and there was a very good attendance. The lecture for the night was given by Cedric 6ZBC, entitled "Resurrecting the Wrecks." Cedric gave some simple means of fixing up all those meters which have taken some hard treatment. To alter a centre reading meter you simply unsolder the hairspring, shorten it a little and resolder.

The fox hunt on 144 Mc. was held on Mar. 18, the foxes being 6BO and 6RY. A number of cars took part and they explored several spots before arriving at the right one. Apparently some very good reflections were taking place. The tx was a modified 522, running 15w.

Roy ex-6ZB eventually received confirmation that he passed the c.w. and is now 6RY. It appears that several of the Z boys will be contesting the c.w. at the next exam and some m.c.w. has been heard on 50 megs. between 6RY and 6ZBG. Many reports of appreciation have been received and anyone wanting some practice has only to ask. Gordon ex-3ZBJ has now been given the call sign 6ZDA and reports that he will be operating soon as his gear has arrived from the east.

50 Mc.—It would appear that the band is going to give us some DX, as during the month the Russian t.v. station has made an appearance and also HLKA has appeared up to S8 during the Easter week-end. One JA was heard, but no contacts made.

144 Mc.—The 6BO to 6WG skeds have been going on with regularity and varying results. Other activity has been much better with several stations building and testing gear.

288 Mc.—Quite a lot of activity has been going on on this band with 6HK, 6ZDS, 6ZAA, 6WJ, 6BO, 6ZAS and not forgetting 6ZCB being the most active with c.c. converters and tx's being used.

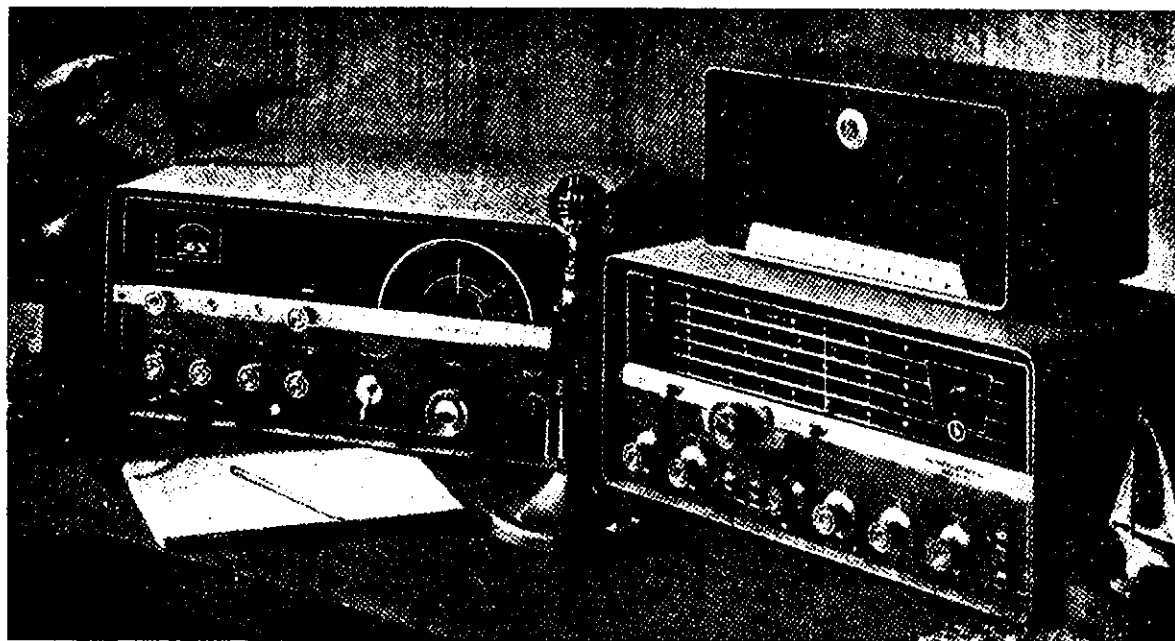
576 Mc.—Rod 6ZDS and Wally 6ZAA have been fiddling with this frequency and have had contacts over a few miles using phone each way.

Another item of interest was a trip to Cape Naturaliste during the Easter week-end by Kevin 6ZCB and Stan 6ZAS. They carried out checks on 50, 144 and 288 Mc. over the distance of approx. 140 miles. The 50 Mc. signals were at most times quite readable, how-

(Continued on Page 15)

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DX

John C. Pinnell, VK2ZR
15 Summit Avenue,
Earlwood, N.S.W.
Phone: UW 4248.

I find it necessary for me to give up intensive DX-ing after being very active for over six years. The information in these notes has been collected from those who have so willingly helped me for well over two years. To them I wish to say "thank you."

As things are at present and beyond my control, it will be impossible for me to be on the air much during the next 12 months. Also, I will be away from home from time to time which will make it impossible for me to continue writing these notes for this page.

I will write the notes for next month (June) and would appreciate any news you may have for that issue.

NEWS AND NOTES

Franz Josef Land is expected to be on the air at any time now, using the call UA1KED. Tuva in Zone 23 has the following active c.w. stations: UAOKYA, UA0YC, UA0YD, UA0YF. The recent Tannu Tuva s.s.b. DX-pedition from Moscow made nearly 1200 contacts and so made it possible for several to complete their W.A.Z. with this mode of transmission.

If you worked AP2F located in Peshawar, Pakistan, between April 22, 1948, and April 10, 1949 or the same operator when in China and Korea within the same time period, confirmation may now be obtained from VE3BWV (214 Delaware Ave., Toronto 4, Ontario, Canada).

At the present time there is no Ham activity in the Chagos Islands, but VQ8BC is planning to be there in about four months time. HC1JU in Ecuador is anxious to make 80 mx c.w. contacts. He operates near the low edge of the band and can often be found around 0600 GMT. He is an old-timer and has not used this band since 1922.

FF8AU is on s.s.b. with a pair of 811s in the final. He operates on 14300 kc. His call sign may possibly be changed to 6V8AU in the near future. Two other Senegal stations, FF8CK and FF8CQ, are building s.s.b. rigs.

CF8EA is active on s.s.b. on or near 14310 and 14345 kc. W1BAN is his QSL manager (Box 64, Woodstock, Mass.). It is almost impossible to get cards direct as I.R.C.'s are not acceptable in Bolivia and mail is generally unreliable.

EA8BA, Canary Islands, is now active every day except Sundays from 1200 to 1300z on about 14320 kc. s.s.b.
9USMC, Ruanda-Urundi, is active almost every day at about 1800z and Saturdays for many hours on 14015 kc. c.w.

It is understood that Danny Well is now planning to resume his round-the-world cruise. 9N3PM is with the Hillory expedition in the Himalaya Mountains. His main concern is to keep in contact with their main base in Nepal. It is reported that he will make DX contacts whenever possible.

The planned DX-pedition to the Galapagos Islands has been postponed until either the last two weeks of May or the first two weeks of June.

Antarctic Expedition. For two or three weeks in June there will be another expedition on the ice field operating from Wilkes Base, Antarctica. Operating will be done on 7 Mc. with a v.f.o. and using the call sign VK0TC. This call will not be used for any other operation. It is requested that if anybody even hears them, a report be sent to K2QXG for QSP.

Japanese citizens of Okinawa are now being issued their own Amateur operating and station licenses with their own prefix, KR8. The first such license, KR8AB, has already been issued.

The A.R.R.L. have added Bajo Nuevo to the DXCC country list. Confirmations for contacts must be dated after Nov. 15, 1945. Danny Well operated HK0AA from this tiny island in the Caribbean.

Four new ones on s.s.b.: UA2AO, Kallingrad; ZB2AD, Gibraltar; LA1NG/P, Jan Mayen; and SV0VO, Crete.

PY1CK hopes to make a trip to Saint Peter and Paul Rocks in Sept. of this year. PY4ZS will probably go along with him.

z zero time—GMT.

ZA2BAK, his brother ZA2BOR, and ZA2KC are all active from Albania. I.R.C.'s. will bring the cards direct.

Some W/K4 Hams are planning a trip to Swan Island in the beginning of July. There is a possibility of SM5ADF and SM5-3104 joining the party. The call sign will be KS4BC.

A recent new call to appear on the air is VK3AGO—the XYL licensee of which is from U.S.A., being a daughter of W3MRW. Her name is Lorrie Gardiner and she lives in an outer suburb of Melbourne with an Aussie OM and two Aussie-born children. VK3AGO uses a DX-100 tx (100w.) and a HQ150 rx connected to a two wavelengths vee antenna. Lorrie generally operates on 14 Mc. and has a sked on 14 Mc. c.w. and phone with W3MRW each week-end from 1100 GMT. She did a "W.I.A." course for her ticket during 1960.

ACTIVITIES

Col VK2AQU found conditions to be very poor, with the bands changing rapidly from fair to no good at all. Over the past few weeks best results have been obtained by pointing the quad south-east and operating mostly between 0700 and 0900z. W land has been conspicuous by its absence. Operating from the Blue Mountains, on 14 Mc. c.w., he worked: DL4NAC, EA2DJ, DJ4TE, EA4EQ, G3AAM, G4CP, G3MY, G3MVA, G8OS, G2HQ, GW2DAH, GW2DUR, F9HF, I1KL, HB9ZY, HZ1AB, IU8B, HB9SI, HL9KS, KP4MO, K4ASU/VP, LU2DAW, OA4CV, OA4J, OA4GG, OE1RZ, OE1ER, ON4QX, OZ7BQ, PY2BZB, PY2QT, PA0UD, PY2BH, PY4TK, SM6SA, UA3FG, UA3FE/O, VK0WB, V56EK, XE1FE, YN1AT2, 9M2GA.

Frank VK3QL, 35 Mc. c.w. worked: Ws, VE1ZZ; heard: KL7AUG, WK7LD/KL7. 7 Mc. wkd.: OH5RH, OH7NF, G6GM, G6CJ, G2DC, G8BKF, G3LPS, G3LET, G5DQ, G6HL, VU2XG, 5N2LKG, VS1AP, UA1DZ, many UAs and JAs; hrd.: EA8CG, ZC4IP, CE4DZ, 4X4RY, YV2BJ, HK5TD, LA7Y, DLs. 14 Mc. c.w. wkd.: LA1NG/P, VP3MC, VU2NRM, UA0KYA; hrd.: 5N2GUP, FQ8HO, SV0WZ.

George VK3QU, from Lithgow, is working lots and lots of DX. He has had another good month, the numbers not so high but some good ones among them. Six new countries have been added to his list which now stands

at 111 worked and 70 confirmed. Among the 151 DX contacts for the month on 14 Mc. c.w. were: YV1AD, HC1JU, ZP6CF, PY1GJ, YV5BX, LU9WA, CO7HQ, TI2PZ, KP4AQQ, HL9KT, VS1KL, MP4ML (Oman), V51FE, 9M2FS, W50LI/PK, UT8AD, UB5CA, SM3BZW, UG2KDD, SP4MA, OK1NK, OH5NE, HA5TE, IT2THX, F8KJ, UD6GF, YO4WD, OE7GF, LZ2KBA, HA8CC, YU3ND, YU3NAU, FB8YK, SL6ZK, KZ3GW, LZ1KSZ, HS1F, YK5AK, ZC4AK, 9G1CV.

David VK3VJ is active on 28 Mc. a.m. phone with 50 watts input to an 807 driven by a Gelo. This power is fed to a new 3 element wide spaced beam about 30 ft. high. The receiver is a three-tube crystal locked front-end feeding into the main station receiver. In about one week near the end of the month the following stations were worked: all JA call districts, UA0DZL, UA0LBQ, UA3KND, W/K5, W/K6, ZK1AR, ZK1AY, 457GE, ZL2; heard: I1AFC (0820z), T12RM, UA9ND, VQ4HX (0840z), Y02NM, ZLs, W9 and W0, plus numerous U.S.S.R. stations with T1 notes and bad fm.

Ken VK3TL worked 41 countries for the month, all on 14 Mc., mostly on phone using a 40 ft. dipole. Included in the list: AF2ME, BV3HPT (c.w.), DL1EB (c.w.), EA7GF, G3NNT, HK3XL, HL9KS, I1CBC, JAs, KG6s, KH6s, KR6s, KX6DH, MP4MAH, OA4DT, SM2XJ (c.w.), UA0FR, VE1IE, VF3AML, VK9QJ/W, 0WJ, VF1JH, V56BI, VF6PV, VQ8AM/MM, VQ8BM, VR1G, VR2DQ, VR2BC, V51FZ, V55GS, VS9MB, VU2AC, VU2PS, VU2RA, VU2AK, VU2GE (c.w.), Ws, XW8AL, YV5AOS, YV5APN, ZEAJX, ZK1AR, ZLs, 457GV, 457GE, 457EC, 457YL, 4X4JY (c.w.), 9K2YA, 9M2DQ, 9M2DZ, 9M2GA (s.s.b.), 9M2GW, 9M2GV. (These notes were too late for last month.)

This month Ken VK3TL notes the large number of U.S.S.R. stations active and including a few of the "new" country UA2. The Ws are coming in very well before breakfast, and the 20 mx band is coming good in the afternoons for Europeans. Worked on 14 Mc. phone: CN8CS, EA7HZ, FK8AU, GW3EQL, LA6CF/MM, OA4KU, VE9NN/MM, VRACB, XE1AB, ZS50E, 9N1MM; worked on 14 Mc. c.w.: BV1USA, G2DPD, G3KHA, GM3NOV, DJ1FN, DJ3EN, DL3SA, DLGZB, DL9KP, DM2ADL, DU7SV, EP2AP, FB8XX, FK8AW, HLAKAQ, H1F, IT1AL, JZ0PH, KC6TM, KW6DG, OH40W, OK1VZ, ON4EC, SP8AG, UA1KAC, UA2AD, UA3KND, UA4KHC, UA4LZ, UA4PA, UA9KOA, UA9KP, UA9KKS, UB5KAF, UB5KED, UB5KIU, UD6AZU, UJ8KAA, VS1KP, VS8EQ, VS8ACs, XE1MB, XZ2TH, ZB2AD, ZK2AD, ZS2EN, ZS6ARI, 457EC, 4X4NJ, 9M2FS.

Hal VK4DO.—Conditions good at times in evenings on 14 Mc. but patchy before breakfast. 21 Mc. signals from W land came through very well towards the end of the month. Hal has been working many Europeans, especially those in the cities he visited during his trip there last year. 14 Mc. c.w. wkd.: W, K, KH6, JA, DJ1FN, DJ2JL, DJ5J, DJ4UZ, DL1MK, DL0LH, DL1DC, DL3ZM, DM2AGO, DL7HZ, FB8J, FA8RJ, G6BQ, G6ZO, G3ASG, HB9UD, I1FO, I1SVE, I1USHL, OE9VH, OK3DG, PY3ASV, SM5WK, SM7LQ, UA0KKS, UA3HO, UD6GF, UR2BU, YOSZ4; heard: BV1USA, CE0AC, DJ1VS, DL4OF, DL9BW, EA4HC, EA8KO, FA2CT, G3SJ, G6XL, FQ8HW, HC5CN, I1ADW, I1OE, KP4BQ, LU9AH, OH2FS, OK1NK, OK2QR, SP5ADZ, SP8KAE, SV0WZ, TI2PZ, UT50F, UA0, UA1, UA3KND, UA4KHC, UB5SK, UB5TL, UB5KEP, UR8KD, UJ8KAA, UO5KAA, UP2AO, VS1DN, VS1JT, YU3HY, ZK1AK, 5A2HW, 9U5V, 14 Mc. phone wkd.: W/K, KH6, VRACB, 21 Mc. c.w. wkd.: OH5TK; hrd.: DJ3EN, DJ4OP, DL1OV, HB1VZ, LA8XF, OH1OU, OK1ZL, SP8HR, SP9SG, UA4CH. Phone hrd.: VS1GQ, AP2MR.

VU2NRM (Laccadive Is.) was worked by VKs 5RX, 5NQ, 5NO, 5LZ, 5MY. (VK5RK)

George VK5RK worked on 14 Mc. c.w.: ZK1AR, CX7CO, UO5PK, 9USMC, 35KV/9Q5, LZ1KSZ, Y06KI, SM5KV/9Q5, UC2AR, YU3ND, YU3VP, HS1R, DL0QL, EP1AD, W80L/PK, ST2AR, IT1AGA, VQ5IB, HK7ZT, SV0WI. George will soon be eligible to join the Certificate Hunters' Club. He already has 23 certificates and the other two required to join the club should arrive in the near future.

Ron VK5GM is temporarily off the air but hopes to resume transmissions again soon.

Ray VK5RK has been doing a good job of supplying notes on the "doings" from VK5. On 14 Mc. he worked: UA0KJA, VU2GD, JZ0PH, KH6, VS1JW, VS1PE, UA0LC, UA0EV, W.

Sven SL3ZO is very keen to work on the I.f. bands. He has logged VK3AFQ on 80 mx and needs his card for "HAZ" and DXCC on 80 c.w. VK3AHO has often been heard on 3788-90 kc. with f.b. strength using s.s.b.; VK2AN has also been heard s.s.b. on 80 mx. VK3ADE is heard daily on 7 Mc. c.w. at 0600-0900z, 1900-2100z with signals peaking around

(Continued on Page 17)

UNCLAIMED QSL CARDS

I desire to direct the attention of VK3 members of the W.I.A. to a somewhat sad state of affairs relating to the current accumulation of Inward QSL Cards at their QSL Bureau at 478 Victoria Parade, East Melbourne. In particular, this "message" is intended for those Amateur members living within a 25 miles radius of the G.P.O. Melbourne. There are several thousands of QSL cards on hand at the Inwards Bureau for members. This knowledge "rocks" me. I just can't understand why so many ordinary human beings could reach the stage in their Ham lives where they leave so many QSL cards resting in peace miles from their proper resting place. All the more so when I realise that many of these cards are of beautiful and expensive design, and many come from the rarest DX spots on earth.

Most real DX men do not have to be reminded about collecting QSL cards. They are "eager beavers" like myself in this regard. But I have the sight before my eyes every time I sort QSL cards at the Bureau—the sight of QSL cards gathering up dust in filing cabinets at a distant QTH, instead of being cuddled by their rightful owners in Ham shacks. Why, men, do you allow this to happen? I for one would sure like to know, and the best way you can solve this problem is to let me have your stamped addressed envelope regularly, unless you intend to regularly call at the Bureau QTH, or pick the cards up at the monthly meeting of the Division. (I would be far more happier mailing away QSL cards in 1,000 envelopes than I am at present with a mere 20 or 30.)

Finally, I appeal to all members who read this comment to relieve me of the present burden I am shouldering. Collect not only your own cards but also those of your friends. By so doing, you will ease my present unhappy state of mind, and put some glow into my present droopy-looking eyes.

—Eric W. Trebilcock, BERS-195, Inwards QSL Mgr., VK3 Div. W.I.A.

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DC 2007.5	AWA3545	L 4750	FT 5535	LP 6110	LP 6525	FT 7375
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FT 2075	FT 3650	FT 4780	FT 5552.5	LP 6130	DC 6550	LP 7450
2085	FT 3840	FT 4815	DC 5590	FT 6173.33	DC 6561	FT 7611
DC 2096.25	FT 3885	FT 4840	FT 5635	FT 6175	DC 6572	DC 7660
AWA2103.1		FT 4852.5	FT 5660	LP 6187	DC 6572	DC 7700
FT 2260	FT 4025	L 4870	FT 5665	LP 6210	LP 6583	FT 7750
DC 2336.4	FT 4035	FT 4880	DC 5700	FT 6225	LP 6640	DC 7810
DC 2338	FT 4080	FT 4895	FT 5706	FT 6235	DC 6650	DC 7890
DC 2338	L 4096	FT 4930	DC 5710	LP 6235	FT 6650	LP 7890
DC 2338.05	FT 4124	FT 4950	DC 5710	DC 6240	DC 6700	DC 7920
DC 2368	FT 4240	FT 4965	FT 5725	DC 6243	LP 6700	DC 7925
AWA2442.5	FT 4255	FT 4995	FT 5740	LP 6243	DC 6750	DC 7925
DC 2595	FT 4280		FT 5744	LP 6317	DC 6783	DC 7930
DC 2665	L 4285	AWA5161.6	DC 5770	FT 6333.3	FT 6900	LP 7930
	FT 4295	DC 5170	FT 5773	DC 6350	LP 6910	DC 7997
AWA3030	FT 4360	FT 5180	FT 5775	FT 6350	LP 6910	
DC 3055	L 4396.7	FT 5205	FT 5780	LP 6350	LP 6940	LP 8060
FT 3184	FT 4397.5	DC 5210	FT 5782.5	FT 6373.33	FT 6960	DC 8126
FT 3195	FT 4397.5	FT 5245	DC 5810	FT 6375		LP 8155
DC 3266.25	FT 4445	AWA5280	FT 5815	FT 6400.000	LP 7010	DC 8161
DC 3287.5	FT 4490	DC 5285	DC 5840	FT 6406.607	LP 7060	LP 8171
DC 3313.5	DC 4495	FT 5295	FT 5850	DC 6420	DC 7062	DC 8176
L 3320	FT 4495	FT 5327.5	FT 5855	DC 6423	FT 7077	DC 8182
DC 3332.5	FT 4520	FT 5360	L 5897.5	FT 6440	DC 7120	LP 8195
FT 3340	FT 4540	FT 5365	FT 5910	DC 6450	LP 7120	FT 8270
L 3432.5	DC 4549.44	FT 5397	L 5910	DC 6450	LP 7130	DC 8284
DC 3440	FT 4550	DC 5410	FT 5920	LP 6450	DC 7200	DC 8350
AWA3450	FT 4620	FT 5410	DC 5950	LP 6470	FT 7200	FT 8353
L 3460.5	DC 4660	FT 5435		FT 6473.333	LP 7250	DC 8392
L 3467.5	FT 4672.76	FT 5437.5	DC 6032	LP 6480	DC 7270	DC 8440
DC 3488.5	FT 4676.11	FT 5480	LP 6040	FT 6506.607	LP 7270	DC 8630
	FT 4735	DC 5515				DC 8751

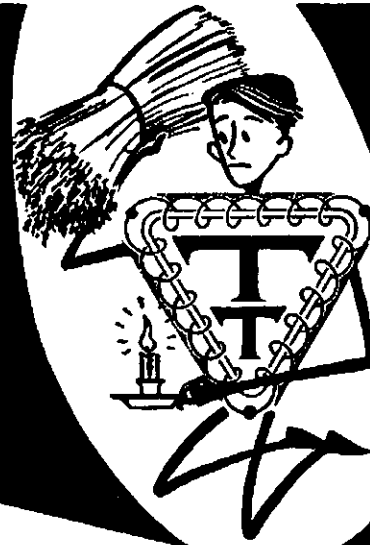
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Editor "A.R." Dear Sir,

I enjoyed the description of the AFDR1 in April "A.R.," however realizing that it is the fashion nowadays for manufacturers to let the customer test the product, I have decided to wait for "next year's model" before placing my order.

Also in April "A.R." was a statement made by a certain "portly gentleman" to the effect that the yearly fee for an Amateur Station licence could not be paid at any Post Office. If this was made in an attempt to outpuff the Publications Committee, then it was done in very poor taste.

In actual fact I have paid my fee locally several times and have been advised by the appropriate authorities that payment can be made at any money order office.

I believe that coloured trousers have been suggested for men in the latest fashion trends overseas. No doubt these will also include "rose petal pink!"

—Max Riley, VK2ARZ.

MOBILE STATIONS—BEWARE!!

Editor "A.R." Dear Sir,

I would like to draw the attention of all Radio Amateurs to a most unusual hazard upon which I have come across recently. It concerns chiefly mobile stations whose ranks are mounting daily and it was while I was operating 40 mx mobile myself recently, during my annual vacation, that this potential danger impressed itself upon me.

It concerns the use of electric blasting caps to set off explosive charges and the hazard is found most commonly along main roads and highways where road works, etc., are in operation and of course where Amateur mobile stations are very likely to be found.

In N.S.W. it is customary for road signs to be exhibited in the vicinity of road works where blasting caps are being used and these state "BLASTING SWITCH ALL RADIO TRANSMITTERS OFF." Frightened by one of these signs, I inquired of the Dept. of Main Roads of N.S.W. for more particulars. They referred me to an article published in "The Explosives Engineer," of Sept.-Oct., 1951, wherein this matter is discussed rather fully and I would like to quote some of the relevant passages in order to familiarise Amateurs with the problem and so avoid unpleasant possible consequences, both to persons and Amateur Radio in this country.

"The wires of an electric blasting cap can act as an antenna and pick up radio energy, and if the configuration of wires is just right, and the radio transmitter is close enough, the bridge wire in the cap can be heated sufficiently by the radio frequency current produced in the wires so that the cap can be exploded.

"The current needs to be of the order of 0.25 ampere or more.

"The greatest danger arises when the two wires of the cap have a total length equal to one half wavelength with the cap in the middle. A serious danger also exists if one wire is one quarter wave length and the other is grounded close to the cap.

"It has been reported that an electric blasting cap placed in the rear compartment of a police car which had a transmitter was exploded while the transmitter was operating.

"In experiments with a 100 watt Amateur Radio it was possible to shoot electric blasting caps 20 to 30 ft. below the horizontal antenna."

The article then goes on to suggest "the desirable minimum distance of separation between radio broadcasting transmitters and such blasting operations." These include:—

1. Input power between 0 and 30w.—100 ft.
2. Input power between 30 and 100w.—200 ft.

It is suggested also that "for closer distances the transmitter should be kept strictly turned off and preferably locked."

On reflecting these statements, one realises that a 33 ft. lead to one of these electric blasting caps is quite feasible and indeed probable, and it happens to form a resonant half wave on 40 mx, our commonest mobile band, with the cap situated at a current peak in the

centre. This condition holds too with lead lengths of odd multiples of 33 ft. which are even more likely to occur. The current necessary to set the cap off is also very little and, by way of comparison, it is similar in magnitude to the current in a small torch globe.

So with these thoughts in mind, I suggest that Amateurs watch for any blasting signs should they be using their transmitters and that they at least put their carrier smartly until well past the potential danger zone.

—Clem Maloof, VK2AMA.

ROSS HULL MEMORIAL V.H.F. CONTEST

Editor "A.R." Dear Sir,

We were interested to read the comments by David Rankin, VK3QV, regarding a proposed amendment to the Ross Hull Memorial Contest.

We are in agreement with the general principles involved in the revised system of scoring, basing the points per contact on a distance basis, rather than on Interstate and Intrastate contacts. An example of the inadequacy of the latter system is the following example from the 1960-61 Contest, Section C, 144 Mc. A contact from the South East of VK5 to VK7, a distance of approximately 450 miles, would earn the contestant 2 points. A contact by the same station, to a VK3 station located close to the VK3-VK5 border, say a distance of only 30 miles, would also gain the contestant 2 pts. A system of scoring based on the above, does not provide much incentive for an operator to spend a lot of time during a Contest attempting to work a weak DX signal, when there is a number of strong stations closer in, but worth the same number of scoring points per contact.

We therefore urge the adoption of the new scoring system, but with the following modification, viz., that scoring points be allowed for local contacts. There are two reasons for this:—

1. To encourage a maximum amount of activity on all v.h.f. bands, e.g. a reference to the proposed scoring table for 144 Mc. shows that no points are allowed for contacts of less than 50 miles. This may discourage stations with simpler equipment from participating in the Contest. Don't forget that the fellow with simple equipment this year, may graduate to higher power, a larger antenna, higher frequencies, and a general progression in v.h.f. knowledge next year, provided his interest in v.h.f. is fostered by remembering his requirements during contests, etc. Not everyone participates in a contest with the object of winning it.

2. After some calculations on particulars supplied by various entrants in the last Ross Hull, it is felt that a metropolitan and a country station with similar equipment would have a more equal chance of winning the contest, if local contacts counted for scoring points. VK5AW will be happy to discuss this point with anyone interested, either on 7 or 144 Mc.

In view of these comments, a suggested modification to the scoring table follows:—

Distance Between Stations	Points per Contact				
	50 Mc.	144 Mc.	288 Mc.	576 Mc.	Higher
Up to 10 miles	1	1	1	1	2
Over 10 and up to 25 miles	1	1	1	2	6
" 25 " 50 "	1	1	2	10	16
" 50 " 100 "	4	2	6	20	30
" 100 " 200 "	10	4	10	30	40
" 200 " 300 "	20	10	16	40	
" 300 " 500 "	10	16	30		
" 500 " 1000 "	2	30			
" 1000 " 5000 "	10				
Greater than 5000 "	20				

As a final comment, the suggestion of a contestant choosing one week from an operating period of two months seems quite a good one. Let's have some more comments from those interested, to enable the rules to be modified in time for the 1961-62 Contest.

—D. A. Carthew, VK5AW.
A. C. Rechner, VK5ZCR/T.

Editor "A.R." Dear Sir,

With reference to the letter from VK3QV published in April "A.R." I would like to join David's crusade toward more progressive v.h.f./u.h.f. activity. I must admit I have no clear-cut views on whether the Ross Hull Memorial Contest, in particular, should take the form of a king size convention, or an all-out battle of technical skills. I am sure however that points will be scored in any contest by the easiest and quickest means possible, and even the indefatigable 3ARZ will not talk himself into a state of post contest shock by working long hours if an easter method exists.

Unfortunately I cannot see a scoring system alone increasing u.h.f. activity at present, because of the large points subsidy needed to offset the great number of stations on 50 Mc. and 144 Mc. I feel that a drive once or twice a year is not sufficient, but rather that this should be current throughout the year. Every field day, scramble, convention, and even club event could have its u.h.f. section, with a major honor or prize if necessary to make up for any lack of pride in personal achievement.

A scoring table such as suggested by VK3QV would certainly be a step in the right direction, although I would be inclined to allot even more points in the 288 Mc. and above bands. This in itself would only be effective if a reasonable number of stations was operating, but it could be the incentive needed to overcome the amazing lack of 288 Mc. activity, noted by the writer this v.h.f. year, and may offer some encouragement to those building equipment for higher bands.

I would not try to discourage the contestant who is sufficiently keen to spend a lot of time in a contest but there is no doubt that more interesting competition would result if country and DX stations worked, resulted in more points. This would be of great benefit to those who live at a distance from the cities and would bring about a reciprocal reward.

The need for some consideration here is indicated by the relative few who have worked VK7 on 144 Mc., or even attempted 288 Mc. contacts during the last v.h.f. and Ross Hull Memorial Contests. It just wasn't worth the extra 1 or 2 points as far as the Contest was concerned.

I hope that these comments will help and not hinder the good people who spend so much time organising our Contests.

—Richard J. Highway, VK3ABK.

★

VHF NOTES

(Continued from Page II)

ever QSB was very noticeable. The 144 Mc. signals were also of a varying nature, but contact was made on most occasions. 288 Mc. was not successful, but Don 6ZAV thinks he heard their carrier but could not be certain. Stan and Kevin encountered very wet and windy conditions, but were very comfortable in Kevin's caravan which is also his shack. Power was drawn from a battery charged with a petrol generator.—6RY.

TASMANIA

The March meeting of the V.h.f. Group consisted of a visit to the tx's of ABT2 on Mount Wellington. I guess we were lucky to catch a night with the temperature above (but only just) freezing point. We received an excellent discourse on the gear in use. A brisk search on the way out made sure their supplies were kept normal.

Incidentally, the combine "Neddy Associates," presumed to be under the control of David 7ZAI, will have to come under close scrutiny if some of its disposal gear is not forthcoming.

We believe that Ted Evans, 7FJ, has gear capable of operating at 1215 Mc. and is interested in making use of it.

50 Mc.—Nothing at all to report DX-wise apart from a few VK5 sigs on April 2. Local activity, however, is quite good: Phillip 7ZAX surprised every one with his new modulator—complete with "80 cycle square wave generator." At least we were well prepared for it!

144 Mc.—Most efforts are being concentrated on this band: TMY is contemplating replacing his antennae, 7ZAI seems to be engineering a massive system to be idged on a new tower. 7ZBE has increased power and antenna size and 7ZAQ has completed new rx and increasing tx power. Also building gear is Ted 7EJ.

When all this is finished we hope to arrange skeds with our colleagues in North and North-West Tasmania, and, in the near future, want to be able to announce that we have "scaled" the mountains.

Another plan being investigated is that of a passive repeater installed on Mount Wellington. Our researchers are at present gleaning information on this subject.

Another project we hope to pursue is to organise, as a club project, the construction of a number of 2 mx transceivers by members. Thus we hope to have, on call, a number of portable rigs which could be used by the Institute.

288 Mc.—Still rather dormant but providing an excellent medium for "high level" rag-chewing. 7ZAU was recently heard 5 x 7 by 7ZAO/P at Carlton—reflecting signals off Mt. Wellington.—7ZAO.

S W L

Maurice Cox, WL-13055
 Flat 1, 37 Boyd Crescent,
 Olympic Village, Heidelberg,
 N.23, Victoria.

It is most gratifying to receive all the wonderful letters that VK s.w.l.s are writing to me. They certainly keep me busy answering all their queries and I am only too pleased to help you all. If your reply takes some time in coming back, be patient, it will come; I take everyone in turn.

We should shortly have available the two S.w.l. Awards and in the next issue of these notes I will inform you what is required for these two Awards.

CORRESPONDENCE

I thank the following s.w.l.s for their letters: Colin Hutcheson L5031, Ian Thomas L3065, Eric Trebilcock, Kevin Walsh L3089, P. Horn, Afton Westcott L2136/VK4, Peter Drew VK6, Anthony Mullen L2064, Harry Major, Don Grantley "Sir" Charles Aberneathy L2211 (the "Sir" in front of Chas. Aberneathy was given to him by W4TK who sent him a card and letter addressed to Sir Chas. Aberneathy. One unconfirmed knight of the s.w.l. of VK land). To continue, Peter Field L5039, Craig Cook L3093, Arthur Locke VK3AUL, Howard Harvey L3094, Fred Mackiewicz, Richard McKell, John Walker, Dave Jenkins L3039—what a bag full, eh?

Now as you all know we only have one page, so I'll take out of each letter only parts of, so hope that it is of interest to you all.

Col. Hutcheson wishes he had been at Radio Australia—you sure missed something Col. At their last meeting five members were present, and with SZCR, they discussed v.h.f. propagation. Col. entered the N.F.D. and scored 200 pts. He's sending me a photo of the VK5 Group for the page.

Ian Thomas, now a Z call, but still a keen s.w.l., has been inactive of late due to blowing up his modulation tubes. That's no good Ian, go back to s.w.l., hi. He says 20 mx has been good on the p.m. with some QRM, QSB and QRN—Ian, that's always there, keep getting that 6 mx signal out, one always has to keep on trying.

Eric Trebilcock. He never stops listening and tells me that he handled 20,000 odd QSLs during his reign of Acting Federal QSL Manager. On N.F.D. week-end he went to the Test Cricket, but managed 145 points. You know he used to listen between 12 midnight and 5 a.m. but not any more—he reckons that he is getting too old. (You're only as old as you feel, Eric.) He has received his N.Z.A.R.T. certificate, the one of many over a period of years. He reckons the N.F.D. is the best contest because one has to search for stations. In 27 hrs. out of 48 hrs., he scored 1,020 pts. in the B.E.R.U. Contest this year, fair enough Eric.

Kevin Walsh is next, he reckons he feels guilty at not coming to our meetings because he has no rx. Always come Kevin, you will learn something and you never know (as you asked would it be possible to get a loan of a rx). One of the boys might be able to help you. In Jan., he was in an Army camp for specialist sigs. training and is in charge of the schools' sig. unit and hopes to obtain a No. 62 from the Army for the school use. Thanks Kevin, hope to see you soon.

Peter Horn gets up at 5 a.m. to listen to ZL b.c. stations; he uses a Com B i.f. set with no r.f. stage, 6SA7 conv., 6SK7 l.f., 6SS7 det. and audio, 6V6 output, 6X5 rect., but it oes. He's copied 80 b.c. stations at night, all 5 x 9. He gets up early to beat the Aussie b.c. stations. Thanks Peter for your letters. By the way, Peter is an ex-ZL.

Afton Westcott. He tells me has pulled down his QQ and is now using a Mosley TA-33-JR beam and it's the ant's pants, better than the Quad. So what with Hq170 and the TA33, he should pull in that elusive DX for sure. He says he's heard a lot about the Drake 2A rx and they are marvellous on s.s.b., but noisy on a.m. Afton is also a keen 50 Mc. DX man and is after cards right and left. I could write more about Afton's activities, but space does not permit.

Peter Drew, of VK6, has been a member of the W.I.A. for seven months. He has three rx's (all poor), but they work. With those three he can listen to 80, 14 and 20 mx; his

antenna is a short length of wire, 20 ft. high. He tells me he wrote to the VK6 S.w.l. Group for a number, but no reply and no number. Peter is still at school, but very keen.

Anthony Mullen sends me scores for the DX ladder, he's only a beginner, but we all started at the beginning, eh? Think I can sought your scores out, Anthony.

Harry Major will soon be a member of the VK3 Group. He's been in hospital too; all the best for a speedy recovery, Harry. He gave a lecture to 34 lads at his school on DX and s.w. listening and has written details of the talk in the school magazine—good show, perhaps you would like to give the VK3 S.w.l. Group one on your early days of listening?

Don Grantley. I could write pages on his activities, anyhow here's a little of it. He's sent out a lot of cards this year on phone and s.s.b. and some Russian c.w. He's heard quite a lot, too, you should see the list! He obtained 580 pts. in the N.F.D. His Marconi r.f. type unknown, has two r.f. stages, three i.f. with gain control. KH6ECD (Kure Is.) will be a new country soon and you QSL via KM6BI. Don is very interested in classical music (like me) and has a fine collection of records.

More news from Don, "We note that there has been a gradual increase in DX on the lower frequency bands of late. 40 mx has been providing some really good countries in the past few weeks, whilst 80 is showing signs of life. However, most of this is on c.w. and the way these bands are shaping, it would seem that the s.w.l. will have to either learn the code or take a holiday. Don't be side-tracked by the publicity and comments by certain members who insist that c.w. is out, most of the s.w.l.s lower frequency listening will be on c.w. or not at all for the higher bands can't be relied upon for any really intensive listening as we had a few years ago."

CONTESTS

Australia has made a clean sweep of the VK-ZL Contest in the S.w.l. Section once again, just who got the top score is unknown here at the time of writing, but we do know that it was one of the VK s.w.l.s. The N.F.D. came and went with very little interest from the s.w.l.s, L3088 again couldn't get across the river and operated as L2022 for about 3 hrs. only for a very modest score. Next one for the boys is the c.w. only B.E.R.U., which will be over by the time this reaches you. Congratulations to BERS-195 for winning the last one (VK Section); L2022 came last, hi!

Ross Hull Contest was a washout here, despite a few openings the gear just wasn't able to handle the converter and went out of it after a week or so. The AR7 just isn't suitable for a converter with an output of 28 Mc., so count L3088 out of the v.h.f. field until he gets his other converter, output 10 megs., working again.

ACTIVITY

Other commitments keep L3088 out of business most of the time, however a bit of good DX still manages to reach the log at times. Latest for him is UG8KAA on 40 mx, taking the overall score to 218 countries heard, and 70 confirmed.

Band conditions have been only fair in this neck of the woods, nevertheless despite the lack of phone and s.s.b. DX up here, there has been tons of c.w. for anybody who has the patience to dig into the commercials. Countries heard on 40 include 4X4, JA, UG6, UA0, HA, UB5, W, VE, DU, KR6, YO and VS1. Openings on 15 have been rather infrequent, but nevertheless some really good phone DX has been heard on the occasions when it is open.

Chas. Aberneathy has a new Eddystone 640 rx and by his letters he's doing remarkably well, going by what he has heard. To make the Eddystone double conversion, he has put a b.c. rx behind it. On the last i.f. of the 640, which has 1600 kc. i.f.s., he's connected it to the aerial coil on the b.c. rx which is tuned to 1600 kc. The b.c. rx then naturally converts to 455 kc. i.f., hence double conversion. Anybody got any comments to make on that?

His antenna will soon be a 66 ft. 6 in. dipole. He does very well on 50 Mc. too and has collected 12 QSLs—VK2, 3, 4, 5, 6 and 7—he only needs 1, 8, 9 and has obtained all four ZL districts. He uses a 6 mx 4 element beam rotatable plus a three tube 50 Mc. converter into a SX28. OA4DT sent him QSL plus a photo of his shack and self plus a pennant of Radio Club, Peruamo, Lima.

Peter Field writes that there are over 21 Amateurs and four s.w.l.s. in Elizabeth, VK5—the four s.w.l.s. are Ron Christy L5038, Roger Miles, D. Killen and Tony Strong, plus Peter. The Amateurs will give an award to any s.w.l. who hears eight of the Elizabeth stations.

Peter's rx is of a type unknown, 13 tubes, ant. is 40 mx dipole plus a long wire for 80 and 20. He's going to send me a photo of his rx for this page to see if anybody can identify it for him.

Craig Cook's equipment consists of a Marconi 75 kc. to 18 Mc., a partly built converter for 10 and 15 mc., a long wire 54 ft. long 14 ft. high (N & S.), a 20 mx dipole (E. & W.), has a 22 ft. tower and a half finished 20 mx 3 element beam—good work, Craig, that's the way to do it.

Arthur Lock, VK3AUL. The first Amateur I've written about in this page (fully licensed). Arthur tells me he has trouble getting QSLs too: never mind Arthur they will turn up. It's hard to realise that you an Amateur has to use an I.R.C., that shouldn't be so. Arthur worked 5ACZY, sent an I.R.C., but no card as yet. If he had received it, he would have his W.A.C. on the wall. Arthur has an HRO rx, old model, so I sent him a copy of the circuit of my modified HRO which is beyond all my expectations, so hope it's of help to you. Hope the National Co. sent you the dope you wanted. Arthur finished his letter by wishing all the members of the S.w.l. Group a very successful and happy Convention (it was), and also a very successful year of activity in the Group with plenty of DX and may the membership continue to grow and produce many more fully licensed Hams. Thanks very much for those wishes. Arthur.

BAND CONDITIONS

10 mx. I've had a right royal time whilst on weeks. I've stations I have logged in three weeks. There were plenty of Ws from 0900 F.A.S.T. till 1300, W6s, 5s, 4s, 0s, 8s, 7s and VE7s. JA's in the p.m. and a couple of Asians and Pacific stations; they were UA0GA, JA-6NP, JA8BY, UA0LBQ, JA2YK, JA6YG, JA-1AMA, JA5BPZ, UA0DZL, KR6GW, UA3KND, 457YL, TZ0E and many others plus ZLs. Heard a couple of South Africans but they were weak. Anyhow I would suggest you all keep your ears peeled to 10 mx.

15 mx has not been very good at all, but when open quite a lot of good stations are heard, only 61 logged on this band, some of them were Ws of course.

VRIG, HB9VX/MM, 9MZEK, VSIDN, CTIYE, DL8LZ, IICVA, F8LI, SM5OV, XE1AY, VR2D, YV5ALK, CPIBH, ZS1OU, UA0LO, Z54PB, OA4U, YN1EDB (a YL), ZD6LT (on s.s.b.), VS6CL, G3JAF and G3FGF.

Afton Westcott has heard G2CDI, LA8LF/MM, 9SUVS, ODSB, VP3MC, VP2AB, VS1JX, ZC4AK, CRSAL, DLSUC, DLIKB, EPIAD, GI-4TY, 9K2AP and UA9KOG.

Peter Field of VK5 has logged the following on 21 Mc. G2DX, XKZPU, G4ZA, OH1TL, ON4SZ, 8V1US, AP2MR, UA0LO, ZK1AR, G52T and Z56ZJ.

20 mx. Quite a lot has been heard by many of the boys, I'll put in the rare ones, Peter Field, G3ZAX, VR3G, XE3CCE, EA7HZ, FY2CK, CX2AX, VP6WD and ZY7R. Afton Westcott: BVIUG, DL7HA, HM1A, 9N1MM, 9M2DQ, Z5BE, CPIBH, OA4DT, FY2ZL, YB-2BU, EPIAD. Chas. Aberneathy: ZK1BL, Gs, EA2FE and THZ, VU2ZK, CN8CS, ZE1JP and CCP, DL6LL, 9N1MM, IIAN, F8CPT, OA4DT, Ws, LA6FT and VE0NH/MM. Craig Cook: HL9KS, AP2MR, VU2SR, LA6CF, DL7HA, G8BS, FJ3W, G3NNT, VS6EC.

Well, I think that's enough for this month lads, I would have put more in and will do so next month.

QSLs Received.—Peter Drew: 9M2DQ, OE-3KK, Chas. Aberneathy: VR2DO, OA4DT, ZS1KW, VK9GP, KH6DJV, VESAJ, VR1F, KR8IM, CE3HL. Colin Hutcheson: CX2CO. Eric Trebilcock: DU6TY, FL8ZA, HK0HCA, JZ0PH, LA4W, MP4QAQ, W80LJ/PK, UJ5AI, UP2AC (never heard of them), VQ1HT, VQ1SC, VS6EM. That will do for sure.

DX LADDER

		Conf.	Hrd.	Con.	Zon.	No. of Cards
L3042	Eric Trebilcock	264	276	40	6798	
VK4	C. Thorpe	85	137	34	—	
L2022	D. Grantley	70	218	34	422	
L3074	M. Hillard	55	185	24	145	
L3055	M. Cox	29	196	19	83	
L3065	I. Thomas	16	130	13	32	
VK4	A. Westcott	29	152	—	—	
L3072	T. Heywood	12	80	11	17	
L2211	C. Aberneathy	15	42	11	47	
L5031	C. Hutcheson	6	96	6	18	
L3086	D. Grantley	4	130	—	10	
L5020	F. Aslin	4	40	4	—	
VK6	P. Drew	10	144	9	18	

All those who have been withdrawn from the ladder have not advised me of any alterations for months. So until I am advised further, they will be omitted. 73, best of DX, Maurie, L3065.

SIDEBAND

End Ponnsett, VK2AQJ
6 Alice Street,
Queanbeyan, N.S.W.

PHONE PATCH

What are your thoughts on this subject? I have heard some complaints regarding the subject from VK stations who have been asked to shift frequency to allow Pacific Island-U.S. phone patches to be placed. A lot of argument has gone on about whether this is a strictly Amateur activity or not.

As morale boosters to service personnel of the U.S. Forces in the Pacific, this facility provided by Amateur Stations, is of great benefit not only to the Serviceman himself, but to the Amateur Service. It shows the layman that the Amateur can provide a communications medium that is not just a toy. The advantage of a phone patch in the Amateur Station during an emergency could be of immense value.

While not expecting our licensing authority to authorise phone-patch to Australian stations on the same basis as the F.C.C. in the United States, I, for one, would like to see permission granted for calls to be made to and from Antarctic personnel who are indeed isolated. This would be a small contribution when compared to the service that these men are giving Australia and the rest of mankind. This facility could also be extended to our Servicemen serving in Malaya and other areas remote from their homeland.

PHASING PLUS FILTER EQUALS GOOD S.B.

The Sydney team, Leo VK2AC and Harry VK2AJZ, have been experimenting with a combination of phasing and crystal filter methods to generate a sideband signal. The results have been most satisfying. Carrier suppression first by the phasing section and then further by the slope of the filter section has resulted in a very good suppression figure. Unwanted sideband suppression is also outstanding.

The phasing-filter system was applied to Harry's "Sideband Package" tx which normally uses the crystal filter method of s.b. generation. Leo and Harry have been unhappy about the carrier suppression obtained in the original circuit and found this new method superior in all respects.

Getting down to details, the s.s.b. signal is generated firstly at 440 kc. by the phasing method, amplified by a 6AG5 tube and then passed through a single section half lattice crystal filter. This well processed s.s.b. signal is then changed to 2250 kc. using another oscillator and a 6BU8 balanced mixer tube. The 6BU8 performs very well in this application and is much cheaper than that other excellent mixer, the 7380.

Leo reports that the phasing section at 440 kc. is very easy to adjust and the values of r.f. phase shift components are not at all critical.

G5RV ANTENNA

Going from one extreme to the other. From s.b. generation to the antenna. I have had some enthusiastic reports from sidebanders using an antenna system that appeared in the January 1961 issue of "A.R." This is the G5RV design. It performs very well on 80, 40, 20 and 10 metres, but has a high s.w.r. on 15 mx. It seems to be the answer for those of us who have an average backyard, as the overall length is 100 feet. It can occupy a slightly shorter length if one mast is used to support the centre and 300 ohm matching transformer, and the radiating portion is sloped down at a shallow angle. This is the antenna to solve that 80 mx problem and increase the activity around 3.7 Mc. If you have any doubts, call VK3OZ or VK3JK for a convincing demonstration.

PERSONAL

Welcome to a couple of newcomers to our ranks. VK2APP of Mont Eagle, near Young, needs no introduction and has been interested in s.s.b. for a long time. I am pleased to be the one from whom he caught this fascinating disease. Peter has a Hallicrafters HT37 which paired with his SX100 rx, should provide many hours of enjoyment. Using a home-brew exciter is Bob VK2NF, of Sydney. Bob is by no means a stranger to 40 mx sidebanders,

having often joined our nets with his a.m. equipment. Bob is using the adaptor described by Stan Burke, VK2EL, in the July 1960 "A.R." Activity in VK1 has been at a rather low ebb since the New Year with Arch VK1GV being the sole sidebander for a while on using 80 mx only. Stan VK1SB, who had been holding the 20 mx fort, much to the delight of W.P.X. and W.A.V.K.A. hunters, has been on the sick list involving a spell in hospital. He is back home again now taking things quietly but having a few contacts on 20 mx. Interest has flared up in the Capital Territory with VK1JE, PI, ML, all making plans to appear on the bands using yours and my favourite mode.

Up on Lake Macquarie, Doug VK2ASA has been absent from the bands for several weeks while awaiting a replacement power supply transformer for his HT37 tx. Doug has also moved to a new location and has water on three sides, being situated on a small peninsula—should be good for 80 mx and what a pity he cannot use the 160 mx band.

Menndie Jack, who now lives in the Sydney area, has enticed Gil VK2BI to shift from Tenterfield and take up residence in the metropolitan area. They both work at the same establishment now and rumour has it that s.s.b. gets mentioned occasionally during "smoko." After the VK2ALL-VK2ERI performances on 40 mx in the past, how do they manage to keep the "smokos" down to ten minutes? VK2ALL is established in a home, beaten the t.v. problem, and is back on the air, but as yet Gil has to find a home for his tx and family.

★

DX NOTES

(Continued from Page 13)

37/89 when conditions are good. VK2QL also heard with good c.w. signal on 7 Mc. VK3SK and VK2ID have been logged on 7 Mc. s.s.b., plus 25 other VKs on c.w.

Sven Elfving SM3-3104 (opr. at SL3ZO) is a member of the Polar Bear Radio Club and Editor of the "DXer". He is willing to help the VK boys with any QTHs they need—Europe or anywhere—he has thousands of mailing addresses of new and rarer Hams. He says "I'd be happy to help you fellows along. For Northern Europe I can help you get the cards easily if you enclose two I.F.C.'s to cover s.s.a.e. envelope to the station and back."

The Polar Bear Club has produced a Russian Call Book which lists about 1,000 U stations in all the rarer districts, with name, QTH, region/oblast, zone. It costs 2 dollars U.S. This appears to be the only book of call signs available from the U.S.S.R. Address S. Elfving, Solgardsgatan 15, Ornskoldsvik, Sweden.

Eric BERS195 is kept very busy handling the inward cards for the VK3 QSL Bureau, so is not spending such long periods at the receiver. With cards from HK0HCA and 9N1MM, his total now reaches 265 countries confirmed. 7 Mc. c.w. heard: KH6CEA, LZ1KBD, OK1KUR, UA0GF, UA0KCA, UB5JJ, UB5UX, VE3KE, VR2DK, ZC4IP, ZK1AR, SM5CBC/MM; phone heard: KH8BIA, VK2FR/LH, VK8EW, VK9GR, 9M2DQ. 14 Mc. c.w. heard: BV3HPT, EPIAD, FB8XX, FB8YY, FB8ZZ, FK8AW, FO8AC, GD-SFBS, HC2CS, HL4KAQ, JZ0PH, KZ5MQ, LU-2ZR, MP4MAH, OA4FN, W8OLJ/PK, UA9YAC (Zone 23), UL7FA, VK9GP (Norfolk), VK0DA, VK0RT, VP8MC, VR1B, ZK1AK, ZM6AC, 8J1AD.

Dave L3080 has spent more time on 7 Mc. band and found conditions quite good with Europeans coming in well each morning around

1800z. JAs, Ws and a couple of HKs were logged in the evening, on a little regen. rx. He is now building transistor and xtal converters for all bands 3.5-28 Mc. 3.5 Mc. c.w. heard: W1IB, 7 Mc. hrd.: LZ2NG/P, LZ2KBA, HK-1FF, ZC4IF, G5DQ, G3FXB, YO3AC, JA3AIS, UA1DZ, JA1AEA, W2CC, HK5TD, DJ2JS, UA3FT, SL8AR, 14 Mc. hrd.: UA0AS, UL7KAD, IT1AI, ZK1AK, W3OJY, JZ0PO, DUIOR. Thanks for other news Dave.

Laurie VK2AMB has worked the following stations on 14 Mc. c.w.: CP3CN, FB8XX, OZ-5MJ, UQ2KBR, MP4TAC, ITIHEA, YV5FH, OA4BW; heard: BV3HPT, CE0AD, CR7CC, VS-6EP, VU2SOZ, VU2TOZ, VU2NRM, 5A2CW, YV5AGB, VS9AVG, SV0WI, W8OLJ/PK, VQ-2AB. 14 Mc. phone worked: VK0RF; heard: ZE7JR, KG4AL, XE1HC, XE1YL, VR1G.

QSLs RECEIVED

VK5EK: XW8AI, DJ3BB, 4S1LB, EI9Y, and KV4CI.

VK2AMB: VS9OC (Oman).

VK2QL: KV4CI for 3.5 and 7 Mc., HH2OT, HS1R, UN1AB, ZS7M, 4X4YL, ET2US.

VK2ZR: SP8KAR, 4X4BS, HB1GP/AR, PY-2BZD, VS9AQ, ZBIHC, EA6AF, CN8CJ.

BERS-195: DU8TY, FA2VC, FL8ZA, HK0HCA, JZ0PH, KZ5TD, MP4QAQ, OD5LX, W8OLJ/PK, UJ8AI, UP2AC, K8PTP/VOL, VQ1HT, VQ1SC, VQ8BM, VS6EM, VS9MB, VU2DR, ZK1AR, 9N1MM.

VK3TI: AP2MR, BV3HPT, JZ0PH, JZ0PM, LU3WU, SM5XJ, VP6PV, VQ8EM, VR1F, VS-6EQ, OA4DT, VS9OC, KZ2TH, YN4AB, YU1EH, ZB2AD, ZK1AR, XE4JX, 4X4JU, 5A5TF, XW-8AL and VS9MB.

ADDRESSES

VK2ATQ—Christian Brothers College, Gosford, N.S.W.

VK3AGO—Mrs. Lorrie Gardiner, 72 Heathwood St., East Ringwood, Vic. LAING/P—C/o. Norwegian Embassy, Reykjavik, Iceland.

JZ0PH—Joop, 1953 Hortenslaweg, Biak, Netherlands New Guinea.

XZ2TH—Tun, 75 Bogyoke Aung San St., Rangoon.

FK8AW—Via W2CTN.

VK9PJ—Via G3MTU.

OA4KU—Box 375, Lima, Peru.

ZK1AR—Via K4LR, P.O. Box 85, Kendall, Florida, U.S.A.

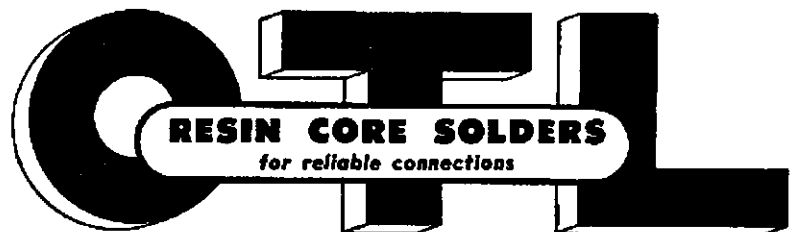
(Txn 2QL, BERS-195, 3TL, and 3QV.)

In writing these notes I have used material from Don Chesser's DX Magazine and notes sent to me by SM3-3104 and several VKs. Thanks for the letters and hope to hear from you again next month. 73, John.

50 Mc. W.A.S.

Call	Cer. Add. No. Cntr.	Call	Cer. Add. No. Cntr.
VK2WJ	13 4	VK2AEZ	10 1
VK3PV	5 3	VK3XA	11 1
VK2VW	9 3	VK3GM	12 1
VK5GG	19 3	VK3ACL	14 1
VK5ZBL	21 3	VK3ZD	18 1
VK4RY	2 2	VK2HO	17 1
VK4HR	4 2	VK3ZEA	18 1
VK5LC	1 1	VK3ZAC	20 1
VK8DW	3 1	VK2ABC	8
VK3RR	6 1	VK2WH	15
VK3HT	7 1		

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The abovementioned have indicated that they have no objection to publication in the Institute's magazine, "A.R.," of information that they are members of the Amateur Advisory Committee.

The membership of the New South Wales Committee is incomplete, three having indicated that they do not desire publication of information that they are members of the Committee.

FEDERAL QSL BUREAU

Hams in Victoria and South Australia were surprised and delighted during early April, by a flying visit from "Dud" Charman, G8CJ. "Dud," who is a Past President of the R.S.G.B. and well known to Australians since 1935, had a riotous time in VK5 and spent the Easter week-end in Melbourne renewing and cementing old air friendships. Complete with the out size with which we always associate him, "Dud" seemed to enjoy his hurried visit to VK. Come again, "Dud" and stay longer.

The 1861 P.A.C.C. Contest of the V.E.R.O.N. (Netherlands) during April was again spoiled—in VK—by the failure to give sufficient advance notice of the Contest. For those who did make contacts, logs should be sent to PA0VB, Contest Manager V.E.R.O.N., Keizerstraat 54, Gouda, Netherlands, by June 15.

—Ray Jones, VK3RJ, Manager.

FEDERAL AWARDS

D.X.C.C.: The Mall Federation (FF8) comprising areas previously known as Senegal and Fr. Sudan was formed as from 20/6/60 and given separate D.X.C.C. Listing in "A.R."

SILENT KEY

It is with deep regret that we record the passing of:—

VK2HP—Harold Peterson.
VK6WD—Francis Duns.

Sept. '60. After a short period this Federation changed to Senegal Repnblic and Mall Repnblic (formerly Fr. Sudan). Both areas will now be given separate D.X.C.C. Listing as from 20/6/60.

Kaliningrad Region (UA2), situated on the Baltic Sea between Poland and Lithuania, forms part of European R.S.F.S.R. from which it is sufficiently removed to warrant separate listing as outlined in "A.R." Oct. '60, page 26, for any post-war contacts.

Amend D.X.C.C. Countries List published in "A.R." Jan. '61, accordingly.

50 Mc. W.A.S.: Congratulations to Bill Wehr, 50 Mc. W.A.S.: Congratulations to H. Blythe, VK5ZBL who has been issued Award No. 21 with the addition of Papua, New Zealand and Japan.

W.A.V.K.C.A.: Further Awards Nos. 148-155 were issued during January-February '61 to WBLF, W1VG, WGMG, W41MM, K8CQM, W8CF, W2TP, W3LE, W6BYB, ZL4CK, K2CPR and KH6ACU.

—Alf Kissick, VK3KB, Awards Manager.

NEW SOUTH WALES

Unfortunately, owing to an error of judgment I did not get the March notes away on the due date, but hope that they will be acceptable to members even at this late date.

Anyone who may complain of any inactivity in the Division must indeed be hard to please, for I think that at no stage in our history have we had so many opportunities to obtain information on the many phases of Amateur Radio. For some months past we have two meetings each month at which lectures and demonstrations have taken place.

Each month we have the general meeting held normally at Science House, Gloucester St., Sydney; the meeting held on the fourth Friday of each month and commencing at 8 p.m. On the second Friday of the month an additional meeting is held at our headquarters, 14 Atcheson St., Crows Nest, which is just 150 yards from St. Leonard's Station, and also very close to transport from the city and suburbs.

Unfortunately, for some months, neither of these meetings has received the support they deserve, surely a fine way of showing appreciation of the work done by those who spend so much time in planning on behalf of our many members. All are always welcome at either night and are assured of an interesting and informative evening.

March activities commenced with the mid-month meeting at Crows Nest where a novel evening was arranged by Harold 2AAH, who as Divisional Education Officer has the task of arranging lectures, etc. This evening was in the form of a quiz session, but with a difference, in that the audience asked the questions which were capably dealt with by Harold. This developed into something of great interest and as the subject was "Antennae" the questions were many and varied.

As remarked previously, the attendance was not all that would be desired, but the keenness of those present made up for their lack of numbers. Further lectures are arranged for this informal gathering and members and their friends are requested to make it a must. Full details of coming events are always featured in both the Bulletin and the weekly broadcast.

The March monthly general meeting was held on 24th March and again the attendance was not all that would be desired. The President, Bill 2YB, took the chair and in opening proceedings welcomed the visitors: W8CMP, temporarily stranded in Sydney due to stoppage of aircraft schedules, FK3AV and FK8AL. The President reported the timely passing of Harold Peterson, VK2HF, for many years prominent in Institute affairs in this State, and members observed the customary one-minute silence.

Sixteen new members were admitted to membership for the month and the Secretary reported four resignations.

The lecture for the evening was one on a most interesting subject "The Science of the forecasting of Magnetic Storms," given by Mr. Cooke, of the Ionospheric Prediction Service, who outlined the activities of the service, the difficulties they encounter and the theory of Ionospheric Research. Mr. Cooke is the officer responsible for supplying to the Division the forecasts which are given in the broadcast each week, and which are used to such good effect by those of us who chase the off-times elusive DX. He was assured at this meeting of the appreciation of members for this service to us.

A notice of motion was dealt with, regarding the use of frequency shift keying on all bands. The originator of the motion, Barry 2AAB, spoke of the desirability of using this mode

and after discussion a vote was taken which proved to be in favour of the motion.

Following further general business, the meeting closed for supper and the usual ragchaw.

OPERATION PICNIC

"Operation Picnic" occurred on Saturday, 18th Feb., and was an exercise conducted by the Civil Defence Organisation in N.S.W. to check aspects of mass evacuation of Sydney subsequent to an attack. This exercise received much Press, Radio and T.V. publicity, much of it on a national basis. Four convoys of cars carrying 700 persons left various areas of Sydney journeying through the Blue Mountains to Katoomba.

Radio communication was provided by 144 Mc. mobile stations of the Blue Mountains Section and of the V.h.f. and T.v. Group, operating along the route, reporting the time and location of the various convoys en route. These spottings were reported to Glenbrook, and to the main assembly point at the Katoomba Showground, where announcements were made over the public address amplifier as to the position of the various convoys.

Mobile stations in the field were Phil 2ZBX at Emu Plains; Wal 2MZ and Horry 2HL at Glenbrook; Bob 2ASZ at Linden; John 2ZPJ at Wentworth Falls; Dick 2ZCF at Katoomba. The Blue Mountains Section home tx, 2AUX, was located at the Katoomba Showground and acted as control station, with operators Dave 2NK and Norm 2QA. Over 20 Amateurs assisted in the exercise in various capacities.

The net operated most effectively despite the difficult terrain and signals were very good at most times. The 700 visitors were provided with morning tea at Glenbrook, and lunch at Katoomba by the Blue Mountains Civil Defence Section.

Divisional Council thanks all those who participated in the day's operations for their efforts, and the Civil Defence Controller for the Blue Mountains, C. A. Strachan, was more than pleased with the performance of the radio communications network.

ANNUAL MEETING

The Annual Meeting of the Division was held at Science House, Gloucester St., Sydney, on 24th March, at which the attendance, though adequate, was, to say the least, disappointing.

The Retiring President took the chair at 8.5 p.m., receiving apologies for non-attendance from VKs 2APQ, 2AGH, 2TI and Barney Smythe. Following the reading of the minutes of the previous Annual Meeting and their adoption, the Returning Officer was appointed. Dave 2EO, who, with the assistance of a team of scrutineers, attended to the counting of the votes in the ballot for the election of Divisional Council for the ensuing year.

A record number of ballot papers were returned, 40% of which proved to be informal. The successful councillors are N. Beard, 2ALJ; W. Lewis, 2YB; H. Burtoft, 2AAH; M. Pfeffer,

W.I.A. D.X.C.C.

Listed below are the highest twelve members in each section. New members and those whose totals have been amended will also be shown.

PHONE

Call	Cer. C'tnt- No. ries	Call	Cer. C'tnt- No. ries
VK6RU	2 251	VK6KW	4 202
VK6MK	43 245	VK4HR	12 192
VK5AB	45 243	VK3BZ	3 176
VK4FJ	21 221	VK3GB	50 171
VK3WL	14 211	VK4RW	23 164
VK3ATN	26 204	VK3EE	10 163

C.W.

Call	Cer. C'tnt- No. ries	Call	Cer. C'tnt- No. ries
VK3KB	10 287	VK4HR	8 218
VK3CX	26 275	VK3XU	48 213
VK4FJ	29 264	VK7LZ	17 212
VK8NC	19 236	VK6RU	18 210
VK3FH	15 226	VK3YL	39 203
VK3BZ	6 222	VK5RX	23 195

OPEN

Call	Cer. C'tnt- No. ries	Call	Cer. C'tnt- No. ries
VK2ACK	6 289	VK3BZ	4 231
VK4FJ	32 267	VK3HG	3 225
VK6RU	8 265	VK3WL	45 225
VK6MK	74 249	VK7LZ	23 223
VK8NC	77 238	VK3XU	61 221
VK4HR	7 233	VK6KW	13 218

2MP; F. Fine, 2QL; T. Mills, 2ZTM; V. Molesworth, 2VO, to whom we offer our congratulations on their success. So fellows, rally around your Council, assist them in all ways and make their year in office a pleasurable one.

The Auditors' report was presented by the Hon. Auditor, J. Cummings, 2PM, showing that the Division had a successful year and was in a sound position. Following the adoption of the report, Jim was re-elected for the coming year.

The general meeting for the month had been opened and among the correspondence was notification that the Far Northern Radio Club had been formed. As yet we have no details of officers of this new organisation, which will fill a need in the district.

The lecture for the evening was delivered by Peter Griffin, of the Department of Civil Aviation, his subject being "Supervisory and Remote Control Equipment," an interesting subject given in Peter's efficient manner. The vote of thanks was given by George 2CB.

At a subsequent meeting the incoming Council elected the President, W. Lewis, 2YB; the Vice-Presidents are F. Hine, 2QL, and M. Pfeffer, 2MP, to lead the Division in its many activities during 1961-62.

At its first Council meeting of the year, the following appointments were made: General Secretary and Treasurer: R. Luther, 2ZEL; Minute Secretary: M. Pfeffer, 2MP; Bulletin Officer: V. Molesworth, 2VO; Publication Committee: V. Molesworth, 2VO, N. Beard, 2ALJ, P. Pearson, 2ZBB; Disposals Committee: K. King, 2AVK, N. Beard, 2ALJ, D. Melbourne, 2NK, V. Molesworth, 2VO, B. Smythe, Assoc.; Education Officer: H. Burtott, 2AAH; Registrar: W. Storer, 2EG; QSL Bureau: F. Hine, 2QL, and S. Molen, 2SG; Correspondence Courses: N. Beard, 2ALJ; A.O.C.P. Instructor: C. Bardwell, 2IR; Hon. Solicitor: W. Clarke; Slow Morse Instructor: F. Pearson, 2ACQ; Divisional Correspondent: C. E. Whiting, 2ACD.

HUNTER BRANCH

The most important news Institute-wise this month is the report of the Annual General Meeting which was held at the University of N.S.W., Tighe Hill, on 10th. The meeting was particularly well attended and we were favoured by the presence of two councillors from Sydney, namely, Frank 2QL and Harold 2AAH. Two other visitors were Messrs. Gibson and Brokman. Apologies were forthcoming from 2ZL, and the local gang who did roll up were VKs 2AYF, 2SF, 2AYL, 2CS, 2AKX, 2RJ, 2ZIF, 2AFA, 2JE, 2AQR, 2QB, 2XQ, 2ZMO, 2XT and 2ZK; associates Messrs. Sutherland, McLachlan, Forrest, Bailey, Davis, Finch, Jackson, Mullen, Foster, Stobbs and Gray.

In his report, Lionel 2CS told of a progressive year during which we had much information passed on via lectures and films. The Blackalls field day also gained a mention both for its social merit and also as an example of untiring effort by stalwart members who made the whole thing possible. The Monday night broadcasts went on as usual, reported Lionel, and proved of great value. One very interesting note also was the fact that, as far as was known, nobody in the Branch had received any blue forms from the R.I. (One lakeside member was apparently just dead lucky!)

The President then retired and the election of officers for the ensuing year took place. Frank 2QL performed this duty and many were the loud shouts of approval and otherwise from those who sat. Those elected were: President, Stuart 2AYF; Vice-President, Lionel 2CS; Hon. Treasurer, Bill 2XT; Hon. Secretary, Gordon Sutherland; Zone Correspondent, Keith 2AKX; Social Treasurer, Bob Bailey; Social Secretary, Les 2RJ; Liaison Officer to V.h.f. Group, Stan 2AYL.

Frank told us also something of the workings of Council and asked us all to remember to spread goodwill with our on-the-air activities. "We must use the bands we have been allocated," said Frank. John Moyle's words written at the end of the Geneva Conference were quoted to remind us all of what our responsibilities are and what our fate may be unless we heed them.

During this time, Harold 2AAH had been doing weird writings on the green board and had amassed a vast quantity of such material to illustrate his lecture on "Antennae," which followed. All present listened intently to Harold's most informative discourse and many points about dipoles, quads, tuned feeders and in fact everything the complete Amateur should know were made clear. An interesting question session closed the lecture, during which Harold told us something of his days as "A.A." in G land pre-war. It seems that many of these aerials were far from artificial! We all know Harold's motto now, "The bigger the better."

OBITUARY

HAROLD PETERSON, VK4HP

Harold passed away on 16th February at the age of 78 years. He was active from the late 20s, and over the years was prominent in Amateur Radio activities.

He was an office-bearer in the Waverley Radio Club for many years and served on the Council of the N.S.W. Division from 1936-1946, and was State President in 1937-8.

Harold retired from the Sydney Water Board in 1952, and was subsequently active on all bands.

FRANCIS DUNS, VK6WD

With regret we announce the passing of VK6WD, Francis Duns, of Hyden, W.A.

Francis was a successful farmer in this district, and did much to further interest in the Junior Farmers' movement. He was keen on tennis, and found time to put a fine signal on the air on 20, 40 and 80 mx. He will be missed very greatly, not only by his West Australian friends, but also by many Eastern States, with whom his call sign was so familiar.

To those who had the pleasure of personal acquaintance, he had everything a Radio Amateur should be.

He leaves a wife and grown up son and daughter to whom we extend our deepest sympathy.

An auction sale of some equipment completed the evening and Cliff Foster was seen staggering down the stairs loaded with millions of microfarads.

As can be seen from the above your new scribe is now on the job and I hope that no stone will be left unturned in finding news of the goings on in the Branch. Things have been very quiet by the shores of Phenyle Bay during the past three weeks and distant stations have given encouraging reports to other locals due to the lack of r.f. from the respected gentleman's bow tie. He has as a coming home present a clip for the said tie with the correct call this time. No wonder Norm couldn't get the right one in the first place—he didn't understand what Bill said.

Also on holidays as these notes are written is ex-Zone Correspondent, Bob 2AQR. He has had the 613 running on dry batteries from Avoca or somewhere in that vicinity but when I heard him the other day it sounded as if the volts were running out. Hurry home, Bob. It is said that a certain lad with three tall masts in his garden now has 150 watts of well modulated r.f. to go with them and is working all the DX about the place. Is it true that you are writing insurance policies for speaker cones, Jim? Lionel at last has found the recipe for success at billiards. He just takes off his glasses and all is clear. Now he wonders why there are only three balls on the table instead of six, as before. It was good to see two members at Bill's place who had not been present for a while, Les 2RJ and Ian 2ZIF. Les is stoking up the 122 for Urunga and hopes to carry off some of the money. Stan 2AYL has been doing well on 2 lately with 3 in a row to Sydney on the 20th. Mav 2ZMO and Geoff 2VU also have been cashing in on good conditions on 2 and Mac is a regular reporter on Monday evenings.

Our new President, Stuart, with his new call 2AYF, has been borrowing Lionel's rig for the broadcast on Mondays and is doing a fine job. He's also getting many clues on battleship construction from the old gentleman so that he, too, may have a signal like that when the time comes. Hot on the trail of disposals, Stuart has visited Atchison Street for choice bits for the March meeting.

Ernie 2PF is still doing well after his spell in the hospital and should be back to 100% by now. Our Parliamentary rep., Alan 2KE, also has had a sojourn in hospital and all members wish him well and a speedy return to health. Navy morse, it is said, is pretty speedy and Max, in the best traditions, has been pounding the brass to give practice to two other associates going for the big quiz this month. He has already blown up one oscillator transformer and burned out several keys in the process. Ian Forrest thinks in morse now and is trying to do Leaving Certificate algebra in that medium. Tony Mullen's budgerigar has gone mad and whistles the code at teleprinter speed when ever Tony pounds the cage. Belmont Bob is chasing 80 mx slow morse on his 1155 but can't seem to find them.

Chris 2PZ gave the Vanguard a thrashing a week or so ago when he collected four Type S supplies for the boys from Sydney. Aren't

800s a pretty blue colour? Harry 2AFA is progressing at a great speed and has been heard on 40 lately. Come on Harry, what about some QRM from Teralba. Forget about the one-eyed monster! A permit has been applied for so that the hamburgers from Booragall can get on the air. A parallel dipole as per 2AAH has been suspended 55 ft. aloft and crystals have arrived from a secret source west of Suez. There should be some signals from the premier high school before shortly.

Gordon 2CI came on with a burst on Sunday announcing that his 20IAs were percolating again and he was looking for Joe. I had to rush for the gain control. Things with 2AWX have been DX-ing special of late with callers from VK6 and VR2. It's getting to be a regular thing now. Merv 2MW calls in regularly also and is always a good signal down here. Our wandering councillor Pearce 2APQ has returned with a pocketful of apples but Ivan has taken to brushing up on a foreign language so that he may parley with us later. Icl Carlingford?

Don't forget the next meeting chaps because you will be told many things of wonder and delight about pieces of equipment you thought were useless. Lionel will have words to say and so may yours truly—a five-minute conversion described in half an hour.

The monthly social meeting will be on at Bill's (2XT) on the fourth Wednesday, 24th. Come along and show your prowess at billiards. And don't forget the specs.

Late news: Newcastle was represented at the Urunga Convention by VKs 2XT, 2PF (good for you Ernie) and 2RJ. Two prizes were brought back by the boys. The Gleeson Trophy for finding the hidden 144 tx was won by Les 2RJ, and Bill 2XT took third place in the All-Band Scramble, and there sure was some competition. Well done chaps! Two local associates, John Gray and Norm Finch, have successfully passed the Limited A.O.C.P. and are now awaiting their Z calls. Congratulations to you both, but polish up the old keys so that you may sit for the morse as soon as possible. We can still stand some more QRM on the h.f. bands. 73, 2AKX.

BLUE MOUNTAINS SECTION

The March annual meeting was held on Friday, 17th, in the club rooms at Lawson. The retiring President, Keith 2ABK, presented his annual report, which went back over the many successful events and projects of the year. After the usual formalities, the election of officers for the ensuing year took place with the results as follows: Chairman, Jack 2ADF; Vice-Chairman, Bob 2ASZ; Secretary, Bill 2HZ; Treasurer, Norm 2QA; Publicity Officer, Ron 2ADA; Catering Officers, Dave 2NK and Mrs. Stahl; Construction Officer, Wal 2MZ; Delegate to N.S.W. Division, Keith 2ABK.

Members present numbered 14, including s.w.'s Laurie 2ZJC from Kurrajong was welcomed and made a 100-mile round trip to attend. Hope to see you again Laurie. Bob 2ASZ has almost completed the Club's 522 tx on 2 mx and a power supply was obtained by the meeting for the Club's AT13. Some aspects of W.I.C.E.N. were brought up for discussion, then the meeting closed with a lucky dip, supper and the usual ragchew.

Activities around the members to mind: Bob 2ASZ has nearly completed an all-band h.f. mobile tx including 144 Mc. Bob uses a Geiso exciter on h.f. and xtals on 2 mx, and has used a photographic scale-down of the Geiso dial to miniaturise—looks very nice. Don 2ART and yours truly have been busy with 522 gear and we should be on 2 mx in a few weeks.—73, 2ADA.

VK2ATQ—BOYS' RADIO CLUB Christian Brothers College, Gosford

Staff changes have unfortunately brought to a close the Amateur activity from the boys' club at Newtown Technical School, but interest is now being aroused in Gosford. The call sign 2ATQ has been allocated to the boys' club at the above college, and so far there has been plenty of interest.

Amateur Radio is new to the boys in Gosford, but they have had a number of contacts on 20 mx, particularly with South America (YV and HC). Time is the chief problem, but the boys are usually on 20 or 40 mx between 12.30 and 1.30 E.S.T. Mondays, Tuesdays and Fridays. Among club members are harmonics of Harry 2LX and Len 2AMU.

The rig is still rather primitive, 40w. a.m. on an 807, and dipole antennae. A new QSL card is on the way, and they guarantee 100% QSL service to Amateurs contacted and to s.w.'s.

We hope the club will develop rapidly, and become a source of new members for the well established local Central Coast Club (2AFY). Further details should appear in next month's "A.R."

VICTORIA

Well, lots of things have been happening in VK3 lately, I hope I can remember them all! Firstly there were the balloon hunts; probably everyone knows about these as the air has been very busy on this business lately, but a few facts for those who are in the dark. Mac 3AVM, of the Physics Dept., has written those who helped in the hunts a letter of thanks, and has given these points about the first one held on 19th March. The balloon was launched at Pikes Creek, Reservoir, at 1215 hrs., burst at 97,000 ft. over Williamstown at 1350 hrs., and landed near the Highway at Officer at 1500 hrs. (approx.), where it was recovered by 3ADW and party in their mobile d.f. unit. The 30 milliwatt transmission on 3.801 Mc. was received from 1225 hrs. till 1450 hrs., and reports were received from as far as Coleraine, Warrnambool, Horsham, Benalla and Wangaratta.

The d.f. bearings were, on the whole, accurate, the main troubles being (a) bearings were taken at odd times and could not be correlated with others taken five minutes later; (b) some bearings were given from magnetic north, others from grid north (preferred), but often neither was specified; (c) grid reference of some d.f. QTHs was not known at the plotting centre and could have accounted for some of the errors.

However, the exercise has shown that the frequency and power used are suitable for balloon recovery anywhere in the State, and Dr. Hopper and his co-workers are delighted with its effectiveness.

After this performance, during which stations such as 3KR helped a great deal in relaying, another trial was arranged for Sunday, 9th. This was on a different basis, but still saw 3ADW and folks (pun, get it?) careering about the country chasing elusive balloons. 3AOG beat them to it this time because 3ADW/M was not marine mobile and couldn't cross the Yarra in the last stages. Anyway, Mac says that they were ruled out by the stewards because they had the thing in visual contact. Michael says the balloon looked like a star, and as it was a clear day the 20 ft. balloon was very clearly discernable at 85,000 ft. The Geelong and district boys were very active on this day too, but the balloon drifted to the east of Melbourne where 3AOG, relying solely on his d.f. gear, eventually made the kill.

3WI was on 40 mx, operated by Dave 3QV, Jack 3CS, and Alan 3AEL. John 3AKJ was on 3795 kc. relaying the plots from the Laverton radar station regularly (but it felt as if I was talking to myself all day). The fun was on 40 when everyone and his dog seemed to call in to 3WI with information about the weather, the balloon, the broadcasts, the Institute, their mates, etc., etc. Anyway we all enjoyed it all, and achieved some good publicity even on the t.v. A full account of the balloon project will appear shortly in "A.R.," so I'll not mention it again, except to thank all those who have shown an interest even while not being directly concerned.

STATE CONVENTION

Remember the last Dinner? Bad cess to you if you don't; anyway, this year the State Convention is to be held in Melbourne, and promises to be a beauty! It will be held on 30th September and 1st October, and the scheme seems to be that on the Saturday afternoon a conference room at Scott's Hotel will be used for Convention business, followed in the evening by the Annual Dinner at Scott's; remember last year's?

Anyway, we will probably only be able to accommodate about 250 people, so when you receive further details about the Convention and Dinner, don't hesitate in replying with the necessary info. and cash promptly.

On the Sunday, a day in the country will be held with all sorts of activities designed to make the whole week-end a memorable one. Doug Bowie, and Michael Owen are organising the show and it'll be a beauty! Remember the last Dinner? Yeah, well you won't forget this year's I'll bet! We would like a very big representation from the Country Zones so please organise a party from your neck of the woods, or bush or what-all.

LIBRARY

We do have a library, it's at the rooms, and we are very pleased to announce that Tom 3ZYQ has agreed to take on the job of librarian as soon as the building is finished. It should be well on the way by the time you read this, as work was started last month.

COUNCIL NEWS

At the Annual General Meeting, held last month, David 3ADW, our President, gave his report. I started to take notes, but the report was so lengthy and detailed that I gave up;

however, it is being sent to all members. When you get it read it very carefully and critically, and I've no doubt that you will come to the same conclusion that I have—that is that this past year has certainly been a year of effort, achievement, interest and much constant and hard work by your Divisional Council. I feel that Council, the office-bearers, and all others who have helped are to be sincerely congratulated on the fine achievement of the past year. Not the least, our Secretary, Michael 3ZEO, and our Treasurer, Keith 3YQ, and of course our President, David 3ADW, should be singled out for a special word of praise and thanks.

Maybe some corns have been trodden on, probably this is unavoidable when people are tramping along with a single-mindedness and devotion to duty as they all were. The Institute and the Amateur Service, as a whole have benefited I am sure from the combined efforts of the large band of workers, and their leaders, who have worked for us in the past year.

They are still there in office. Office-bearers for 1961 are as follows: President, D. Wardlaw, 3ADW; Vice-President, A. Elliott, 3AEL; Secretary, M. Owen, 3ZEO; Treasurer, K. Roget, 3YQ. Alan Elliott is also our Federal Councillor for 1961-2. We are glad they are still there, give them the support you did last year and we're in for a further good year.

The P.M.G. Dept. advises that examinations for the Amateur Limited Licences will be held in future on the third Tuesday in January, April, July and October, and that the closing date is the 22nd of the month preceding that in which the examination will be held.

We have a supply of the new badges, smaller and neater than the old ones, 5/- from the Secretary.

WARNING

Be very careful about gear that may be offered to you, especially 3BZ tx and an Astor car radio converted for 1725 kc. These were stolen from the Elwood Life Saving Club's launch recently, after some of our members had spent a lot of time installing them. Has anyone some surplus gear that we could give them to replace this—this is a very worthy cause, and we'd like to help. If you can help with a tx or rx suitable for conversion and installation in a rescue launch let's know.

PERSONAL ITEMS

Let me have bits for this section of the notes, please. I'm not able to be on all bands every night because of my work, but I try to get on 80 mx on Thursday evenings; if not, please drop me a line. I can't make the news, only report it. Still, I've a few bits.

Noel 3ANS wrote me a very nice letter in March, it was unfortunately too late for inclusion in April "A.R.," but we can welcome his news this month. Noel is up at Wangaratta, having moved from Denilquin (ex-20U) and is on 40 each night from 7.30-7.40. He tells me that he has 40 and 80 mx gear going, and will get on 2 mx soon. He's brought his tower with him and intends to stay in Wang., and as he has a 10 over 10, 60 ft. up, there will be some activity from there soon. He and Bruce 3QC organised a "Ham Stand" at the local Hobbies Exhibition and worked 40 and 80 mx.

SUBSCRIPTIONS

● Please pay your Subscriptions PROMPTLY when due. Failure to do so may result in the loss of valuable issues of "Amateur Radio." High costs of production make it necessary to limit the number of extra copies printed each month.

WANTED!

ARTICLES

Can you write an article for "Amateur Radio"? How about one for Hints and Kinks?

The Voice of the Alps, Arthur 3AUL, has been in Chiltern during last month, and we've heard many QSOs on 80 in the evenings, with blobs picking him about his motor-bike. Don't let them worry you Arthur, I had a two-banger for years, and it's cheaper than a car, but one thing I'd like to know—why don't you turn it into a single-sidesaddle linear? I know, I know, you don't have to tell me!

Ten metres has been a picnic over Easter, signals coming in loud and clear from all corners of the globe—after eight years I worked my first DX on 10 over that time, a ZL! However other stations were more fortunate and VK3s were heard in QSO with DX stations all day and night during Easter. While we are talking about DX, VK0JC has just returned from the Antarctic and would like 3WC to contact him at his home address.

Two Zone Conventions were held in April, the S.W. Zone and the Eastern Zone. Could we please have details for June "A.R." by the 6th of this month, fellers?

Jack 3APL is reported to be much better, he's up and about but has to return to hospital for further treatment. We wish him all the best for a complete recovery. Chin up, Jack, we're all thinking of you and looking forward to your return to the bands.

Bob 3UW is busy building a s.s.b. rig and a 2 mx rig beamed on Melbourne. Morton 3ANG is also saving up for a s.s.b. rig. VRIB on Tarawa is an ex-VK3 and VK0 (Macquarie Island). He operates 20 mx phone and uses a.m., is looking for VK3 contacts, especially 3ATR. He has not heard Trevor around and is looking on 14.2 Mc. on Sunday nights or Monday nights 1000 hrs. GMT.

P.S.—VK3AKJ wrote this rot, let him have some decent material for next month, by the 1st May if possible! Especially personal bits.

SOUTH WESTERN ZONE

The Zone Convention has been arranged in Warrnambool on 29th and 30th April. The local committee have arranged a full programme of events commencing with the dinner at the Caledonian Hotel at 1830 hours. The Annual Zone meeting will be held at 1430 hrs. on 29th, thus clearing the evening for a night's entertainment. See you there? Bookings are in the capable hands of Eric 3ANQ.

Bill 3XE has treated himself to a new type X power supply and it is rumoured has plans to eliminate his carrier some day. Why though, Bill? What about eliminating the sidebands instead? Judging by the test equipment being built there, something must be brewing. Latest one is a new g.d.o. which puts out a quite good signal for its 0.6 watt on 80 mx.

Latest Zone station to adopt the break-in on c.w. is Eric 3XL who, after some initial troubles, has persuaded the v.f.o. to key quite nicely. Look out you commercials now! Eric reports that four members of the Geelong Club have been successful in passing the A.O.L.C.P. exam, and one, Harry, the Club President, has managed the A.O.C.P. Congratulations chaps.

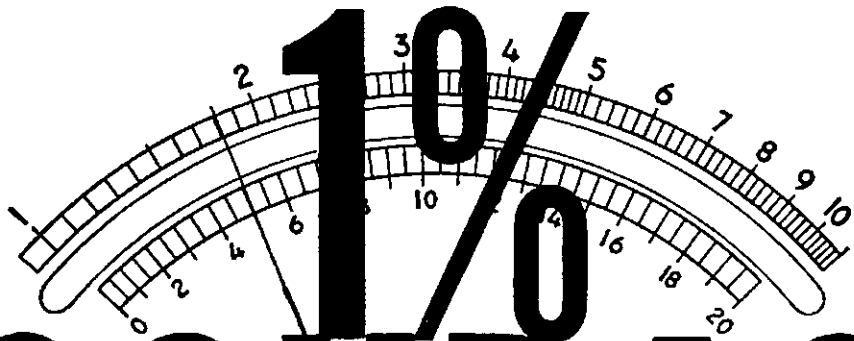
From Thorb 3APS comes news of two s.w.l's in his district. Both are members of the VL-3QC net and keen listeners on 40 and 80 mx. They are Fred Bousefield and Jack Murphy and both will be sitting this month for the A.O.L.C.P. Thorb has brushed the dust off the old code oscillator as both have their sights on the code exam. later. Good luck to both of you! Thorb has been putting his ground plane antenna to work on 20 mx.

Way up in the DX listings is Norman 3NC. Just as a reminder that power input is not the be-all and end-all, Norm's 240 odd countries were made using 6 volt batteries and an FS6 power supply. Input on c.w. is 8w. and on phone 4w. Antenna system was an umbrella of 300 ft. vee beams, but now is 6JK beams. The shack is in a good spot certainly but to work G land on 20 mx phone is no mean feat indeed.

Talking of DX, comes a report from that old master of 80 mx Claude ZLIC1 of hearing a mobile contact from this location one Sunday afternoon. Phone was R5 there and also R5 at Gretna in VK7. However after a night out with 3XN, both of us called CQ, CQ DX and everything we could think of and only managed to get a brush off from a ZL station who decided to call his mate on sked on the channel. Brian 3XN is going QRO with the mobile by using four (adapted) 807s in a grounded grid linear circuit (and an asbestos loading coil?). Brian has also hung his antennae up a gum tree now with much better results.

We are sorry to learn that Bill 3BU has not been well and the Zone hopes that you have long since recovered Bill and back on the bands again.

Jamie 3MC, who specialises in signals from space, has been reporting signals from balloons from Mildura and other places. Jamie has been having receiving troubles and is looking



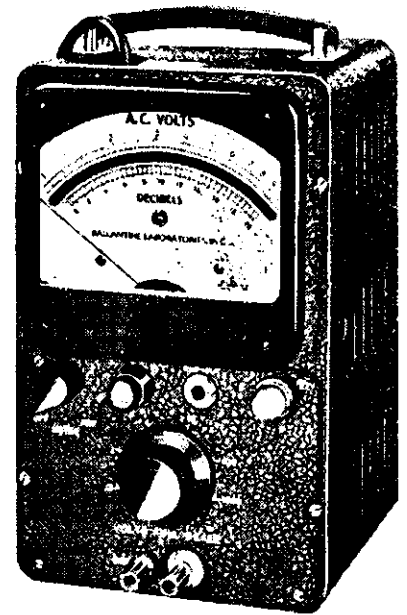
ACCURACY

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BALLANTINE model 300-G SENSITIVE ELECTRONIC VOLTMETER . . .

- Top accuracy of 1% over entire meter scale from 1 mV. to 250 V. and over the band of 20 c.p.s. to 20 Kc. Better than 2% to 1,000 volts and for the wider band of 10 c.p.s. to 250 Kc.
- High input impedance: 2 megohms shunted by 15 pF., except 25 pF. on lowest voltage range.
- Long life: Several thousands of hours of operation without servicing or recalibration.
- Does not require stabilised input voltage. Less than 1/2% change in indication with power supply change from 200 V. to 240 V.

- Five inch, mirror-backed, easy-to-read meter. Only two scales with mirror between. One is 1 to 10 for volts, and the second is 0 to 20 for decibels.

NOTE.—A New Ballantine **Laboratory Standard** device will be released later this month . . . The model 393 HF Transfer Voltmeter. Write for further details.

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WARBURTON FRANKI

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for ideas on stabilising the heater voltage with Zener diodes.

An SV station has given Neil 3HG his 108 country on s.s.b. all within twelve months too. After quite a while inactive during which time he has built up a very nice little business, Bill 3RE has come back again. Bill works mainly 20 and 15 mx and complains that every time he gets the bug again the solar cycle is on the wane.

Wally 3UT is back again and seems destined for some QRM over there as harmonic Keith is getting ready to sit for the exam. Keith is a listener—we hesitate to say short wave listener—of no mean repute. His latest effort in ferreting around the 140 kc. region has brought a confirmation from Moscow Radio on 145 kc. and two other European stations in that region. Rx is an AR8. That is real DX you s.w.l.'s!

John 3AGD is still compiling that Jamboree report and waiting. Should be over by this John and hope all is well.

Jim 3ABT has gear for 2 mx ready and expects to go on 1200 Mc. later.

Much interest was shown in the recent balloon flights by various zone stations, some of whom were 3AMC, 3ALP and 3AGD. The tiny tx when in flight was heard at S8 to S9, all over the Zone; proving again that if the antenna is well up, the signal gets out.

Well chaps next month will bring the new office-bearers, so from the old ones, best wishes and best DX.—3AKN.

WESTERN ZONE

Activity on the higher frequency bands seem to be increasing in our Zone. The Z call chaps are doing a fine job, also there are a few interested listeners who have built up their own receiving gear so we will be pleased to welcome these boys to our bands in the near future.

Trev. 3ATR now has the S.E.C. connected and is very pleased with results. Half your luck, Trev., looks like another three years before it gets down this way.

Congratulations go out to Chas. VRIB and Audrey on the arrival of Peter Charles. Perhaps this event may cramp Chas' style for a while, but guess that Peter Charles will soon learn correct shack procedure by sleeping soundly at the appropriate times.—3AKW.

QUEENSLAND

TOWNSVILLE

After reading April "A.R." I have come to the conclusion that I am living in the wrong place. There is Hal 4DO in Rockhampton with a nice list of stations on the DX page (does he use that new receiver AFDRI?), and that s.w.l. Afton, in Atherton (rhymes doesn't it) gives an impressive list of s.s.b. stations, or does Lady Luck enter into it?

Since writing last notes, the bands show a little better opening, also the 50 Mc. path to Japan being open most days and evenings; longest opening being seven hours with some quick fading. Len 4GD, Don 4ZDM and Bill 4ZBE, together with self, are always there when the band opens. Although can hear JAs working southern VK4, no sign of any VK signals being heard. The KH6 sigs so far have not eventuated.

On meeting of local club, the boys left twiddling their thumbs for a while as a result of the Secretary forgetting the due date. After disposing of usual small business, the gang settled down to two lectures by Alan 4BE on his building of a s.s.b. transmitter and incorporating all of the best circuits he can find for various stages. John 4DD gave a run down on the new s.s.b. receiver he is building, making certain that he tries to obtain the ultimate in sensitivity, selectivity and stability. John was lucky to obtain some very choice parts for same overseas. Both he and Alan made frequent use of the blackboard.

Alan 4PS again spent the Easter week-end at Mount Spec. on his mobile rig, while the boys speculate what is the attraction there? Congratulations go to Basil 4ZW and XYL, Zee, on the arrival of a new harmonic. Bob 4ZK feeling on top of the world after recent eye operations. Glad to hear they were successful. Local gang pleased to hear Ray Robinson and Evelyn Bahr were successful in the recent examination for Limited ticket, and Ken 4ZAK made the grade in Morse.

No information from the Ayr and far northern boys on doings in their regions; while further south in our capital city no one can find time to write notes for "A.R."—shame on you boys. Cannot we find someone to sit at the feet of the Scribe of Scribes, 5PS, and emulate his deeds. The pen is mightier than the long bow, so advertise the best State—Queensland! 73, 4RW.

SOUTH AUSTRALIA

As a final remark last month, our Editor made the statement that once a year fortune smiles on "Us." Now, quite apart from the Editorial "Us," fortune not only smiles once a year, but provides the VK5 Council with the opportunity to have a square look at the previous year's reporting, and invite a suitable person to take up the pen, and once again set the standard for the next period.

The annual sojourn of Pansy Parsons (5PS) once each year has become an institution, and his mode and location of operation whilst in "smoke," varies from the hospital section of a certain racecourse, to the other amenity buildings attached thereto. In spite of the report, in another place, that he is touring the State, he is up to his usual tricks, but at the time of writing it can be mentioned that there is no truth that the supposed bomb placement at the said racecourse had anything to do with him, except it is thought, that some s.s.b. operators may have been trying to "help him along."

Some recent remarks in these columns, aimed at s.s.b. operation, and the problems associated with receiving such at Rose Park, brought forward quite a fan mail to our rotund friend, none of which he has as yet published. It is suggested therefore, that in order to complete the picture, someone might send him a copy of Don Stoner's latest work in that field, for rumour has it that the carrier removal idea has caught on as a result of that fan mail.

The annual VK5 Picnic was held this year at Tea Tree Gully, where a reasonable number of the more athletic members assembled with families for the day's outing. In perfect weather the programme committee saw their plans take shape, ranging from a scientific "guess the frequency" puzzle, through races, rolling-pin throwing, to a sedate knock-out cricket match.

Adequate time was provided in that balanced programme for eating, drinking, and breath recovery, and it was generally agreed a good day was had by all. The number who turned up with mobile rigs indicated the interest in that sphere, and provided a good chance for the less fortunate ones to see the ingenuity displayed by those who had their rigs open for inspection. The variations in this regard ranged from 288 Mc. gear with multi-element arrays, to one d.c. band job in a car as long as the national debt with a loaded whip that would have done credit to a 3K2 oil baron.

Prizes for the obstacle race, consisting of a run, eat a dry biscuit, and blow up a balloon to bursting, was won by Bob Ring, with Clive 5PE second, and Eric 5ZDQ third. One prominent sidebander tried valiantly, but of course with only one sideband he couldn't fill the balloon; bad luck, Phil. Threading the needle was an OM and XYL effort, with the Moore's (5RO) leading from the Millowick's (5MS) and Vivian's (5FO).

The less said about the rolling-pin throwing the better, but it was won by Mrs. 5PE, second to Mrs. 5CA, with Mrs. 5MS and 5DS tied for third. There was a race (of sorts) between the c.w. and phone men, but as the c.w. blokes ran in a staccato manner they lost easily to the practised smooth flowing phone types. The cricket match, that annual hardy, was won by the c.w. team by one run; and what a run it was, too. There is always an element of doubt as to who should be in which side, so in future, the c.w. men who wish to enter this test match will have to bring their keys as evidence, or at least one QSL of a c.w. contact with Warwick 5PS.

Talking of Warwick, forgot to mention him before—or did I? He has instituted a new award, to be known as the W.A.O. (Worked All Oakbank) and can be won by having 30 or more contacts with him (over the air of course—not personal) on any frequency provided he is on 40 and you listen on 20, 15 or 10, or even Channel 9! It should prove an interesting contest, but not over difficult to obtain. You may have to hurry to get in before he removes his carrier(s).

The trick resonant frequency circuit provided a lot of argument, and brought out a few micro-miniaturised g.d.o.'s., the assessment of the frequency varying between d.c. to 2,000 Mc. Eric 5ZDQ carried off the prize for this one. Then there was the DX Story Contest, and it was pleasing to see Les 5AX win it and bring the glory to Gawler. The yarn itself won't stand repeating for there may be an R.I. interested, but the prize is worth a mention. It was a lkw. final, that may or may not be "lit-up" some day. There was no modulator with it, but a key, so Les is in the market now for something about the size of parallel push-pull 813s. Any offers? (It would be cheaper to learn the code.—Ed.)

The last meeting of the Division disposed of the formal business under the chairmanship of President John Hazeldine for the first time, and proceeded to the "Tender" programme directed by Warwick and Norm. There seems to be a race between those two to see who can out-bugle the other, for a remark (rather rude it is thought) from a back-bencher stated "Look, both of them have passed Tubby 5NQ"—and that is saying something!

A capacity house witnessed these proceedings, it's remarkable how membership interest holds when some gear is around, and by a comparatively early hour (for VK5 that is) all but a few pieces had changed hands, and the various tellers were balancing the coppers. Luke 5LL made the lowest bid for some unidentified piece of gear (4d. I think it was), whilst Tubby 5NO and a couple of his confreres kept bidding, buying and believe it or not, Jeff 5NQ (spelled with a J, not a G) was providing the finance. At one stage Tubby quite unknowingly was bidding against Jeff for the same gear, Tubby won and Jeff paid—wouldn't it?

In case you haven't caught up to it yet, and to record it officially anyway, the new Council is as follows: President: John Hazeldine, 5JC; 1st Vice-President: Keith Ring, 5KH; 2nd Vice-President: Phil Williams, 5NN; Secretary: Brian Austin, 5CA; Treasurer: Rex Richards, 5DO; Federal Councillor: Phil Williams, 5NN; Membership: Ian Hunt, 5QX; Minute Secretary: "Doc" Barbier, 5MD; 5WI Operator: Keith 5KH; Programmes: Phil 5NN; Sub-Editor, Publicity, Public Relations, Public Officer, Auctioneer: Warwick Parsons, 5PS (whose address for notices can be found in all current call books).

In a recent issue of "A.R." mention was made that 5WI was operating on the frequency of 4W1 one Sunday morning. This has been checked from the official log book and is not borne out by that record. Perhaps it could be that the new time-tables for operating times and frequencies may have caused someone to think an infringement had been made. This data is published each month on the Editorial Page, and whilst on this, what about keeping the Intrastate call-back frequencies clear chaps. It's not much to ask, and when it's realised that a lot of the country members only contact with W.I.A. is through that call-back, it would be a courtesy gesture anyway. It is not suggested that this is done deliberately but rather thoughtlessly; all the same it does upset the frequencies for such Intrastate use.

Don 5KD has been heard telling that his rig is now in the kitchen and being able to make and eat toast whilst operating gives him a new type of modulation now known as "crummy-lation." By the way, Don is leaving soon, has most of the gear in process of packing and one pole to go. Any takers? Ian 5QX has his new four element beam operating on 15 mx and now nearing completion is a new a.m. rig and a phasing s.s.b. job, all to be push button controlled. Looks like the control panel of a computer could be of course, but he has gone to no end of trouble to make this the rig to end all rigs.

Steve 5HA talking about trying v.h.f. (watch out Don 5TM), John 5ZJM back on the job again after a wog attack. John 5EV also moved to the other place for work and leaving his present haunts. Looks like 5WC membership will benefit. Ron 5FY, the mystery man of the air these days, but as Hon. Sec. of the Elizabeth Club finds plenty to do. Pete 5HB still can't read phone (a.m. or s.b.) and is staunch c.w. to the bitter end, in fact most bitter when the oscillator shifts frequency when keyed; even greater things in sight with an 813 on the horizon.

Ken 5ZCH is as keen as ever on v.h.f. and is keeping up with the Jones', Ken did a real f.b. job in organising this side of the affairs for 5LZ in the N.F.D. Contest. Tubby 5NO enjoying a well earned rest at present, but not so the antenna from there, for Jeff has had a go at both B.E.R.U. and A.R.E.L. Contests to prevent any thoughts of those wires and/or tubes getting rusty. Clive 5PE seen frequently at the E.F.S. station, no doubt doing a good job there, but what about that Viceroy? Heat it up and let's hear more of it.

Cyril 5DY has completed the new modulator, all the trimmings this time, clippers, filters and so on, one of the masterpieces of the district, with results as good as the appearance. Don 5TM was at the picnic, but what about the air? Can't you find a spot Don. Harry 5EU busy on 14 and 21 Mc. DX as usual, but between times finds time to have a dip with the gold fish in the pond up front. Keith 5EJ still at the other place, his 2 antenna masts have the wire on them but no r.f.; coming back some day?

Wally 5DF finding his northern legs, and with a new aerial gets down this way in great style. Tom 5AQ slips that carrier in or out

TASMANIA

at will to the complete confusion of a certain bloke, but it's very good Tom, and should be an inspiration to others to do the same. Like it sideband best at this QTH.

Arch 5XK has given Ham Radio a boost in his area by making available to E.F.S. his whole station as a stand-in when a breakdown put their gear out of action. Good work Arch — it pays to keep the gear in running order. Athol 5LQ, that noisy type at all our meetings, decided recently to come down with the peasants on 40 and talk to Les 5AX. Nice work Athol, a good clean signal as usual, and did you get the HK0 afterwards or was it a SS2? The pile-up was great, but think your patience greater.

Les 5AX has a new mobile rig finishing with a 6146 link coupled to the loaded whip, and on 80 and 40. Tests indicate a first class signal with plenty of r.f. and audio. Of course the front end of the car has changed somewhat to make room for this, with a consequent reduction in room for his patient XYL. Remember the most publicised water pump in Aust.—the one outside Les' shack! Well, it's now painted a bright blue. Blue water next! Lance 5XL continues to come up on the frequency, his 5 x 9 signal penetrates well. Joe 5JO portable at Currency Creek with a Type 11 puts in a 5 x 8 here, no trouble at all. Have you ever heard a phone man with nearly no voice at all? Listen then to Stewart 5MS who unfortunately has voice trouble at present. Heard you recently Stewart, and it's getting better; so hope progress continues. Ray 5BT, the latest to dispense with a carrier, now heard on d.s.b. trying this and that in position A, position B and so on. Keep it up Ray and then next step make the plunge and filter one of them out altogether. At the moment it sounds a bit "carbon mike" but you will get it right.

Quite a lot of fellows have had a spot of trouble getting the bugs out of a commercial v.f.o. unit, some not over successful; well two fellows have done a good job. Les 5AX in his mobile rig and he has promised to write it up soon; the other one is Keith 5ZY, who is putting out the cleanest signal heard here from one of those excifiers. Congrats fellows, you will get many enquiries.

The 5WI Sunday session, as conducted by Keith, continues to draw its admirers. The odd bits he gets into the news and tapes of visiting Ham celebrities all helps the interest. The country boys really thank you Keith for the effort you put into it, and also for the painstaking way you answer their queries even if research is required.

Joe 5JO and Arthur 5HY heard recently, being indoctrinated at Shep 5DC's QTH on the use and advantages of s.s.b. Keep at them Shep for feel sure after the demonstration they were given and the ease with which they absorbed the information that you will have those two as converts in no time at all.

Charlie 5ON and Arthur 5HY heard on 40 recently announcing their first contact in 47 years. Hey fellows, use the bands more frequently than that please!

Had intended to make quite a plug for s.s.b. this month, but notice the April issue stole my thunder in the splendid Editorial and the article series commenced by "VOX" on page 5.

VK5 has Bram 5AB, Phil 5NN, Clive 5PE, Tom 5AQ, Reg 5QR, Shep 5DC, Burnie 5WC, and yours truly on s.s.b., and Reg 5RR, Doug 5KK, Ray 5BT and Les 5AX on d.s.b. as the first step, and with three other rather prominent VK5s soon to appear on s.s.b. So as far as this State is concerned it's catching on and proportionately think we are up to the other States.

Congratulations to "A.R." for its scoop on the Trade Review of the AFDR1 Receiver; not often we get the inside story of such a brilliant development. Sorry you missed out on one of the really interesting accessories of the unit, for which there is a power outlet provided, that is the changeover assembly for send/receive. It is a little known accessory that by reversal of function turns the Receiver into a transmitter to provide a true transceiver. Think the name given to that gadget is transinformograph . . . I spell (no, perhaps I had better not).

Up the wall!

—SEF.

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- T.V. ALIGNMENT.

ECCLESTON ELECTRONICS

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The Annual General Meeting for the year 1961 was held in Hobart on 25th March, followed by a most successful annual dinner, attended for the first time by lady guests. It was very pleasant to meet so many members and their ladies from the other Zones.

The election for Council resulted in the following being elected: Tom 7AL, Ken 7KA, Len 7LE, Alan 7MY, Doug 7DW, Charles 7CH and myself 7ZZ. Officers will be elected by Council at the next Council meeting. Many other positions were filled at the same time. QSL Manager, 7JB; Broadcast Officer, 7JB; Assistant Broadcast Officer, 7KS; Lecture Organiser, 7LE; V.h.f. Officer, 7MY; Traffic Officer, 7OM; and Auditors, 7GR and 7LJ.

About 70 people attended the truly excellent dinner, and we all enjoyed to the full the evening to follow. During the course of the evening certain money raising ventures were undertaken, and I wish to state publicly that the two prizes won by the wife of a certain R.I. visitor were honestly gained and that the organisers did not in any way contemplate immunity or favoured treatment arising out of Departmental inspections of radio gear, even if that should be the result.

Our Division has had several visitors during March, including Alf 2CE, Ron 3APM, and Ted 5JE, as well as Pearce 2APQ, Federal Councillor for VK2, whom we welcomed to our March Council meeting.

Conditions for the B.E.R.U. Contest early in March were poor. Most contest contacts were limited to VK and ZL stations. On the other hand, conditions for the A.R.R.L. c.w. contest late in that month were quite good, and I worked many stations in almost all States.

Snowy 7CH was away twice on the yacht Mooina with his portable gear, and those stations who worked him mobile marine were again rewarded by excellent conditions on the 80 mx band.

After the formal business at the April Divisional meeting, our members visited the studios of ABT channel 2 and were much interested and rewarded by so doing. We are all delighted that the P.M.G. has granted permission to re-broadcast a 50 Mc. transmission of v.h.f. notes over the 7 Mc. Sunday morning broadcast. 73, Ian 7ZZ.

NORTH WESTERN ZONE

As this is my first effort, I will start at the finish and work backwards. Our last Zone meeting was quite a success, the highlight of the night was a screening of some colour slides, taken by George VK3AHN on his recent tour of Tasmania. We are grateful to George for his thoughtfulness in sending the slides over, and congratulate him on his skill with the little black box.

We were pleased to learn that the gear designed and built by this Zone for the Burnie Fire Brigade is in action and doing fine service during our dry summer. Which reminds us that the Devonport Fire Brigade radio gear, also built by this Zone, has proved so successful over the past few years.

The last Tx Hunt was reviewed and voted a great success. The frantic dashing backwards and forward past the hidden tx (7TT and associate Alan Baptist) by TMX caused considerable amusement. Six trips were counted and when he made a reconnaissance on foot the hidden boys held their breath while he went past. What is wrong with my d.f. gear?

VKs 7SF, 7TT, 7ZAA and 7ZAH went south to the annual meeting and dinner of the VK7 Division and all voted it an outstanding success. Apparently the inclusion of the ladies at this year's function did much to brighten the evening.

Hear that Sid is now the proud possessor of a 1154 rx. Bob turned up the other night with a very interesting looking shiny box with bits and pieces sticking out. It proved to be a walkie-talkie 144 Mc. device and looked quite good. Turn up the gain, you VK3 boys. You could hear 7ZAA. We are anxiously waiting to hear Ken radiating his first signal. Shake it up Ken. 7XL now sports a business-like looking whip on the Holden and appears to have the 122 working nicely. Quite a collection of mobile gear was seen at the last tx hunt, including 7TT and 7SF.

7MS has a long wire, in fact a very long wire. Understand it started out at about a thousand feet, but has been shortened now to about twelve wavelengths on 20 mx. As this is in the apple area suggest you watch for trouble David, if a hundredweight of starlings decide to roost at once.

We have had a number of visiting Amateurs passing through our Zone recently. Can recall VKs 3AHN, 3FM, 5ZCN, 5JE, 5KK, 2JR, and 2CE—always pleased to see them. Brings to mind the chappie who landed from the ferry on Tuesday morning and booked his passage back same night. The idea was to have a quick look round Tasmania during the day. Hi, hi!

Hope by the time 7RL reads these notes he will be back in circulation again after the unfortunate accident. Best of luck, Reg.

Noticed Harold having a good personal QSO with a couple of VK5s recently. Apparently 7MZ was getting some news from the old home town.

We look forward to some interesting meetings this year. The committee is cooking up some special dishes which we hope will improve our attendance.

We didn't realise, until the last meeting, that so many of our members were interested in photography, mainly colour transparencies. This offers some new scope for future meetings, when possibly radio will have to take second place. And yet, I don't know, and yet . . . —7MX.

HAMADS

Minimum 5/-, for thirty words.
Extra words, 2d. each.

Advertisements under this heading will only be accepted from Institute Members who desire to dispose of equipment which is their own personal property. Copy must be received at P.O. Box 36, East Melbourne, C.2, Vic., by 8th of the month, and remittance must accompany the advertisement. Call signs are now permitted in Hamads. Dealers' advertisements not accepted in this column.

FOR SALE: BC342 Receiver in excellent condition; recently modified to include 85 kc. 2nd i.f., product detector and a.m. detector, S Meter, also included as separate unit 10 and 15 mx Xtal Locked Converter; £40 or nearest offer. Wireless Set No. 22, good condition, complete, £12/10/0. D. C. Haberecht, VK2RS, Box 439, P.O., Albury, N.S.W.

FOR SALE: Collins Mechanical Filter, new, 455 kc. centre frequency, 3.1 kc. bandpass, £26. R. E. Slutzkin, 8 Lynedoch Ave., E. St. Kilda, Vic. LB 1861.

FOR SALE: One Collins Type F455-Y40 mechanical filter, 4 kc. wide, new from U.S.A. Never used, excellent for sideband exciter. Price £22 or near offer. S. Brown, 12 Denman St., Yarralumla, A.C.T.

SELL: Camera F1.9 Exakta single lens reflex with E.R. case, cable release, close up lens, lenshood and instruction booklet. Focal plane shutter 12 secs. to 1/1000th, perfect order. 127 size. £21/10/0. "O.N.O." C/o Editor "A.R."

SELL: "2 in line" Rx, 100 kc. crystal, modulator, 560 kc. i.f., b.f.o., £5½. Command Rx, 3-6 Mc., £2½; one now 13-19 Mc., £2. 2" CRC wide amp. Miller t./base, probes, £11. 2 Selsyn motors, 8/- ea. 12v. Motor, 0.5a., 1800 r.p.m., 8/-. Wave Meter "M/P" case, meter, tubes, £4½. Command Fu, 5.3-7 Mc., £2. Etc., etc. VK2ZAF, FX 1254, 9 Clovelly St., Watsons Bay, N.S.W.

WANTED: Urgently. Sub-Editor to continue writing the DX page in "A.R." John Pinnell (VK2ZR) has to relinquish this position due to the pressure of personal business. Please write to Editor "A.R." or John Pinnell if you would be prepared to take on this task. Appointment would commence in June 1961. The usual fee for "A.R." Sub-Editors will be paid.



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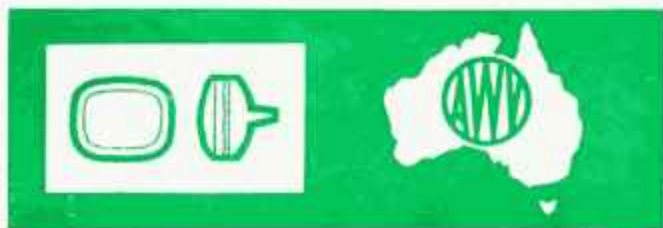
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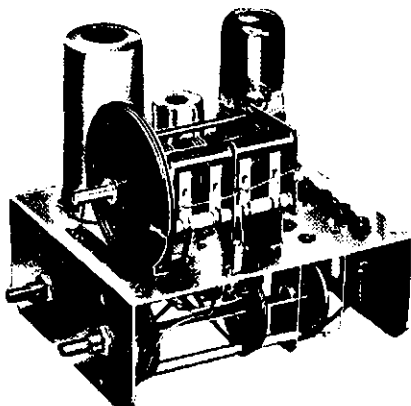
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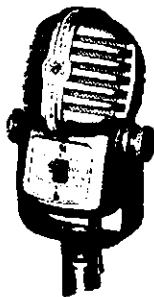
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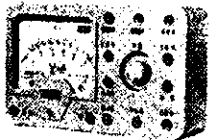
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EDITORIAL



CONVENTION TIME

WE are probably a little early to remind members that Convention time is coming around again. It won't be until Easter 1962, but since it is—or at least it will be by Easter 1962—three years since your Federal Council met together to discuss and resolve your problems, it seemed high time to remind you all that it is now time for you to take action on your particular "gripe".

Your Federal Constitution, as it is written today, provides for a specified time in which agenda items can be submitted to the Federal Executive so that they can, in turn, be promulgated to the Divisions of the W.I.A. for submission to you, the member, to discuss and direct your Council in the manner you desire in relation to each agenda item. From now on to December is the time!

Yes siree! From now on to December is the time for you to submit to the Council of your Division any problem of a national nature which you would like to have discussed and resolved by your Federal Council. You—and you only—know what you would like to achieve in our world of Amateur Radio! You may have been "gripping" for the last many months that Amateurs should be able to do this, that or the other thing, but you can't get any sense out of anyone. OK! Now is really your time! You put pen to paper and place your problem before the Council of your Division. Your hard working Council will then give it the round of the Conference table, and if they think it a matter to table before the Federal Council (i.e. a matter deemed other than a local administrative problem), then they will "knock it into shape" as an agenda item and forward it to the

Federal Executive of your Institute for inclusion in the agenda of the 26th Federal Convention of the Wireless Institute of Australia to be held during the year of the British Empire Games in Perth 1962.

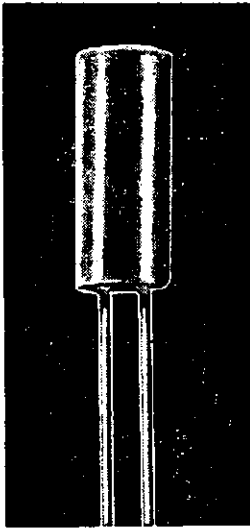
Sure! Whilst the majority of members have been voting against the holding of a Convention these past few years, your Federal Council has not stopped working for you and what you want. They have had you represented at the Geneva Conference of the International Telecommunications Union (1959) in defence of your frequencies; they have later still had you represented on the Postmaster-General's Frequency Allocations Review Committee; they have pursued a policy for the protection of your bands for you; they have been constantly reviewing and resolving your problems when they are known.

But as the science progresses and conditions change, more problems arise and you are the one to have intimate contact with some of these changes. Your answer is to have them presented before your Federal Council. The Federal Convention next year in Perth is an ideal time if you act NOW! What do you want from Amateur Radio that you haven't got now? Put it on paper to your Divisional Council and they will put it in due form before your Federal Council. Your Federal Council will decide the issue at the highest level. But it's up to you to put your problem before the Institute constitutionally if you want it heard. It's no good "gripping behind the curtain" if things aren't done the way you want them if you don't do things the right way yourself." Now's your real opportunity! Let your Council have it!

FEDERAL EXECUTIVE.

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zener diodes

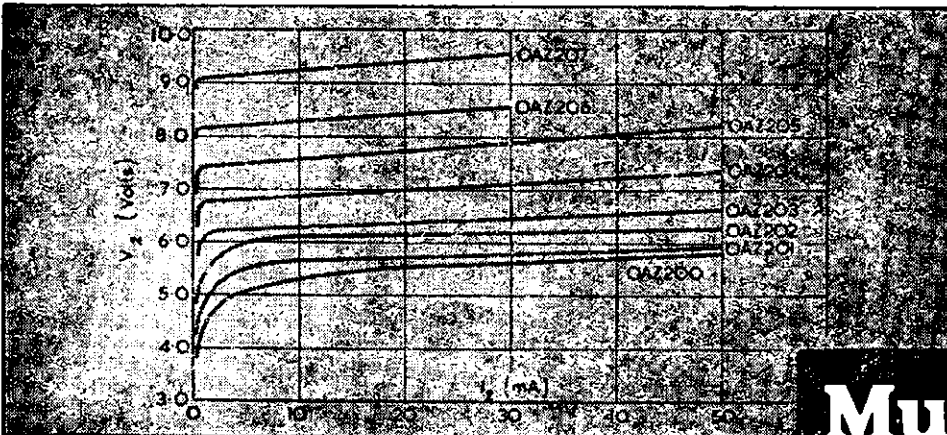
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○AZ201	5.1	4.8	5.4
○AZ202	5.6	5.3	6.0
○AZ203	6.2	5.8	6.6
○AZ204	6.8	6.4	7.2
○AZ205	7.5	7.1	7.9
○AZ206	8.2	7.7	8.7
○AZ207	8.1	8.6	9.6
15% Tolerance Range			
○AZ208	4.2	3.3	5.0
○AZ209	5.1	4.4	6.0
○AZ210	6.2	5.3	7.2
○AZ211	7.5	6.4	8.7
○AZ212	9.1	7.7	10.6
○AZ213	12.2	9.4	15.0

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BENDIX FREQUENCY METER BC221 (SCR211 AUST.)

R. B. WALLACE,* VK3UW

THE desired frequency (when the frequency meter is used to calibrate a transmitter), or the observed frequency (when the frequency meter is used to measure an unknown frequency), may often fall between the value listed in the calibration book. To aid in the calibration of the proper dial setting or the frequency corresponding to these intermediate values, the following method (called "interpolation") should be used.

EXAMPLE A:

The observed dial setting is 2754.2. This setting lies between the two successive book values 2756.3 and 2752.7. The corresponding frequencies for these book values are 195.0 and 194.9 kc. (fundamental) respectively.

Problem: To find the unlisted frequency corresponding to a dial setting of 2754.2.

Solution: The facts are stated numerically in the following form:—

Dial settings—

$$\text{Diff. } 3.6 \left\{ \begin{array}{l} 2756.3 \\ 2754.2 \\ 2752.7 \end{array} \right\} \text{Diff. } 1.5$$

Corresponding Frequencies (kc.)—

$$\left. \begin{array}{l} 195.0 \\ F? \\ 194.9 \end{array} \right\} \text{Diff. } 0.1 \text{ kc.}$$

F = unknown frequency.

Therefore—

$$(i.) 0.1 \text{ kc.} \div 3.6 \text{ div.} = 0.0277 \text{ kc. per dial division.}$$

$$(ii.) 0.0277 \text{ kc.} \times 1.5 \text{ div.} = 0.0415 \text{ kc. change from lowest calibration frequency to F.}$$

$$(iii.) 194.9 \text{ kc.} + 0.0415 \text{ kc. change} = 194.9415 \text{ kc.} = F.$$

In the above problem, a change of 3.6 dial divisions (from 2752.7 to 2756.3) causes a change of 0.1 kc. in frequency (from 194.9 to 195.0 kc.). This represents a change of 0.0277 kc. per dial division, (i.) above. Since there are only 1.5 dial divisions between 2752.7 and 2754.2, the difference in frequency between these settings will equal 0.0277 kc. \times 1.5 div., (ii.) above. This difference (0.0415 kc.) is then added to the lower known frequency (194.9 kc.) at the dial setting of 2752.7, (iii.) above, to give the unknown frequency, F.

EXAMPLE B:

It is desired to set the frequency meter to a frequency of 194.95 kc. This frequency lies between the two successive book values 195.0 and 194.9 kc.

Problem: To find the dial setting which corresponds to the frequency 194.95 kc.

Solution: The facts are stated numerically in the following form:—

Dial settings—

$$\text{Diff. } 3.6 \left\{ \begin{array}{l} 2756.3 \\ D? \\ 2752.7 \end{array} \right\} \text{Diff. } 0.05 \text{ kc.}$$

Corresponding frequencies—

$$\left. \begin{array}{l} 195.0 \\ 194.95 \\ 194.9 \end{array} \right\} \text{Diff. } 0.1 \text{ kc.}$$

D = unknown dial setting.

Therefore—

$$(i.) 3.6 \text{ div.} \div 0.1 \text{ kc.} = 36 \text{ dial divisions per kc.}$$

$$(ii.) 36 \text{ div.} \times 0.05 \text{ kc.} = 1.8 \text{ dial divisions—change from lowest dial reading to D.}$$

$$(iii.) 2752.7 + 1.8 = 2754.5, \text{ the dial setting D for a frequency of } 194.95 \text{ kc.}$$

In the above problem, changing the dial setting from 2752.7 to 2756.3 (3.6 dial divisions) causes a change of 0.1 kc. in frequency (from 194.9 kc. to 195.0 kc.). This represents a change of 36 dial divisions per kc., (i.) above. An increase in frequency from 194.9 kc. to 194.95 kc. is a change of 0.05 kc. Since a change of 36 dial divisions causes a change of 0.1 kc. in the frequency, an increase of 0.05 kc. requires a change of 36 div. \times 0.05 equal 1.8 dial divisions, (ii.) above. This increase (1.8 div.) is then added to the dial reading (2752.7), corresponding to the lower known frequency (194.9 kc.) to obtain the dial setting D corresponding to a frequency of 194.95 kc., (iii.) above.

The methods shown are accurate for all frequency columns (including harmonics) in the calibration book.

[The reader is referred to Jan. '61 "A.R." for comments regarding accuracy.—Ed.]

* 17 Gilbert Street, Wodonga, Vic.

Technical Correspondence

SCR211 FREQ. METERS

Editor "A.R.," Dear Sir,

A short note concerning the Editorial postscript to my article on Frequency Meters in the January issue.

So far as I can ascertain, the "official handbook" on SCR211 Meters is War Dept. Technical Manual 33 A1-5-19-1, formerly 40SCR211-5, or Army TM11-300. Anyway, these publications purport to describe SCR211 Frequency Meters models A, B, C, D, E, F, J, K, L, M, N, O, P, Q, R, T, AA, AC, AE, AF, AG, AH, AJ, AK, AL and AN. It is clear from para 3 of this handbook that the likely error of such equipment is 0.34% at 4 Mc.

I am aware that there is a U.S. Navy document N.A.V.A.E.R. 08-5Q-38 and 45 which relates to the LM13 and 14 series frequency meters, and which ascribes magical accuracy to such equipment, as you say 0.01% at 2-20 Mc. and 0.02 on the low band.

It is obvious that the LM and SCR211 series equipments are very similar, particularly in the frequency determining circuitry and in the important

mechanical aspects. Such differences as occur are largely the result of adding modulation, and will not improve (or degrade) accuracy significantly.

The crystal reference in both equipment is virtually identical, having a temp. coefficient of about 1 cycle per degree, and supposedly being set during calibration to within 5 cycles of reference.

The dial mechanism and condenser are identical, BUT the Navy admit to the presence of up to 0.3 division backlash, whilst the Army and Air Force eliminate the effect of this by clockwise rotation to the final setting. Nevertheless, the Naval accuracy figure is better!

The point to stress is that Tech Orders are NOT always infallible, particularly if the statistical background is not known. For example, the U.S.A.F. appreciation of the effect of random inaccuracies in frequency may be more highly developed than that of the "fish-heads". As a result, they MAY publish error figures assessed at the 95% level, against a possible say 50% level for the Navy. This could account for a factor of about 3 between figures published for the SAME equipment!

Frankly, I don't know the basis of calculation for either of the above-

mentioned manuals, but I do know that on my experience, I am not prepared to accept that LM series equipment is significantly different to SCR211 in regard to accuracy, re-set or otherwise.

Whilst the editorial P.S. ascribes a good capability to all SCR211 types, quite clearly the fellow who makes them doesn't!

My plea is simply to ensure that we don't fall into the trap of thinking these portable freq. meters are secondary standards, whose accuracy is 25 c.p.s., or 0.01%. The fact is that the great majority of such boxes, particularly the models on the disposal market, just won't make it!

In such circumstances there is a need for official band edge marker transmissions, particularly as I.T.U. requires all sideband components to be within the allotted channel. To be safe on this, and to recognise frequency measuring errors, can well leave the end of each band unused for say 10 kc.! Personally, I am not that timid, but there is little defence if a monitoring station measures, on secondary standard equipment, out-of-band transmissions!

—C. G. Harvey.

A SIMPLE CHASSIS BENDING TOOL

C. H. L. EDWARDS, G8TL

Modulator Design with OC26 Transistors

Publication Committee member, VK-3UJ, whose name appeared at the head of the reprint, "Modulator Design with OC26 Transistors," has pointed out that credit for the article should be given to the author, Mr. J. R. Goldthorp, of Mullard Australia Pty. Ltd., who published the original in Mullard "Outlook," Australian edition. Our apologies to Mr. Goldthorp for the error made.

The following corrections to the reprint in May "A.R." should be made: Column 2, line 9, "x 50" should be deleted; column 2 line 13, "= 0.21V" should be inserted; page 7, column 1, lines 3 and 4, "frequency cut-off" does not accurately describe the symbol "fae" which appeared in the original article; page 7, column 1, line 9, "12K ohm" should read "1.2K ohm."

Mr. Roudie has suggested that a 200 to 500 μ F. condenser be added across the battery supply to the modulator to keep the power supply impedance low under varying conditions.

REMEMBRANCE DAY CONTEST

12th and 13th AUGUST, 1961
1800 hours to 1759 hours E.A.S.T.

W.I.A. D.X.C.C.

Listed below are the highest twelve members in each section. New members and those whose totals have been amended will also be shown.

PHONE

Call	Cer. C'tnt- No. ries	Call	Cer. C'tnt- No. ries
VK6RU	2 253	VK6KW	4 202
VK6MK	43 248	VK4HR	12 192
VK5AB	45 243	VK4RU	23 184
VK4FJ	21 221	VK3BZ	3 176
VK3WL	14 211	VK3GB	50 171
VK3ATN	26 204	VK3EE	10 163

C.W.

Call	Cer. C'tnt- No. ries	Call	Cer. C'tnt- No. ries
VK3KB	10 289	VK4HR	8 218
VK3CX	26 279	VK3XU	48 213
VK4FJ	39 264	VK7LZ	17 212
VK3NC	19 236	VK6RU	18 211
VK3PH	15 226	VK3YL	39 203
VK3BZ	8 222	VK5RX	23 196

New Member:
VK3AWP 69 133

Amendments:			
VK4SD	52 172	VK2OW	58 146
VK3XO	43 168	VK3ARX	66 142
VK4RW	47 162		

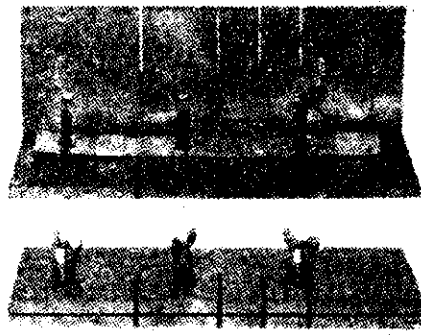
OPEN

Call	Cer. C'tnt- No. ries	Call	Cer. C'tnt- No. ries
VK2ACX	6 269	VK3BZ	4 231
VK4FJ	32 267	VK3HG	3 225
VK6RU	8 266	VK3WU	45 225
VK6MK	74 256	VK7LZ	23 223
VK3NC	77 236	VK3XU	61 221
VK4HR	7 233	VK6KW	13 218

New Member:
VK2APK 82 125

Amendments:			
VK4RW	52 208	VK3HL	75 160

pieces of aluminium cut from the corners between the bolts, cutting them to size if necessary and keeping them behind the slots to allow the chassis material to slide in unhindered. On top of them, place another very thin piece of metal (such as tin) and bolt the plates together again. The slot between them will now be the thickness of the aluminium to be bent plus the "ten thou" clearance to allow the material to slide in.



Two views of the tool. Below, closed; above, opened to show the pieces of aluminium and tin placed between the plates.

The metal to be bent is then pushed between the faces of the tool up to the bend line for one of the longer sides. Then, keeping the aluminium flat on the bench, bend upwards with the jig until it is at right angles to the metal. The other long side should next be bent in a similar manner.

To make the last two bends (the short sides) the slots in the tool are used, the previously bent sides being in line

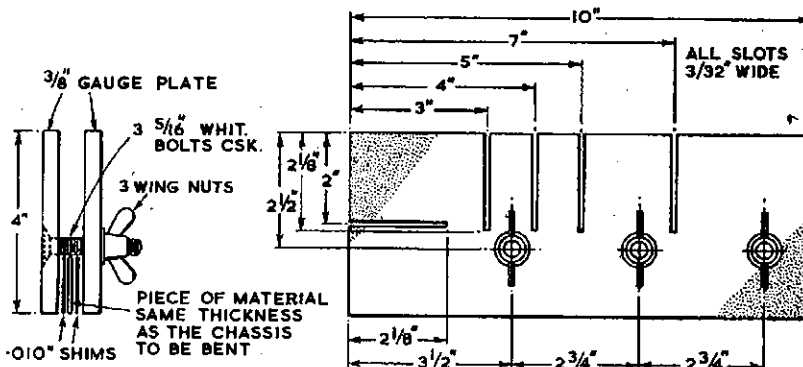


Fig. 1.—Layout of the chassis bending tool.

MAKING A CHASSIS

To bend a chassis, the following procedure should be adopted. Mark out the width and length of the chassis to be made plus twice its depth. Cut out the four corners and put the pieces aside for use later. Next, open up the jig by removing the wing nuts and sliding out the bolts. Put three of the

with one edge of the tool and an appropriate slot. If care is taken, a neatly bent chassis will result.

The same type of tool can be made from wood if desired, though it will obviously not last so long as the bending edges will wear more quickly. However, they could be planed down from time to time. It is advisable to use plywood, eleven ply $\frac{3}{8}$ " thick being suitable.

* Reprinted from R.S.G.B. "Bulletin," Nov. '68.

3 Kc. CUT-OFF LOW-PASS FILTERS*

R. G. ROPER, VK5PU

THE purpose of this article is to present a few representative audio low-pass filter circuits; anyone desirous of designing their own filters to particular specifications is referred to the section on filters in the A.R.R.L. Handbook.

The restricting of transmitted information to a minimum bandwidth is becoming more and more of a necessity on today's crowded bands. By using a filter with a cut-off frequency of 3 Kc. very little voice individuality is lost, but the spectrum occupied by the transmission is reduced to about one-third that occupied by a rig with a "wide open" modulator. Audio filtering is also a "must" in s.s.b. phasing-type rigs. Audio phase-shift networks of the type normally used by Amateurs produce the desired output phase relationships only over a limited audio range. If the audio input to such phase-shift networks contains frequencies outside the 300 cycles to 3 Kc. limits, splatter and insufficient suppression of the unwanted sideband will result.

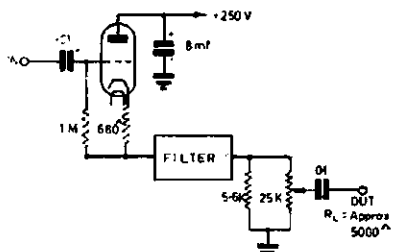


Fig. 1.—Suitable circuit for driving any of the filters mentioned. Max. input equals 5 volts peak to peak.

If low-level clipping is used to increase the average audio content of a signal, a low-pass filter after the clipper is essential to attenuate the higher order harmonics generated in the clipping stage.

Attenuation of low frequencies is easily accomplished by the use of low values of coupling capacitors in the early audio stages, or by the use of a 150K load resistor for a crystal microphone (the latter being a dodge used by Phil Williams in his s.s.b. rig).

Sufficiently sharp top cut is not so easily achieved, however, and this has proved a bugbear in the past. Most Amateurs have access to an RC bridge which will enable them to select 2% capacitors, but to wind inductances to the required tolerance is impossible without suitable test gear, and a time consuming process even with such instruments available.

The production by two manufacturers of suitable ferroxcube pot cores has removed the guesswork from inductance winding for the Amateur, the only prerequisite for success being the ability to count turns.

Limited stocks are available of Mullard Ferroxcube Pot Cores type LA1,

price 14/6 including sales tax. These pot cores are machined to optical tolerances, each core having individually adjusted gap so that the turns per millihenry can be given to an accuracy of 1%.

The formula for calculation of the number of turns (n) required to produce an inductance of L millihenries on an LA1 pot core is

$$n = 52 \sqrt{L}$$

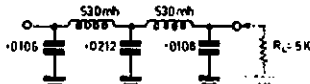


Fig. 2.—Low-pass filter, 3 Kc. cut-off, 30 db. per octave attenuation.

In the filter circuits following, certain enamelled wire gauges have been specified. Larger diameter wire, or silk or cotton covered wire of the specified gauge cannot be used, since the bobbins will not then take sufficient turns to produce the required inductance. Lighter gauges than specified may be used, but Q values will suffer because of the increased resistance of the windings. The available winding area is 0.05 sq. inch.

Because of the tolerances involved in grinding, the outsides of the cores are marked so that the ground faces can be matched when the cores are re-assembled.

Attention is drawn to the fact that all the filters described match to the load resistance; the required inductance values for constant K section filters are directly proportional to the load resistance; larger inductances mean more turns, and hence smaller wire with higher resistance for a given winding area. This results in lower overall Q. Distributed capacities also play a more important part at higher impedances.

Because of core saturation, these pot cores can only be used at low levels. As a filter is progressively overdriven, its cut-off frequency tends to rise, and the filter itself produces clipping and higher order harmonics. In the filters described, up to 30 volts peak to peak can be handled with negligible distortion. Note that the driving circuit shown is only capable of handling up to 5v. peak to peak.

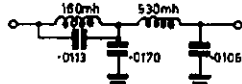


Fig. 3.—Low-pass filter, 3 Kc. cut-off, m-derived end section. Rejection notch at 3750 cycles.

The all-enclosing nature of the pot core ensures that negligible external field is created by the inductances, and effectively shields against hum pick-up. They may be stacked or placed as layout decrees, without any regard to possible coupling. (Mounting of filters on plate transformers may be tempting fate a little too much. However, reasonable separation from power transform-

ers is a necessity for low level audio stages anyway; if hum does not affect the associated circuitry, it will not be picked up by the pot cores.)

A suitable circuit for driving any of the filters given is shown in Fig. 1.

The performance of the two filters (Figs. 2 and 3) is comparable, with Fig. 3 having a sharper cut-off. However, Fig. 3 filter is more prone to ringing if not preceded by sufficient bass attenuation.

Capacitance tolerances in Figs. 2 and 3 are $\pm 5\%$ of stated value (all values given are in microfarads). In Fig. 4 the tolerance is $\pm 2\%$. A Philscope will give the required 2% accuracy. At these impedances and frequencies, reputable brand paper capacitors are satisfactory; micas show greater stability with temperature and age.

Two "ultimate" low-pass filters (Fig. 4) have been built using a mixture of mica and paper capacitors paralleled up to give the right values, and these have been operating satisfactorily 24 hours a day for six months.

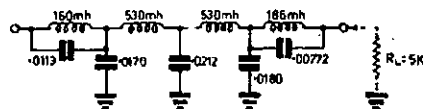


Fig. 4.—"Ultimate" low-pass filter, 3 Kc. cut-off. Rejection notches at 3750, 4300 cycles. Passband is flat to 3 Kc., falls to -54 db. at 3.7 Kc., and attenuation remains greater than this at all higher frequencies.

INDUCTANCE TABLE

This table is compiled for the use of LA1 type pot cores, using the formula $n = 52 \sqrt{L}$ mentioned earlier:—

Inductance Milli- henries	n (No. of Turns)	Enamel B. & S.	Near- est S.W.G.
160	655	34	38
186	712	35	39
530	1196	38	42

1960 "CQ" CONTEST PHONE RESULTS

All Band—Single Operator		
VQ4DT	.....	558,285 pts.
Multi-Operator—Single Transmitter		
4X4GB	.....	729,135 pts.
Multi-Operator—Multi-Transmitter		
K2GL	.....	383,112 pts.
Single Band Leaders		
28 Mc.	LUI1DAB	..... 126,808 pts.
21 Mc.	VQ4RF	..... 214,389 pts.
14 Mc.	CX2CO	..... 333,168 pts.
7 Mc.	YO9CN	..... 3,367 pts.

Single Operator—Australia

Number groups after call letters denote the following: Band, final score, number of QSOs, zones and countries.			
VK3TL	..... 14	1,650	30 12 13
VK4DD	..... 14	24,444	113 32 52
VK5AB	..... 14	24,691	126 26 46
VK6RU	..... A	61,525	206 40 67
VK7WA	..... A	3,619	42 21 26

* Reprinted from "The South Australian Wireless Institute Journal," Jan. '61.



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TYPE PT1870.—Primary: 230 or 240 volts to high, medium or low taps. (Overwound primary.) Suitable for switching with non-shorting contacts.

Secondary: 1: 850, 750 or 600 volts per side of c.t., depending on primary tap selected. D.C. load current 200 mA. continuous or 250 mA. part intermittent with choke input filter.

Secondary: 2: 4.5 to 6 volts at 0.3 amp. for pilot lamp. For use with 5R4GY rectifier, choke input filter.

TYPE PT1400.—Primary: 200, 220, 230, 240 volts.

Secondary: 565, 500, 425 volts per side of c.t., 250 mA. condenser input filter.

Filaments: 2 x 6.3v. (3a.), 2 x 2.5v. (3a.), 5v. (3a.). Horizontal mounting.

TYPE PT1371.—Primary: 200, 220, 230, 240 volts.

Secondary: 1000, 850, 750, 600, 500 volts per side of c.t. 300-400 mA. choke input filter.

TYPE PT1305.—Primary: 200, 220, 230, 240 volts.

Secondary: 2.5v. c.t. 10a. for 2 x 866/A fls. Max.: D.C. wkg. 3000 volts.

TYPE PT1516.—5 v. at 3 a., 1000 v. D.C. working. For use with h.t. power supply and high-level negative peak clipper filament voltage.

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TYPE Z3044.—12 Henrys 200 mA. D.C. resistance = 165 ohms.

TYPE Z3045.—10 Henrys 250 mA. D.C. resistance = 130 ohms.

TYPE Z3046.—10 Henrys 300 mA. D.C. resistance = 90 ohms.

TYPE Z3047.—5-15 Henrys 250-50 mA. D.C. resistance = 70 ohms.

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" 66 MA	£11/3/6
" 66 MD	£9/3/0
" 67 MA	£11/3/6
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NATIONAL FIELD DAY CONTEST 1961 RESULTS

FORTUNE smiled on the National Field Day Contest this year in so far as the weather was concerned as it was much better than it was last year and in consequence portable operation was much more pleasant. It was pleasing to see the increase in the number of multiple operator stations working portable in the Contest. Some of these were very elaborate and must have required very careful planning to cover every eventuality in the field. These stations in general made high scores and judging from the logs, there was also associated a high measure of fun and experience.

The highest score in Section A (single operator, phone) was made by VK7TT with 467 points, followed by VK2AAH with 382 points. Section B (single operator, c.w.) was poorly contested and in this section top score was made by VK5XK with 433 points. The highest score in Section C (multiple operator, open) was made by the VK5LZ group with 1,550 points and closely followed by the VK3APC group with 1,510 points. VK3AKN gained highest score in Section D with 690 points from VK-2YN who gained 475 points. D. Grantley gained the highest score in the receiving section with Miss Martin in second place.

A vast array of equipment was assembled in the field during the weekend with the multiple operator stations combining the resources of a number of operators. VK2ARZ and VK2ABB used a v.f.o. with a 1625 p.a. VK3APC left nothing to chance and had duplicate stations available for most bands—two home brew tx working on 3.5 and 14 Mc., three Type 3 Mk. II. Transceivers for 3.5 and 7 Mc., and another home-brew tx for 144 Mc. The receivers included a BC342, a Collins and an Eddystone. VK3ADW at Mt. Blackwood used a 122 as the basis of the station and worked on five bands with five aeriels. VK3CS, with six operators, worked on five bands. VK3ASC, with five operators, used home built tx's on 7 and 50 Mc., a Panda Cub on 3.5 and 14 Mc., and a BC625A on 144 Mc. Receivers included an HRO, AR8 and an A.W.A. Communications rx. Long wire aeriels were used on 3.5 and 14 Mc., a Windom on 7 Mc., a Halo on 50 Mc. and a three element beam on 144 Mc.

VK4CS also used a Windom on 7 Mc. and a two element beam on 144 Mc. Receiver was a AR88D with a car radio and converter also. Three groups of operators worked at VK5LZ at Blacktop Hill. Group one worked on 7, 21 and 28 Mc., group two on 3.5 and 14 Mc., and group three on 50 and 288 Mc. Receivers included an Eddystone 750, CR100, a Super-regen. and a converter combination on 50 and 288 Mc. Aeriels included dipoles on 3.5, 7 and 14 Mc. and Yagis on 50 and 288 Mc. VK6VP, with five operators, used a Collins and a Geloso tx. The receiver line-up included a Collins 75A4, a Collins 75A1, a HRO, and a BC348. All this was housed in a caravan and a tent. VK7JB and two other operators used a 122 set and a BC342N receiver on 3.5, 7 and 14 Mc. bands.

In the single operator sections, the equipment used was much simpler. VK2AAH used a modified BC358A tx with an input of 22 watts from a transistorised DC/DC converter. Rx was a BC453 with a crystal locked converter. He used an 8 ft. centre loaded whip mounted on the car as aerial. VK3HE used a Type A Mk. III. Transceiver with 4-5 watts input to a 130 ft. antenna. VK4OL worked on 7 Mc. only with 3.5 watts input. VK5AQ used modified Command and No. 19 set on 3.5, 7 and 14 Mc. VK7TT used a No. 22 transceiver on 3.5 and 7 Mc. In the c.w. section, VK2ASZ went camping with a Type 3 Mk. II. set as transmitter and a BC342 rx. Both VK5XK and VK7LJ used Type 3 Mk. II. Transceivers.

Federal Contest Committee, W.I.A.

AWARD WINNERS

Section A (Portable, Phone)
 VK2AAH—H. F. Burtoft 382 pts.
 VK3HE—H. G. Hodge 344 "
 VK4OL—A. J. Hansen 211 "
 VK5AQ—T. F. Bobbins 359 "
 VK7TT—T. J. Tongs 467 "

Section B (Portable, C.w.)
 VK2ASZ—R. L. Lear 248 pts.
 VK5XK—A. J. Hewitt 433 "
 VK7LJ—L. R. Jensen 238 "

Section C (Portable, Multiple Ops.)
 VK2ARZ—M. R. Bruce 602 pts.
 VK3APC—Moorabbin and District Radio Club 1510 "
 VK4CS—Northern Command Signals Radio Club 262 "
 VK5LZ—Elizabeth Amateur Radio Club 1550 "
 VK6VF—V.h.f. Group of W.A. 878 "
 VK7JB—J. Batchler 763 "

Section D (Fixed Stations)
 VK2YN—J. R. Watt-Bright 475 pts.
 VK3AKN—D. G. Baulch 690 "
 VK5JT—J. Kilgariff 150 "
 VK7KS—C. K. Spiegel 435 "

Section E (Receiving)
 L2022—D. M. Grantley 560 pts.
 L3074—J. M. Hilliard 305 "
 VK4-SWL—C. H. Thorpe 300 "
 VK5-SWL—Miss O. J. Martin ... 360 "
 L7007—M. L. Jenner 300 "

INDIVIDUAL SCORES

Section A
 VK2AAH 382 pts. VK3AUC 87 pts.
 2ASZ 341 " 3OH 61 "
 2RJ 185 " 4OL 211 "
 3HE 344 " 4UX 205 "
 3AHN 237 " 4HZ 67 "
 3XN 166 " 5AQ 359 "
 3ZCG 150 " 5GG 125 "
 3ARL 144 " 7TT 467 "
 3JO 134 " 7JO 118 "

Section B
 VK2ASZ 248 pts. VK5XK 433 pts.
 2AAH 47 " 7LJ 238 "
 3AKN chk. log 7CH 203 "

Section C
 VK2ARZ and VK2ABB 602 pts.
 VK3APC, Moorabbin & District Radio Club (operators: VKs 3LC, 3JI, 3AFQ, 3ACS, 3ZIP, assisted on Sat. by 3KE,

3APD, 3NZ, 3AWO, and on Sun. by 3NQ, 3JE. Junior helps: J. Chandler, J. Antennella, G. Comber) .. 1510 pts.
 VK3ADW, VKs 3YQ, 3AEL, 3ZEO and 3ZCZ 774 pts.
 VK3CS, 3ATY, 3ZAI, 3ADL, 3AZR, 3AKT and 3AHJ (Sat. only) 721 pts.
 VK3ASC, 3OM, 3UJ, 3RN, 3ARZ, and 3ZPQ 693 pts.
 VK4CS, Northern Command Signals Amateur Radio Club (operators: VKs 4UW, 4ZBQ, 4ZCI) 262 pts.
 VK5LZ, Elizabeth Amateur Radio Club (operators: VKs 5HB, 5BP, 5QX, 5NO, 5FY, 5TM, 5NQ, 5ZCH, assisted by T. Strong, L. Catford, P. Field) 1550 pts.
 VK6VF, V.h.f. Group of W.A. (operators: VKs 6ZCP, 6ZDS, 6RU, 6BU, 6HK) 878 pts.
 VK7JB, VK7EJ, VK7CT 763 pts.

Section D

VK2YN	475 pts.	VK3XK	150 pts.
2GJ	85 "	3XQ	105 "
3AKN	690 "	3OH	70 "
3AUL	400 "	3ALD	30 "
3GE	360 "	5JT	150 "
3KC	355 "	5ZBL	60 "
3AUK	350 "	5DF	55 "
3LW	340 "	7KS	435 "
3QV	250 "	7WI	45 "
3PP	175 "		

Section E

L2022—D. M. Grantley	560 pts.
L2033—D. W. Shephard	345 "
L3074—J. M. Hilliard	305 "
L3099—J. Jobson	200 "
L3042—E. W. Trebilcock	145 "
VK4-SWL—C. H. Thorpe	300 "
VK5-SWL—Miss O. J. Martin	360 "
L5031—C. M. Hutchesson	220 "
L7007—M. L. Jenner	300 "

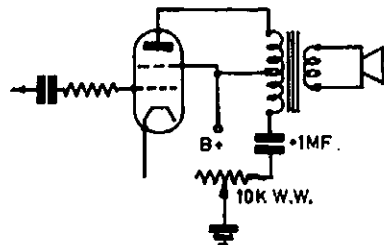
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A SIMPLE HASH BYPASS



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—L. W. P. Smith, VK2AWS.

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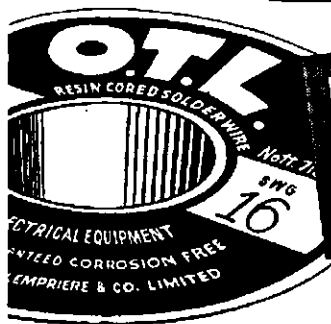
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0	2	4	6	8	10	12	14	16	18	20	22	24	45
28	GMT												28
21	-----												21
14	-----												14
7	-----												7
Mc.	E. AUSTRALIA — W. EUROPE L.R.												Mc.
0	2	4	6	8	10	12	14	16	18	20	22	24	45
28	-----												28
21	-----												21
14	-----												14
7	-----												7
Mc.	E. AUSTRALIA — MEDITERRANEAN												Mc.
0	2	4	6	8	10	12	14	16	18	20	22	24	45
28	-----												28
21	-----												21
14	-----												14
7	-----												7
Mc.	E. AUSTRALIA — N.W. U.S.A.												Mc.
0	2	4	6	8	10	12	14	16	18	20	22	24	45
28	-----												28
21	-----												21
14	-----												14
7	-----												7
Mc.	E. AUSTRALIA — N.E. U.S.A. S.R.												Mc.
0	2	4	6	8	10	12	14	16	18	20	22	24	45
28	-----												28
21	-----												21
14	-----												14
7	-----												7
Mc.	E. AUSTRALIA — N.E. U.S.A. L.R.												Mc.
0	2	4	6	8	10	12	14	16	18	20	22	24	45
28	-----												28
21	-----												21
14	-----												14
7	-----												7
Mc.	E. AUSTRALIA — CENTRAL AMERICA												Mc.
0	2	4	6	8	10	12	14	16	18	20	22	24	45
28	-----												28
21	-----												21
14	-----												14
7	-----												7
Mc.	E. AUSTRALIA — S. AFRICA												Mc.
0	2	4	6	8	10	12	14	16	18	20	22	24	45
28	-----												28
21	-----												21
14	-----												14
7	-----												7
Mc.	E. AUSTRALIA — FAR EAST												Mc.
0	2	4	6	8	10	12	14	16	18	20	22	24	45
28	-----												28
21	-----												21
14	-----												14
7	-----												7
Mc.	W. AUSTRALIA — W. EUROPE												Mc.
0	2	4	6	8	10	12	14	16	18	20	22	24	45
28	-----												28
21	-----												21
14	-----												14
7	-----												7
Mc.	W. AUSTRALIA — N.W. U.S.A.												Mc.
0	2	4	6	8	10	12	14	16	18	20	22	24	45
28	-----												28
21	-----												21
14	-----												14
7	-----												7
Mc.	W. AUSTRALIA — N.E. U.S.A.												Mc.
0	2	4	6	8	10	12	14	16	18	20	22	24	45
28	-----												28
21	-----												21
14	-----												14
7	-----												7
Mc.	W. AUSTRALIA — S. AFRICA												Mc.
0	2	4	6	8	10	12	14	16	18	20	22	24	45
28	-----												28
21	-----												21
14	-----												14
7	-----												7
Mc.	W. AUSTRALIA — FAR EAST												Mc.
0	2	4	6	8	10	12	14	16	18	20	22	24	45
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ROSS HULL MEMORIAL V.H.F. CONTEST 1960-61 RESULTS

THE Federal Contest Committee has much pleasure in announcing the results of the last Ross Hull Memorial V.h.f. Contest which was held in December 1960 and January 1961. Although conditions on the lower frequencies were disappointing and there were fewer overseas contacts, there was increased support from VK Amateurs. No logs were received from New Zealand and the only overseas log came from JA1FAF for one contact only. As in other contests, it was noticed that many who took part in the contest failed to submit logs.

The poor support for Section A suggests that this section could possibly be combined with Section B and made an open section in which both phone and c.w. contacts with a given station on the band could be counted. VK4 stations favoured Section B, while strong support for Section C came from VK3.

Congratulations go to the Trophy Winner, VK5GG, who gained a total of 969 points, of which 905 were gained in Section B. This was the highest score in any one section of the contest. He was followed by VK3ARZ with 840 points, all gained in Section C. This was a particularly fine effort when it is remembered that most of his contacts were worth one point only. Two stations only entered for all three transmitting sections, and of these, VK3CS easily won the award from VK7LZ. Although the receiving section was relatively poorly supported, the logs submitted were of a high standard.

Special commendation also goes to VK3ARZ and VK5GG whose large logs were particularly well set out and very neatly compiled. These were in contrast to a few logs which were made difficult to check by the jumbling up of the sections and sequence numbers. One log, either by accident or misreading the rules, included many contacts twice. In regard to the scoring, the bonus of 20 points per new call area were not intended to be applied to Section C although the printing of the scoring table for Section C above that for Section B in "Amateur Radio" made it appear differently.

Highlights in the contest were the 576 Mc. contacts between VK2ZAH and VK2ZCF and between VK6ZAA and VK6ZDS. VK5GG made 32 contacts on 288 Mc. VK3ZER claimed a record for working VK5AW on 288 Mc. He also heard VK7LZ on the same band. Some contestants suggested a distance basis for scoring contacts on 144 Mc. and higher frequencies. While this might be a good way to score these contacts, it would be most difficult for the Committee to check. However, the Committee keenly appreciates the very helpful suggestions made by competitors and regrets its inability to reply to them individually.

Federal Contest Committee, W.I.A.

TROPHY WINNER
VK5GG—G. A. Gormly 969 pts.

AWARD WINNERS
Section A (C.w. Transmitting, 50-54 and 56-60 Mc. Bands)
VK3CS—I. MacMillan 53 pts.
VK4PU—J. Purdon 25 "
VK5ZDI—B. J. Burns 122 "
VK7LZ—C. P. Wright 27 "

Section B (Phone Transmitting, 50-54 and 56-60 Mc. Bands)
VK2ZLP—D. L. Price 423 pts.
VK3ZEA—G. W. Small 518 "
VK4ZBZ—R. M. Feenaghty 678 "
VK5GG—G. A. Gormly 905 "
VK6ZCB/6—K. C. Bicknell 447 "
VK7LZ—C. P. Wright 199 "
VK3ZFQ/8—K. M. Cocking 135 "
VK9XK—S. R. Coleston 234 "
JA1FAF—Seija Pueta 30 "

Section C (Phone Transmitting, 144 Mc. and Higher Bands)
VK2ZCF—R. C. Norman 89 pts.
VK3ARZ—W. Roper 840 "
VK5AW—D. A. Carthew 334 "
VK6ZDS—R. K. Graham 19 "
VK7ZAS—G. C. D'Emden 60 "

Section D (Receiving, Open, all Bands from 50 Mc. and Higher)
L2211—R. C. Aberneathy 343 pts.
L3055—M. R. Cox 259 "
VK4-SWL—C. H. Thorpe 355 "

Highest Aggregate Score in Section A, B and C
VK3CS—I. MacMillan 525 pts.

INDIVIDUAL SCORES

Section A			
VK3CS	53 pts.	VK5ZDI	122 pts.
4PU	25 "	7LZ	27 "
Section B			
VK2ZLP	423 pts.	VK4ZFA	138 pts.
2ABR	335 "	4ZEA	119 "
2ZGM	304 "	4ZDG	116 "
2ZCF	286 "	4ZRV	95 "
2ZDA	238 "	5GG	905 "
2ZFS	187 "	5ZFM	459 "
2ZDP	154 "	5ZBL	300 "
2ZDM	103 "	5ZCJ	173 "
3ZEA	518 "	5ZCQ	161 "
3ZKJ	310 "	5ZBI	101 "
3ZFM	277 "	7ZAQ/5	76 "
3CS	239 "	6ZCB/6	447 "
3ZCG	171 "	6ZAA	355 "
3ZCZ	149 "	6ZCD	200 "
3NN	147 "	7LZ	199 "
3ZBL	145 "	7ZAC	177 "
3QV	129 "	7ZAQ	152 "
3OF	93 "	7ZAO	120 "
4ZBZ	678 "	7ZAX	111 "
4ZAZ	562 "	7ZAJ	104 "
4NG	419 "	3ZFQ/8	135 "
4ER	215 "	9XK	234 "
4PU	213 "	JA1FAF	30 "
4RW	146 "		
Section C			
VK2ZCF	89 pts.	3CS	233 "
2ZGM	28 "	3ZCZ	215 "
2ZDA	24 "	3ZEA	143 "
2ZDP	13 "	3ZBL	130 "
3ARZ	840 "	3QV	126 "
3ZER	294 "	3ABP	103 "
3ZCG	263 "	3ABK	84 "

Section C (Continued)

3AFW	80 "	5ZBL	21 "
3NN	75 "	5ZDI	18 "
3NB	53 "	5ZCJ	14 "
3ZGL	50 "	6ZDS	19 "
3ZDA	48 "	6ZAA	13 "
VK3ZFM	44 "	7ZAS	60 "
3AIJJ	38 "	7ZAU	58 "
3ZFC	34 "	7LZ	51 "
3ZJM	33 "	7PF	47 "
5AW	334 "	7ZAO	10 "
5GG	64 "	7ZAQ	10 "
5ZGB	30 "		

Section D

L2211—R. C. Aberneathy	343 pts.
L3074/2—J. M. Hilliard	50 "
L3055—M. R. Cox	259 "
L3074—J. M. Hilliard	247 "
L3065—I. D. Thomas	148 "
VK4-SWL—C. H. Thorpe	355 "

FSK TRIAL PERIOD ON ALL AMATEUR BANDS

Permission has been granted by the Postmaster-General's Department for the Amateur Service in Australia to use Class F1 emission (Frequency Shift Keying) with a maximum frequency shift of 850 c.p.s. on all licensed Amateur bands for a trial period up to March 31, 1963, when the position will be reviewed in the light of conditions then obtaining.

The Department does not propose to notify individual Amateurs, so all readers are asked to pass this information on to those who may be interested in Class F1 transmission. This information will also be transmitted from W.I.A. stations for the information of all Australian Amateurs.

In connection with the use of Class F1 emission, Amateurs are reminded that they must abide by Paragraphs 135 and 136 of the Handbook for Operators of Amateur Wireless Stations relating to transmitting call signs of the calling and called stations which must be transmitted at least once in every five minutes and clearly indicate the nationality prefix letters—in the case of Australia, "VK".

When Regulations 135 and 136 are applied in the case of Class F1 emission it will be necessary that the call sign be transmitted by either hand speed morse code (Class A1 emission) or radiotelephony signals.

It is not anticipated at this stage that many will have the necessary equipment for FSK transmissions although it is known that some Amateurs will be participating in FSK experimentation. Reports will be welcomed by the Federal Council of the W.I.A. concerning this mode of transmission and its effect (if any) on the normal use of the Amateur Service bands.

VK-ZL CONTEST

PHONE: 30th SEPT. and 1st OCT.
C.W.: 7th OCT. and 8th OCT.
1000 hrs. GMT to 1000 hrs. GMT

*without change
there can be no progress!*

L M Ericsson Telephone Co. Pty. Ltd., Melbourne, the Australian subsidiary of the world-wide L M Ericsson Telephone Concern, with headquarters in Stockholm, Sweden, pioneers in the development and manufacture of telecommunication and allied equipment, is now the major shareholder in this Company, which was formerly Trimax Transformers Proprietary Limited.

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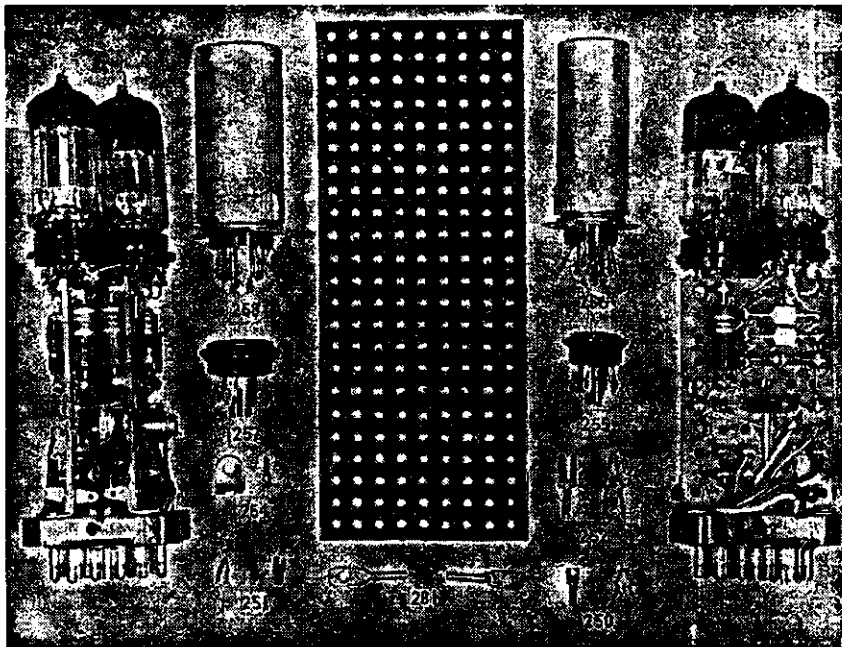


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DX

John C. Pinnell, VK2ZR
15 Summit Avenue,
Earlwood, N.S.W.
Phone: UW 4248.

Reports indicate that DX conditions are holding fairly well but are slowly on the decline, which is to be expected. I have been inactive for several weeks so all information in these notes have been passed along by others who have been good enough to write to me.

In this, my last effort, I am rather pushed for time. It was necessary for me to make a special trip from Katoomba to collect the mail and get any last minute letter that may have arrived. Thanks for all those letters I have received over the past 28 months.

NEWS AND NOTES

Carlos CR7CR, Mozambique, is active on three bands using s.s.b. He works 10 and 15 mx with three element beams, and 20 mx with a long wire.

UA0BP and UA9OI are both active in Zone 18 on s.s.b. UA0KAR is on s.s.b. from Dickson Island. UC2AA is now active on s.s.b. on 80, 40 and 20 mx.

EPIAD has announced the organisation of the Amateur Radio Society of Iran, with himself elected President. After the first week in June, EP2AF (Richard Sanderson, U.S. Embassy, A.P.O. 205, New York, N.Y.) will assume the duties of QSL Manager for all EP stations.

Contrary to rumours 9N3PM, the Hillary expedition in Nepal, is located four miles inside the Nepal-Tibet border. The party has not been in Tibet (up till end of April), nor are there any plans to go there. The battery powered rig has been used mostly to contact the expedition main hqrs. in Katmandu, but a few outside DXers have been worked.

The Yasme III, in San Diego, is being thoroughly reconditioned in the hope that the future may hold a resumption of Danny's exploits. This, however, will depend on the DX fraternity supporting the foundation. If Danny does resume his world cruise it is understood that his wife, Naomi, will not accompany him. In such an event all efforts will be made to recruit one or two other crewmen and operators to accompany the voyage.

Ted Howell, who was very popular as 5N2GUP recently, and before that ZD2GUP and SUIFX, reports he is now home from the Federation of Nigeria, and he will not be returning. If you need his card or cards, send another card to him, G3GUP, 184 Beeches Rd., Chelmsford, Essex, England.

If you worked 4X4JM, MB, MJ or MU, between April 3 and 7, on 14010 kc, you have worked the lowest spot on earth, 1300 ft. below sea level. Location, Dead Sea DXpedition.

Krue Island and East Pakistan have been added to the official DXCC country list (for A.R.R.L.). Confirmations from either place must be dated Nov. 15, 1945, or later. Confirmations must not reach A.R.R.L. before 1st July, 1961.

JATQQ/1 is operating from Marcus Island. He will be found on 7 Mc.

KS4BC will be active from Swan Island this month (June).

FQ8HO logs are in the hands of K8EC (3803 Liggett Drive, San Diego, 6, Calif.) who is still his manager. FQ8HO has left the Republic of Tchad for his home in France on March 20. He will remain in France for several months before again going abroad on a new assignment.

Pitcairn Island, VR6AC, is on 14250 kc. s.s.b., and various frequencies on c.w. His reported QSL manager will be W8RCD, W. R. Goddard, 750 San Fernando, San Diego 6, Calif.

AC5PN, Bhutan, is very active on 14080 kc. c.w. from 1230 to 1400z.

It seems that Indonesia will become active again this month (June) after many years of silence. Bob Burgess, K3HVN, will be in Tjimiari for 14 months with the call sign PK-15X. All cards should go to Mrs. Burgess, 706 Mayo Rd., Glen Burnie, Maryland.

Jack HB9TL will be in one of the neutral zones using the call 9K4A for the first two weeks of June.

z zero time—GMT.

TL8 will be the new prefix for the Central African Republic; TN8 for the present (French) Congo Republic; TT8, Tchad Republic; and TU2 Ivory Coast Republic.

Rev. Bro. Kinsella, VK2AXK, is at the C.B.C. Gosford. Under his guidance the College is now on the air with its own call sign, VK-2ATQ, and anxious to make contacts. This information comes from BERS-195 who heard the College on 20 mx A3, making their first QSO. Bro. Kinsella says he eagerly scans the DX page of "A.R." each month. He would like to see the times of reception/contact of DX calls alongside the call sign. (Several others have made this request recently.—ZZR). An effort will be made to cover this wish.

ACTIVITIES

Frank VK2QL has not been so active again this month. However, he worked E88CG on 7 Mc. c.w. and UL7LE, HB1DX/FL on 14 Mc. c.w. The following QSLs have been received: ZK2AD, ZC4SS, HK0AA, MP4BCV, UM8FZ, YU7LAA, ZP5LS, ZC4AK, VS8MB.

VK9ZR has been inactive for ten weeks. He received 59 QSLs which included: YU3ZV, OH2WVW/9 in Arctic, ZP5LS, YV1AD, Z8JW, VQ4DW, 5ASTA, VU2RF, VK0WH, UA0OE, UL7LE, UM8FZ, UQ2DB, EA7CL, MP4BCV.

Ken VK8TL notes the number of Europeans coming through at odd times. Still using his dipole (half of which has sagged during the month to about a height of 20 ft., due to high winds), managed to work, amongst others, on 20 mx c.w.: C07AH, CR9AH, DJ2AE, DL4NAC, FZKL, FZEU, G3JAF, HAIKSA, HB9VW, I1ZTF, L88PF, OK1ZL, OK3FQ, SP9RF, UA2BD, UA-3LZ, UA4KAB, UC2KAR, U18KAD, UQ2AE/MM, VE8XY, VE8BH, VE0MC, VR3L, W80LJ/PK, Y0ZKAC, YV5ACM. QSLs received: CN8CS, EPIAD, ET2US, FB8XX (Kerguelen Is.), G3NNT, GM3NOV, GW3EQL, OH4OW, UB5KAF, VK9GP (Norfolk), VR4CB, VS1KP, ZK2AD, 9M2FS.

APPRECIATION

The Publications Committee, on behalf of all Amateurs, thanks John Pinnell for having written the DX page for so long and regret he has had to relinquish this task.

We are pleased to announce that Alan Shawsmit, VK4SS, will in future be writing the DX page. Please address all communications to him at 35 Whynot Street, West End, Brisbane, Qld.

David VK3QV has been fairly active on 28 Mc. phone, but found this band to be slackening off over the past few weeks. He expects the band to come good again next spring, that is if it follows out last year's pattern. 28 Mc. phone worked: JA1, 2, 3, 4, 6, 7, KH6RX (0705z), W5BZJ/KH6, UA0DZL, UA0LBQ, VQ-8AM (0830z), KZ5SE, KILXB, W3DPS, W4, 5, 8, 7, 8, 9, 0, W4YGM/MM (South China Sea), XE2AX, ZC4AB, ZE1JJ, ZE2JC, ZE3JU, ZE-7JD, ZLs 1, 2, 3, ZS2DY, ZS8EB, 4S7GE. 28 Mc. phone heard: CT1PK (0800z), HK4PX, KL7, KM6, T18FT, UA0DZL, VS1KF, VS5GS, ZK1AY, ZS4, ZS6, 4X4C (0730z), 9M2AD.

Hal VK4DO had a fairly good month on 14 Mc., but could not hear very many on 21 Mc. 14 Mc. c.w. worked: W/K, JA/KY, VE, DJ5TY, DL2AMG, D36LD, DJ2RE, DL1EE, DL1MF, DM3K, DL4NAC, F8ZZ, F8WK, F9OQ, G3ID, G3GQS, G5BZ, G8ZO, G8GP, G6XL, HB9UD, H82M, I1ADL, I1SZE, I1IAI, I1IAA, LU3RB, OE7FG, OK1ADK, OK1KTI, OK3OG, OK2YF, OK1KVV, OZ1RO, PY4ZG, SL5ZL, SMSAYN, SMSAJR, SMSWI, SP9DT, SP9KJ, SP9RF, SP-9DH, UA1KAG, UA4LE, UA9DT, UC2KAG, UC2KSA, VR1B, Y0BRW, Y08CF, ZP5CF, ZS-5KU, YU3HY, CN2BK. 14 Mc. c.w. heard: DL-1TH, DL3LE, DL5GW, DJ4DM, FB8ZZ, HC2U, HK0TU, HP18B, I1CT, I1ZS, LU1CA, OK1KNT, SMSCE, UA0KDA, UA0KFG, UA0CA, UA-4KWE, YN1OC, YV8CJ, XZ2BB. 14 Mc. phone worked: W/K, CT1FB, YV1DQ; 21 Mc. c.w. worked: W/K; heard: W/K, DM2AGD, F2MA, UA5LZ, UA4KED.

Don L202 had a good month from the listening angle, due mainly to pressure of work being eased and a new antenna. With the help of VK2QD he got a 90 ft. wire swung 40 ft. high and he says "the difference has to be heard to be appreciated." Listed below is a

few only of the countries heard; 80 mx c.w.: W2APH; 40 mx c.w.: W5CNE, W3NSY, W9FZC, VE7AU, W4BTU, W4MKT, J1ANN; 20 mx c.w.: KC4USN, OE9EJ, VR2DK, VS8DV, HM-1AP, G14RY, KM6BI, KL7AL, XE4UA, GC-2FMU, G2DPD, LU1GT, OK2QU, I1TEB, HL-1KQ, DL1EE, LZ2KSR, Y08CF, F77YI, FK8AE, U18KBA, KC8TM, HB1DX/FL, HK0TU, UQ-2AEM, KZ5GH, ZK1AK, VS8AC; 20 mx a.m. phone: F9BE, KW6CJ, VR1G, DJ2ZC, VR1B; 20 mx s.s.b.: KLTND, DJ4WN, DJ3JJ, VK0VK, YN1AK, ON4DY, G3AWZ, G8KN; 15 mx a.m. phone: JA, KH6, DU7SV, YU2CJ, VS8MB, KH6SN, YN3BLU, VR3L, VR2DS, KR6O. QSLs received: G3JAF, UO5PK, UA0KDD, Y0-3FD, G0JF, JA1CJN, G5BJ, F8FF, UC2EG, EA8NG, W80LJ/PK, OK1NQ, G3IVJ, VR3Z, OH8OB, VR6TC.

BERS-195: Eric heard the following stations on 3.5 Mc. c.w.: VR2DK, W6PNY, WDJU; 7 Mc. c.w.: JA1EUV, JA2ZA, JASAI, YU4AAH, YU5HUV, 4X4HC; 14 Mc. phone: FK8AU, VR-2BJ, VR2DE, 9M2DQ; 14 Mc. c.w.: CR9AH, FK8AW, HC2AC, HC2CB, HP1IE, JZ0PH, KM-6DG, KM6BT, KM6BI, KG6AK, OA4BW, OA4FN, W80LJ/PK, T12PZ, UA2AW, UA2BD, UC2KAG, UO6KAF, U18KBA, UL7KAA, UM-8KAA, UO5KAA, UP2NM, URZKAN, UA0KYA (zone 23), VE8YD (zone 2), VK9NW, VK9FU, VK9XK, VK0AV, VK0DA, VK0FZ, VK0TC, VK0VK, VP5BL, VP5CH (Grand Turk Is.), VR1B, VS1JT, VS1KP, VU2CQ, VU2SL, YV1AD, YU4AU, ZK1BS, ZL5AI, UQ2AE/MM, ZSSKU, LA8LF/M, SP2AX/MM, VE0NN, W68SI/MM. Eric received a QSL from PJ2ME which brought his confirmations to 268 countries. He also received a second card direct from SM-5KV/9QS, plus HC5CN, PJ2AE, PJ2ME, UA-2AC, UA2AG, UFGKAF, UM8KAB, UR2BU, URZKAT, VK9GP (Norfolk Is.), VQ3HZ, VS-6EQ, ZS4KJ, SM5KV/9QS, JA6AHY/MM. Hope you have a pleasant holiday in VK5 land.

ADDRESSES

EPIAD—Iran QSL Manager, Hal, A.P.O. 205, New York, N.Y.

VR3L—David, Christmas Island, A.R.C., C/o P.M. Honolulu, Hawaii.

ET2US—Dick, M.A.R.S. and Amateur Radio Club, of Kagnew Station, C/o A.P.O. 843, New York, N.Y. (VK3TL)

UA0KCK—Mihail, Nikolaevsk, on Amur.

F8BAB (1950)—QSL to F3AT, Ivan Pastre, 51 Avenue Pasteur, Auxerre, Yonne, France. (Ivan was FQ3AT and FQ-3AT/EE; operated F8BAB 1948 to 1950.)

ZC4SC and ZC4SS—QSL via R.S.G.B.

6W8AF—Rene Chatonnet, Box 7, Rufisque, Senegal Federation.

6W8AP—Louis Maurel, 42 Avenue Maginot, P.O. Box 6020, Dakar, Senegal Federation.

I wish to thank all those who sent notes this month, also Don Cheser, Burlington, Kentucky, U.S.A., for the use of his DX magazine.

Due to the pressure of personal business, this is my last effort at compiling the DX page notes. I will be off the air for several months and for a long time after that my DXing will be greatly curtailed. Please give the new Sub-Editor, Alan Shawsmit, VK4SS, the same support you have given me, for without your help it would be impossible to cover a very wide field of DX activity. 73, John VK2ZR.

RUSSIAN CALL BOOK

The Polar Bears Radio Club in Sweden has printed a Russian Call Book which lists near 1,000 stations from all rarer Russian regions, including UO, UG, UD, UF, UL, UI, UH, UJ, UM, UA9, UA0 (near 330 UA0s), UP0, etc. The call sign, name, QTH, Oblast/region, zone are noted for every station. Price is 2 dollars or 10 shillings per book. Write to P.B.R.C., Sven Elfving, Solgardsgatan 15, Ornskoldsvik, Sweden, for further details.

50 Mc. W.A.S.

Call	Cer. Add. No. Cntr.	Call	Cer. Add. No. Cntr.
VK2WJ	13	VK3RR	6
VK3ZFM	22	VK3HT	7
VK3GP	5	VK2AEZ	10
VK2VW	9	VK3XA	11
VK5GG	19	VK3GM	12
VK5ZAX	20	VK3ACL	14
VK3ZBL	21	VK3ZD	18
VK4RY	2	VK2HO	17
VK4HR	4	VK3ZEA	18
VK6LC	1	VK2ABC	8
VK6DW	3	VK2WH	15

S W L

Maurice Cox, WIA-L3055
Flat 1, 37 Boyd Crescent,
Olympic Village, Heidelberg,
N.23, Victoria.

A HAM'S POINT OF VIEW ON S.W.L'ING

"Dear s.w.l., your reports are valued and appreciated by most Hams who turn their beams DX-wise. Having been an s.w.l. myself, I appreciate your pleasure on receiving a QSL card and I will confirm every worthwhile report of my transmissions.

"Amateurs really like to know that they have been heard, but when a s.w.l. report is received, sadly lacking in detail, and only containing particulars that could easily have been taken from the station he was working—he wonders! So lads, put him out of his misery, give as much detail as possible in particular, topics of conversation that are not likely to be repeated by the station he is working.

"Wherever possible, address him with his name. "VK3WC, Dear Ewan," seems much more personal than the blunt call sign alone. "Give thought to the presentation of your report. A view-type card or characterure particularly depicting your country or area is sure to find favor and is most likely to find its way to the Ham shack wall, reserved for the Amateur's most prized QSLs. This, of course, is not absolutely essential as several of my most prized reports are well-written, interesting and informative letters. Unlike shortwave broadcast listening, the Amateur engages in two-way communication, and is most likely to have had direct reports from fellow Hams in your country or area; so the most interesting and informative you make your reports, the better are your chances of getting a QSL in return. Comparisons with other stations, particularly those from the same or adjoining call areas, band conditions at the time, stations whom you may have heard calling, the particular Amateur without making contact, are items of direct interest that are sure to please. Details of your equipment are of natural interest.

"But don't forget yourself. Are you young? Middle-aged? Or elderly? Your hobbies, profession, ambitions—do you aspire to become an Amateur or prefer to remain an s.w.l.? These and many other personal items are of great interest to me and I'm sure to many other Amateurs. In short, fellows, give the Amateur some compelling reason to confirm your report, this gives you great scope for your ingenuity, and surely the greatest of pleasure must come from receiving a QSL card from the hard-to-get Amateur. I know that after doing all things possible so many let you down, so be it. We will never get perfection, but never let that deter you from striving to better your averages. It is hoped that many more QSLs be the reward of your effort, patience and courtesy. Yours fraternally, Ewan VK3WC."

I thought it a good idea to let all VK s.w.l. see the above letter that is enclosed with a card to s.w.l. outside of VK land. Ewan has shown me some very bad QSL cards, that he has received from s.w.l.'s. Mind you, the card was fine, but it was what was on it that prompted him to write the above letter. In my book of rules they were absolutely worthless, so the good bloke that Ewan is, he wrote this letter and is enclosing it in every report he receives, that he thinks warrants one. I only hope that none of the VK s.w.l.'s. get one. Thank you, Ewan, for letting me make this letter available to my fellow s.w.l.'s.

VICTORIA

On Friday, 28th April, 23 members of the Group rolled up for a very pleasant evening. It was quite a surprise and pleasing to see so many in attendance. We had quite a long meeting, everything was discussed to keep the boys interested. It has been suggested, and we all agree, that the W.I.A. should be omitted from the VK listeners number and replaced with VK3-SWL-55 (that's my number). I require all Divisional Secretaries to put this to the vote at their monthly meeting and advise me of their decision.

Very shortly a VK listeners contest will be run from this Division and it will interest all s.w.l. whether you listen to the Amateur bands or the s.w. b.c. bands. So please all VK s.w.l. enter this contest—see next month's "A.R."

I wonder if any Amateur would like to donate to the VK3 Group a receiver for use at the rooms, in 478 Victoria Parade? It will be used to show the up-and-coming Amateurs of tomorrow how to operate a receiver and also to give them some interest when at the meetings. Are there any offers?

SOUTH AUSTRALIA

Since Al Rechner, VK5ZCR, went to Mt. Gambler, he has gradually converted the local group to the v.h.f. bands. Colin is going to conduct a 2 mx crystal converter out of the Feb. 1959 R.T.H. and use it ahead of a seven tube receiver. Gary has at last got his receiver going on 20 mx and by his log book of DX stations logged, he is a very happy lad. Colin cannot listen to the good bands, 10 and 15 mx until he builds the four-tube converter from R.T.H. It is hoped to start A.O.C.F. classes soon and their tutor will be 5ZCR. SWI has asked them for news to be used on the broadcast of a Sunday morning, so that the Adelaide lads can keep in touch with the Blue Lakes boys.

TASMANIA

At long last some news from the Appie Isle. I think you lads must hibernate for a while; no wonder my XYL is always asleep, hi. Mike apologises for not writing. They are accepted. Mike, if you haven't any news it's no use writing is it?

Quite a lot has happened since he last wrote. Mike is now on the air as VK7ZAV (another s.w.l. gone west). He reports good results on 6 mx from his location of New Norfolk and longest distance so far is 27 miles over very rough terrain for most of the way. He is running 4w, to a 1625 (borrowed) and a 4 element beam to a three-tube tunable converter. On 2 mx all sigs. are received OK but no one can hear him—perhaps they're not listening Mike. His power on 2 mx is 2w, to a 10 element Yagi.

At their March meeting it was a special "do" to gain new members. They wrote to several of the schools and then arranged a display of receivers, converters, crows, plus Mike's 6 mx gear. They worked 7MY, 10 miles away, using a 300 ohm ribbon folded dipole. The result of all that was that 12 became new members.

By now the senior members of the VK7 Group would have had their meeting to discuss and decide on a programme for the next few months. Hope you have come up with something good, especially Mr. Beard, if he's capable—what with his sprained ankle and tired wrist, hi! I hope it's better by this Ted. All the very best to the Appie Isle boys and don't be so long in writing next time.

CORRESPONDENCE

Thank you to the boys who have written to me this past month. They have come from Eric Trebilcock, Don Grantley, David Jenkins, Peter Drew, Harry Major, Dick McKell, John Walker, Howard Harvey, Fred Mackiewicz and Sven SM3-3104, of Sweden. Peter Drew is now WIA-L8021. He writes that he has just received his listener's No. and since last letter has heard several new countries, plus one more confirmed. At the moment his listening is limited because of school exams. But in the May holidays he's going to listen all day and every day.

Richard McKell, of VK2 land, is a mate of John Walker's and at the moment is in hospital—hope you'll soon be out Dick. He wants to know what would be the best antenna that he could use and how would he rig it? As I answered Dick, a whip is the best that I know of. Anyhow let me know what you eventually do, will you?

John Walker wrote to Gerry Albeck for a s.w.l. number, but as yet no number. Come now, Gerry, if a member wants a number, let him have it as soon as you can.

Howard Harvey; congrats on your passing your A.O.C.F. (another s.w.l. gone west). He's just completed re-building his shack; due to this, s.w.l'ing is lacking. Yes Howard, you can miss a lot in hibernation. Even if Howard is a Z call now, he's not going to give up listening.

Fred Mackiewicz is a new member of the VK3 Group and tells me he had a go at QSLing a DX station a couple of months ago and received a card from IIANX. Fred uses an Eddystone Skyraider and a Philips d.w. His antennae are a long wire and a Windom. Later he intends to put up a fixed ZL beam.

Harry Major—at last I've met the honourable gentleman. He is now a member of the VK3 Group, L3102 and he was at the last meeting of the Group. Harry told me he's had quite a lot of help since I wrote about him a couple of months ago. Don Grantley

was one, thanks Don. Harry is doing an fb job of helping young lads at the Collingwood Technical School. Harry built a s.w. tuner circuit up that Don sent him. He built it onto the front of his little "bitser" set. It is a regen. detector with plug-in coils. He has modified the set slightly and with two audio stages it is super.

Don Grantley. He's doing well on the hearing aid (I heard that last night a W said that his hearing aid was a so and so) with 220 hrd., 72 con. and 54 hrd. on s.s.b. this year he's hrd. 111 countries in 34 zones and 20 on s.s.b.

Milton Richardson, ex Albury s.w.l. and place-getter in the last R.D., is now in Melbourne with the P.M.G. Hope you can get along and see us Milton at the meetings.

At Don's QTH his antenna is now up to 40 ft. but is still using the long wire, pending completion of his feeders for the end-fed Zepp. The tube line-up in his AR7 and Marconi (type unknown) is again altered with good results. He uses the Marconi to search for them and then to the AR7 for selected listening.

Eric Trebilcock. I always like reading his letters, there is so much in them. He writes not only on DXing QSL, but where and what he does. Eric is a great sportsman, especially football, and he is one-eyed too. I am glad you barrack for the same team. Eric is now doing a grand job as inwards QSL manager for VK3.

He's had cards this year from 75 countries, 30 zones. That indicates that he's more than up to his normal received QSLs for this time of the year. Eric says the better quality rather than the quantity of the QSLs is reflected in those figures. He always thinks that the number of cards does not really matter at all. It is the countries and zones of origin that count most. So in his old age, he seems to be judging things a bit better and so achieving better quality results. This year to mid April, Eric has forwarded 348 reports and cards, a little less than average, but still a pretty high figure. Eric's DXing is reported on the DX page.

I am sorry I can't report on anybody else as space is running out. Please bear with me, I'll fit all your interesting news in somehow soon.

Now to the ladder, and I believe this is becoming very popular. I've moved down once again, but just wait—I've sent out 35 reports so far this year.

DX LADDER

	Con- firm.	Zon.	No. of Hrd. Conf.	Cards
L3042 Eric Trebilcock	268	277	40	6853
VK4 C. Thorpe	85	137	34	—
L8022 D. Grantley	74	221	35	425
L3074 M. Hillard	57	195	24	150
VK4 A. Westcott	38	152	—	—
L3055 M. Cox	30	188	19	88
L3065 I. Thomas	16	130	13	32
L3072 T. Heywood	15	90	11	20
L2211 C. Abernathy	18	51	15	58
L5031 C. Hutchesson	7	96	6	18
L3088 D. Grantley	4	153	—	10
L8021	11	155	9	19

That's it lads till next month. 73, best DX, Maurice, L3055.

★

T.V. OPERATOR'S CERTIFICATE OF PROFICIENCY

Alteration of Date of Examination

The Australian Broadcasting Control Board have announced that commencing in June, 1961, the examination for the Television Operator's Certificate of Proficiency will be conducted on the first Tuesday in June and December each year instead of the second Tuesday, as formerly.

The closing date for applications will be the eighth day of the month preceding that in which the examination is to be held.

REMEMBRANCE DAY CONTEST

12th and 13th AUGUST, 1961

1800 hours to 1759 hours E.A.S.T.

VHF

David Tanner, VK3AAU
17 Wolseley Street,
Mont Albert, Vic.

Firstly, would scribes and others please note the above address and endeavour to let me have your notes on the Friday before the 8th of the month.

V.h.f. bands in general seem to have slid into the usual winter recess while some people are studying and the more fortunate ones of us build gear. DX has been almost non-existent on 6 mx except for isolated JAs, so it looks as though we will have to wait for the next sunspot cycle for the last elusive JA districts, etc.

Some news from ZL is not encouraging, although I don't think we need to worry about similar happenings here. The following is a quote from "Break In." On Jan. 13 this year, the New Zealand Post Office in Auckland advised that because of widespread complaints—some direct to the Minister concerned—regulations had been invoked in so far as operations on 51-53 Mc. were concerned and no operation was to be permitted in the Auckland area while a t.v. programme was being transmitted on Channel 2 (54-61 Mc.). The Department officers regretted that this decision had been forced on them "in the public interest." The low power (500 watts) and poor location of the transmitter of the present Auckland service appears to be responsible. We in VK hope that the situation improves.

Reports from most States seem to indicate that two metres is reviving after a couple of years in the doldrums, so we hope that this year's Ross Hull Contest takes some account of this. We are still in the dark about the results of the last contest, it would appear that we have been forgotten again. (Results appear elsewhere.—Ed.)

Moves are afoot again to influence F.E. on the desirability of a c.w. permit for Z calls so if you have any ideas, please send them along through the official channels so that a case may be prepared for F.E. to send to the Department.—3AAU.

NEW SOUTH WALES

General.—Main news this month is the results of the Autumn Field Day on 144 Mc. A dozen or so city stations were portable, mostly in the mountains, with Dick 2ZCF on Mt. Canobolas near Orange. Many country stations were active, portable and at home locations in the west and south-west. 2ZCF made the longest distance contact with 2ZCI at Yanco, a distance of 175 miles. Country stations worked included 2WH, 2ZGM, 2AJO, 2ZBP and 2ZAA. Conditions generally were very poor, but despite the cold and wind, the day was very successful.

The V.h.f. Committee for the next 12 months was elected at the April meeting; an all Z call group headed by Barry 2ZAG as Chairman, Bob 2ZAR Secretary, Eric 2ZDF Vice-Chairman, with Tim 2ZTM, Barry 2ZAH and Alan 2ZEW committee members. The lecture was by Bob 2QA on "V.h.f. Test Equipment," which, judging from the questions asked, was well received by the large audience. Bob dealt with r.f. output meters, "soup loops," s.w.r. bridges, g.d.o.'s, and wave meters with transistor amplifiers, plus many useful kinks.

The Fox Hunt on Wednesday night, 28th, with 2ZFC as the fox, hiding near Lake Parramatta, was won by Paul 2ZPJ, second Dave 2AWZ, third Tim 2ZTM, who covered the shortest distance. A dozen cars took part.

50 Mc.—Very little activity, only reported DX was by Keith 2ZVL who worked JA0 and JA9 midday, April 20. Keith also reports on ex-2ZGW, now 9NW in Fort Moresby, who has worked 180 JAs this season.

144 Mc.—Sunday, April 9, Jim 2ZBP, at Illabo, was hearing John 2ANF at Lane Cove from 1330 to 1500 hrs. on and off. He contacted John by land-line, but although each could identify the other call sign, they were unable to establish two-way communication. Winners of the "Long Distance Trophy" for the year were Lance 2ZKP/M and Keith 2ZVL/M from Murrumbidgee to the Gib.

876 Mc.—There are signs of renewed activity now that the 6 mx DX season has passed. Stations active in this band include 2ZAH, 2HL, 2HO, 2QW, 2ZCF, 2ZAC with 2AWZ a

newcomer to u.h.f. Current activity is all crystal controlled, no mod.-oscs. by request. Typical gear for tx's is as follows: 2ZAH starts at 8 Mc., triode 6U8 to 24 Mc. pentode section to 48 Mc., 12BY7 to 96, 12BY7 to 192, 832 buffer and QQE06/40 tripler to 576 with half wave lines in the final tank. 2ZCF has much the same multiplier chain with a QQE03/12 buffer and QQE03/20 tripler final running 20w. Input to a 16 element phased array. His rx is a search rx with a 6CW4 Nuvistor as a grounded grid pre-amplifier.

1215 Mc.—Several stations are building gear. 2ZAG has a mod.-osc. using a 703A producing a watt or so of r.f., as yet the rx is not complete. 2ZAC is building a final using a 2C39. Alan 2QW is working on gear and 2ZAH has a rx working. Perhaps articles in recent issues of "QST" will promote more local interest.—2ZDP.

VICTORIA

A most important meeting of the V.h.f. Group was held on Wed., Apr. 19, to consider ways and means of raising the enthusiasm of v.h.f. operators in the activities of the Group. The attendance was very good, almost 40 members and included Barry 2ZAG, Chairman of the VK3 V.h.f. Group.

Bill 3ARZ spoke to the proposed plans which included the following items: A publicity officer who would be an active Amateur, preferably a full call, to gather and make known through the 3WI broadcast news of interest to the v.h.f. man. Consideration be given to reviewing the rules of the field days, fox hunts, scrambles and activity nights. Also making the meetings more entertaining, both technically and socially, the latter by having supper at the conclusion of meetings.

ATTENTION ALL V.H.F. OPERATORS

FOR THE INFORMATION OF ALL V.H.F. ENTHUSIASTS

If you have any v.h.f. news re portables, field days, forthcoming schedules, record attempts, new gear being tried, new bands you are trying, any form of assistance you may require with regards to 6, 2, 1, 1/2 mx or above, your man is BILL ROPER, VK3ARZ, publicity officer for VK3 V.h.f. Group. Bill will be available to hear your news, etc., on 40 mx on Sat. afternoons at 1500 hrs. E.A.S.T. around 7100 kc. For 2 mx ops. Bill will be on 144.5 Mc. each Sunday morning at 0915 hrs. E.A.S.T. to receive any news from the Melbourne stations.

All this news will be used in the v.h.f. segment of the Sunday morning broadcast through VK3WI at 1030 hrs.

If you want publicity for your efforts contact Bill either through the above bands or at his QTH, Lot 59, Orchard Street, Mt. Waverley; phone 23-9296, and you will receive all the publicity you can hope for. This also applies to other Divisions who wish to use the service—all v.h.f. men alike.

Barry gave a brief talk on the VK3 Group's function and its activities which appeared to be along similar lines planned here. Bill's plan was put to the meeting and was adopted generally. Bill himself was elected to the position of publicity officer. A management committee was then elected to give impetus to the plan and the following constitute that committee: Chairman 3ZGP, Vice-Chairman Kel 3ZPQ, Secretary John 3ZCO, Bill 3ARZ, Ted 3ZKP, Howard 3ZJY, John 3ZCB, Des 3YA, Michael 3ZCZ, Ted 3AAD, Alyn 3ZGA and Alan 3ZJO.

Thanks for your attendance chaps, we look forward to your enthusiastic participation in all our coming events.

The following revised rules for scrambles have been produced tentatively. 2 mx, second Sunday each month; 6 mx, fourth Sunday. Hours 1945-2015. The scrambles will cover a period of 6 months and the individual monthly scores will be totalled. The highest will be the winner. The winner of each section will be awarded a trophy and the runner-up will receive something worth while. Sections will be 6 mx open, 2 mx city (within 30 miles of G.P.O.), and country. More information will be given by Bill 3ARZ over the 3WI broadcast, so watch for the new scramble series in June. Remember too, that only financial members of the Institute are eligible to receive the trophies.

The June meeting will deal with the re-vamping of the SCRS22 for use on the Am-

ateur bands, so come along and find out all about it from those who know all about it. Remember, June 21 at 8 p.m. at the rooms, 478 Victoria Parade, East Melbourne.

50 Mc.—Due to the inactivity of the ionosphere the band has been particularly dead apart from local activity. A few new stations have appeared and some old ones have returned including Bruce 3VF at Crooydon. Glen 3ZBJ has been portable on King Island and has worked quite a few Melbourne stations. Glen has a "suitcase special" running 3w. Input to a folded dipole up 90 ft. Best signals heard were R5 S8 by 3ZKJ and 3ZJE. Not bad for 160 miles on low power. 3ZLJ is on 50.4 from Maldon, north-west of Melbourne, and also Col 3OF hopes to be active from there soon.

The 6 mx scramble held on Sunday, 23rd April, resulted in a win for Kevin 3ZKJ, who worked 19 of the 32 stations participating.

144 Mc.—David 5AW is active on this band and has worked into Melbourne quite often during the month. 3ZEF has nightly skeys with 5AW which are being kept with monotonous regularity. 5AW's signal is generally audible at 3CS' QTH when he's working. Ron, Ron has 120w. of d.s.b. to a QQE08/40. ZL linear using an 807 clamp tube. Reg 3ZFD hopes to be on s.s.b. shortly, so better brush up on receiving techniques. Ron has t.v.i. with a.m., but none with d.s.b., so some others may like to try it.

Col 3FO, at Maldon, is active on 2 and looks for Melbourne contacts most nights of the week. Col is on 144.62 and also reports that 3ZLJ on 144.12 is also active in Maldon.

New stations include Ivor 3DH on 144.1 at Hawthorn, 9w. to indoor dipole, Bill 3ZLO at Clayton on 144.9 using 8146 final and t.v. antenna temporarily while building a 10 el. Yagi. Ron 3ZLP on 144.28 at Wallington on the Belarline Peninsula running 10w. to a 522. John 3ZFW at Ballarat and Ray 3ZJI at Chelsea have also been heard back on the band. Don 3AKN at Broadwater, near Port Fairy, is running 20w. to a 522 and 7 el. Yagi will also be on 6 mx shortly. Brian 3XN (ex-3ZCQ) and Tony 3WB (ex-3ZAZ), who are in the same district, will soon be on 2 mx. Other starters are Gil 3VC at Ringwood, Alan 3AZD, at Lilydale and Alan 3ADN at Newport should be on soon. 3ARC, Laverton Amateur Radio Club, through 3ZGA, will be active on Friday nights with a 10 el. Yagi up 40 ft.

288 Mc.—Dick 3ABK at Geelong is active on this band and would like to hear from other 1 mx men, particularly from Interstate ops. interested in making skeys. Dick can be found on 40 mx on Sat. at 1500 hrs. Lance 3AHL has s.d.b. on 1 mx running a 6AM5 grounded grid output and has worked 3CS crossband, 6 to 1 mx. 3ZDU at Reservoir is now on 1 mx.

576 Mc.—David 5AW hopes to have high powered gear going on this band in October or Nov., so there's the incentive to get some crystal controlled gear on this band by next season.—3ZGP.

SOUTH AUSTRALIA

50 Mc.—VK5 is still in the doldrums as far as Adelaide is concerned. On 4th and 5th Apr. JAs were in at Penola in the south-east of South Australia, but were not heard in Adelaide. 5AW reports JAs on the 4th between 1230 and 1300 hrs. local time, and on the 5th at 1300 hrs. He worked JA1 and JA3. It seems as though we will miss out on the excellent JA break-throughs we had this time last year.

On the local scene we have a new station on 50 Mc., to wit, Noel 3ZAS. Welcome to the band Noel. With winter upon us, we find the long duplex contacts returning to the v.h.f. bands, and 5AW, 5ZCR and 3ZFM have been indulging in complicated three-ways on 6 and 2 mx.

John 5ZCJ is, at the time of writing, in Crystal Brook, but as yet has not been worked on 6. JH made a trip to Mt. Lofty on 24th to work him with apparently negative results. A new car has been acquired by Doug 5KK and mobile receiving equipment for 6 mx is already functioning, with a tx on the way. That's the way it should be, Doug. 5ZAX is still to be heard portable near Maitland, and claims it to be a fine DX location. Bill is only running 8w. to a 2E26 and a 3 el. beam, but can be worked practically anytime at R5 and S8-8.

Garry 5ZFM is now eagerly awaiting the results of the latest c.w. exams, and should know the worst by the time these notes are read. Graham 5ZAP is sitting for the next one, so we hope that these two prominent 6 mx mobiles stay with us on 6. Incidentally, Graham was the last 6 mx fox with Garry as 2 mx fox. The locations seemed a little more difficult than usual, as only 5ZDG, 5MT and your scribe could find them at all. We would

(Continued on Page 15)

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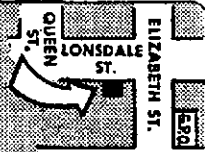
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NETTING

We all know how important it is to net accurately. It seems that when even two s.b. stations get together it is expected of them to be on the same frequency. When a third station joins in, it is imperative that the same frequency be employed.

To accurately net, it is not sufficient to "talk" the tx on frequency, but some small amount of carrier re-insertion is necessary for obtaining zero-beat. Once netted to a given frequency your tx must stay there. Drift in the v.f.o. cannot be tolerated and some v.f.o.'s do still drift. Have you checked yours recently?

THE V.F.O. AT VK2ON

The usual phasing s.s.b. tx uses sideband generation at 8 megs and mixes with a 5 meg. v.f.o. to produce 3.5 and 14 meg signals. With care, one can use the same v.f.o. converted to 2 megs to produce 7 meg. signals. Inclusion of 21 and 28 meg. bands requires two conversion stages for convenient and stable operation. One should not be content with multiplying v.f.o. frequency drift.

A 5-7 meg. Command tx was modified into a tubeless v.f.o., Clapp circuit, quite standard design, with the 6AG7 oscillator on the exciter chassis. The tuned circuit is in the shell of the Command tx at the end of 4 ft. of double co-ax (or two pieces of single co-ax). Valve bases as plugs are satisfactory here, as the impedance is quite low. The warm-up drift of the 5 meg. arrangement was measured at 5.3 megs. From 1 to 10 minutes after switching on it was 125 cycles, and from 10 to 40 minutes was 135 cycles in the reverse direction. As a 2 meg. v.f.o., measured at 1.85 mega., it was 75 cycles in minutes, and 50 cycles in the following 25 minutes in the reverse direction. There is room for improvement at a later stage. The figure given for the KWM2 is 100 cycles after warm-up. No figures are given for warm-up drift, nor is length of warm-up stated.

The v.f.o. covers 5-6 megs. approx. and the bandwidth can be varied by juggling with C5. Temperature compensation is not used as the coil is only affected by room temperature and long-term stability is not a requirement.

The inductance used is the roller-inductor behind the front panel. This is remounted, less roller, between the 1825 sockets so as to have a good clearance from the surrounding metal. The axis of the coil is changed through 90 degrees. Switching in of extra condensers is arranged by inserting an octal valve base in a socket on the front panel, thus converting the tuning circuit to 1.85-2 megs. to cover the 7 meg. band. Precautions to prevent radiation of spurious signals on this band will be mentioned later when discussing the mixer.

Now a few notes about condensers:

- C1-100 pF. padder (middle var. underneath).
- C2-100 pF. variable (back cond. underneath).
- C3-275 pF. silvered mica.
- C4-100 pF. variable (front cond. underneath)
- C5-150 pF. silvered mica.
- C6-0.0015 μ F., silvered mica for preference.
- C7-0.002 μ F. " " " "
- C8-0.0055 μ F. " " " "
- C9-0.0055 μ F. " " " "
- C10-Five-plate trimmer with shaft fitted.

As a 2 meg. v.f.o. the machine is very satisfactory. On 5 megs. the mechanical stability is not perfect, but if it is on a shelf by itself, all is well. The frequency may be set within 2 cycles by the five-plate trimmer. This is a very important item, this vernier control. Of course it has a greater "tuning-range" of 5 megs. than on 2 megs. The electronic stability on both bands is really good. Regulation of the voltage is essential and one should be certain one has a good VR105/30. There are some faulty or inferior ones about. The voltage should stay within 1 per cent. of its operating value.

No cathode-follower or isolating stage is required. Changes in the plate circuit have very little effect on frequency. A poor 6AG7 may give poor stability. The voltage across the load will be of the order of 20 volts. If oscillation cannot be maintained over the band

required, C6 and C7 will have to be decreased in size. If squegging occurs, these condensers should be increased. One should check the value of all fixed condensers before soldering in place. Variations from labelled values can produce unexpected results. Wagging the double co-ax line will affect the frequency slightly, but one does not do this while in QSO.

Next month the latest evolution of the mixer stage will be described (together with the circuit diagram of the v.f.o.—Ed.).

BOOK REVIEW

Collins Radio Company, world renowned for their commercial and amateur single sideband equipment, have published a book, "Fundamentals of Single Sideband."

This is a book for the serious minded Amateur who wishes to delve into the finer points of s.s.b. communication. The book gives a comprehensive coverage of all the aspects of this subject, dealing with sideband generation and amplification, reception and antennae and radio wave propagation. The chapters on Stabilised Master Oscillators and Frequency Standards are of particular interest.

While containing a certain amount of mathematics, the text is very readable and is designed for the Amateur as well as the professional man. Owners of Collins 75S1, 32S1, KWM1 and KWM2 equipment cannot afford to be without this publication. A worthwhile book to have in your library—well printed on excellent paper with a vast number of illustrations, circuits and diagrams.

Our copy from Collins Radio Company, Melbourne office. The Australian price is 50/-.

PERSONAL

I had the honour to be the first station contacted by Dudley VK2DQ, of Broken Hill, on 80 mx after an absence of some 28 years. Dudley last used the 80 mx band in 1933 when a member of the R.A.A.F. Wireless Reserve. He was using a 6146 in a gated screen amplifier and his 20 mx dipole. However, a G5RV antenna should be in use by now.

Another pre-war Amateur to use sideband in the 80 mx band is VK3ZL, of Ballarat. Bill is using d.s.b. and putting out an excellent signal. The results seem to justify an approach that he is using, in producing the signal at a low level with a twin triode balanced modulator. The line-up is a 6AC7 v.f.o., 6AG7 buffer, 12BH7 balanced modulator and an 807 Class B linear final. A 6AK5 and a 6AQ5 are in the audio section.

West Australian, 6JO, of the Perth suburb of Como, has recently completed a phasing tx which contains a home-brew audio phasing network. A 1825 tube in a ZL linear amplifier circuit puts a good signal into the Eastern States on 80 mx.

A high frequency crystal filter on 5170 kc. is in operation in the tx of VK3ZU, at Yarrawonga in Northern Victoria. A band width of some 2.3 kc. is obtained by Frank who has been patiently working on this project for some time. A four diode balanced modulator is used to cancel the carrier and a pair of AB1 807s are in the final. Frank is no beginner at the sideband business, being employed in the telephone branch of the P.M.G. Department and an exponent of the double sideband art on 40 mx for some time.

CORRECTION

Last month an error was made in stating the length of the G5RV antenna. The correct length of the antenna is 101 ft. 9 in. The popularity of this antenna is increasing, being in use at VKs 2ASA, 2AFP, 2ON, 2AQJ and proposed by 2DQ and KL7DMU.

VHF NOTES

(Continued from Page 13)

like to see more competitors in these fox hunts and anyone at all desirous of participating would be welcome to contact the President of the V.h.f. Group, Mick 5ZDR, for details of times or the gear used. As a matter of interest to all, the record number of ears present as entrants on one particular night is 16. This would have included 6, 2 and 1 mx.

144 Mc.—Only one expedition was made this month to Mt. Barker to work the south-east boys with negative results. 5AW now has a 24 ft. long Yagi for 2 mx and hopes to realise 18 db. of gain. The exact number of elements seems a little obscure at the moment. David runs approx. 70w. to a QQE66/40.

WESTERN AUSTRALIA

50 Mc.—Since last month we find that activity has been varied. There has been signs of DX with the appearance of the Russian t.v. station and also HLKA at intervals. There have been a few JAs worked, but not very many.

VK5VF's beacon has been running for many hours and if you tune to 50.002 Mc. and conditions are right, you will hear it with m.c.w.

Talking of beacons, we have learnt that there are two beacons operating in ZS, both on 50.05 Mc. The call signs are ZS1FX, which runs 70w., and ZS1LA, which runs 10w., continuously.

The last fox hunt was on 144 Mc. and was mobile. The only successful hound was Roy 6RY who found him twice. Kevin 6ZCB has changed his vocation and now works up at the t.v. station. It is very pleasing to hear several new call signs on 50 Mc. and we bid you welcome. A very interesting event took place on 7th May, that being a v.h.f. scramble. There was a half hour session in the morning and another half hour session in the afternoon.

Bob 6BE is house building and finds that to keep progress going, requires continual checks and verbal requests to keep going. Cedric 6ZBC will be moving into his new QTH very soon.—6RY.

TASMANIA

The V.h.f. Group are at the moment working on two projects. We are now preparing a circuit and kit sets for a 2 mx tx-rx which we hope will enable more to make use of this band. We may also be able to supply these ready built—with a margin in aid of the club room fund. This rig will be capable of being used for fixed, mobile or portable use and should enable us to have on hand stations capable of being used in an emergency, field days, regattas and so forth. Head men on this job are 7ZAS and 7ZAI with help from 7ZAO and 7ZBE.

We hope to set up a Satellite Listening Station which will work in conjunction with the local Moonwatch team. Chief consultant here will be Paul 7ZAJ.

New call sign on 6 mx is Brian 7ZAZ, who radiates a mighty signal from Sandy Bay. Ken W4KUT visited Hobart recently per U.S.S. Sutherland—had quite a few of us guessing; eventually we discovered that he was visiting Phillip 7ZAX. Ken seems to be quite active on v.h.f. back home. He had Alan 7MY engaged for two hours after the 7WI broadcast.

V.h.f. news is now being re-broadcast from 6 mx to 40 mx by 7WI, enabling us to keep all VK7s abreast of v.h.f. happenings. Incidentally, how about some information on happenings in the north and north-west by some means or other.—7ZAO.

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PAYMENT OF LICENCE

Editor "A.R." Dear Sir,

Permit me space to reply briefly to Max VK2ARZ with respect to the second statement in his recent letter to the Editor in the May issue of "A.R."

Assuming the VK5 Divisional membership to be, shall we say 350, I can assure Max that 349 of those members wait each first of the month in eager anticipation of my making even a teeny-weeny slip of the pen which would permit them to get a little of their own back.

Bearing this in mind, is it logical that I would be foolish enough to put pen to paper without being doubly sure of my facts as they apply to VK5.

The fact that Max claims to having paid his licence renewal fee several times locally means nothing outside of VK2, as I can assure him that in Adelaide he can only pay the fee to the Receiver of Public Money in the Adelaide G.P.O.

—Warwick Parsons, VK5FS.

ROSS HULL CONTEST

Editor "A.R." Dear Sir,

I found it encouraging to read the replies of VK5AW, VK5ZCR/T and VK3ABK in the May issue, and of a letter from VK4ZAA, but are these the only people sufficiently interested in the Ross Hull Contest to put pen to paper. What about VK2, VK6 and VK7? Don't the v.h.f. people there care? Other VK3 operators have spoken to me on the air, but in general they agreed with my proposals. In fact a table very similar to the one published in April "A.R." (p.16) was recommended to the Federal Contest Committee by the VK3 Division. However, insufficient time was allowed for anything to be done for the contest last season.

The scoring table I put forward was to illustrate the points I was trying to make. However, with slight modification, I think it would become a practical proposition. I put considerable thought into the values in the table and I must disagree with the changes put forward by David VK5AW and Al VK5ZCR/T. Two points that I neglected to state in my first letter are my reasons.

1. Local cross-town contacts serve no real positive purpose on 50 and 144 Mc. New stations, with the simpler type of gear, always find themselves popular for the first month or so of operation and don't go short of contacts, contest or no contest. However, such contacts do, undoubtedly give the large-city operator a definite advantage and without doubt the most favoured city in this respect is Melbourne. Look in your Call Book at the number of VK3Z calls listed, then compare. Melbourne is favoured so much that in the contests of 1955/56 and 1956/57, when the rules were such that local contacts were permitted, VK3 entries predominated—15 out of 31 entries in 55/56 and 11 out of 14 in 56/57. Entries were at an all-time low and some States were not represented at all. During the latter part of 1958 and early 1959, I had the chance of meeting v.h.f. operators in VK2, 4 and 5, and I asked why the lack of enthusiasm for the Ross Hull. The reply invariably was "... the rules favour Melbourne operators because of the relatively great activity there." These were city v.h.f. men talking. They had activity all right, but not on the level existing in Melbourne. In my view, this state of affairs still exists and the best way of nullifying this advantage is to bar local contacts. This would mean that the v.h.f. station just outside the main centres of activity does gain some advantage but not such a great one as some may think. The country op. cannot always work every city station and surely the people to encourage are those in the mulga. If, however, general opinion throughout Australia shows that local contacts should have some value, then to offset the advantage of numbers, perhaps a limitation could be placed on the number of scoring contacts with a particular station within the shorter ranges.

2. In the table submitted by VK5AW and VK5ZCR/T, they have doubled the values in my tabulation in most cases. This, I feel, leads to some odd situations in causing too big a difference in the value of QSO in adjoining distance areas where such a difference is not

warranted. I think this apparent random doubling of the points serves no purpose other than to make for large scores.

My suggestion about operating for one week within the Dec.-Jan. or Jan.-Feb. period at the operator's discretion, may answer VK4ZAA's request.

VK3ABK caused me to have further thoughts on the value of contacts for the higher bands over the shorter distances, and because of the very limited activity on these bands at the present time, I feel it would not be inconsistent with my foregoing statements to modify my original table as follows:—

	225 Mc.	576 Mc. Higher
Over 1 and up to 10 miles	0	1
" 10 " " 25 "	1	2
" 25 " " 50 "	2	5
" 50 " " 100 "	4	10
" 100 " " 200 "	6	as as
" 200 " " 300 "	as	as before before

The remainder of the table to be as before. Remember, it is up to the v.h.f. men in each State to agree amongst themselves, and then, through their Divisional Council to inform F.C.C. of their wishes. Remember, too, to keep things simple and if any radically new ideas come up, let everyone know by putting the idea in the mag. In this way, the views submitted to F.C.C. shouldn't be too divergent and that body should be able to come up with changed rules acceptable to everybody with a minimum of effort.

Now is the time to act if you want new rules for the 1961/62 contest. Get cracking—see you in the Ross Hull.

—David Rankin, VK3QV.

EUROPEAN OSCILLATOR CIRCUITS

Editor "A.R." Dear Sir,

Referring to the article on European oscillator circuits recently reprinted from "CQ" magazine. In particular the Clapp Franklin circuit of Telefunken Laboratories.

This circuit seems to have undergone some major changes during reprinting:

- (a) The anode circuit of the second triode is taken to B neg. instead of B plus.
- (b) Some rather amazing values are quoted for the feedback network, i.e. 0.015 μ F. and 0.01 μ F.

To maintain oscillation, a circuit must satisfy the equation $A \times B$ equals 1, where A equals valve gain, B equals feedback.

With the values of capacity quoted it would be necessary for the two triodes to have an overall gain of approximately 100.

Triodes in such a circuit at 5.5 Mc. are more likely to have a gain in the vicinity of 2, i.e. 2×2 equals 4.

I feel that the values of 0.015 and 0.01 quoted were probably, in the original, 0.0015 and 0.001, under which condition the formula $A \times B$ equals 1 can be satisfied by an overall gain of approximately unity.

The above theoretical considerations are borne out by my experience when I built this circuit which, after the above mentioned modifications, proved to be very satisfactory and all that was originally claimed.

—Cyril B. Edmonds, VK3AEE.

THE BOTTOM "40" OF 20 METRE PHONE

In the "good old days" before the fateful 10th March, 1960, DX operators made a practice of working 20 metre s.s.b. DX by tuning the frequency range 14300 to 14350 kc. This segment of the 20 metre band was affectionately dubbed "the top 50".

A careful scrutiny of this "top 50" today would reveal a totally different situation. A solid mass of S9 plus signals from North American stations would be the only thing heard, with scarcely a space in the 50 kc. segment. Any DX station brave enough to operate here with a signal less than S5 would be unreadable for much of the time.

The stronger ones who do manage to make themselves heard above the cacophony are faced with a constant stream of W calls or the familiar "break, break". Usually the intrepid DX station has to give up eventually even if he tries to cope with the Herculean task of handing out reports. Under these circumstances, a solid QSO is not only rare but also well nigh impossible.

The net result is that nobody is happy with the situation as it is at present. Here in Canada, the DX-minded s.s.b. operators have been trying their hardest to convince DX operators throughout the world that the spot for the VEs and the DX is below 14.2 Mc.—that is, the "lower or bottom 40", the band of frequencies between 14100 and 14140 kc.

Until recently, we have been "wee voices crying out in the wilderness", but during the

past week, several DX stations have favoured the "Bottom 40" with their presence: VR6AC, ZD1ES, LZ1WD, VP2AB, VK3AHO, ZL3IA, G1KVVQ, ZL1ATQ. These are just a few DXers finding the "Bottom 40" comfortable.

Now, it only needs a final push-pull effort by all of us to make the "Bottom 40" a permanent home for DX s.s.b. operation on 20 mx.

May we count upon your support in this programme? With your support, we would soon see the return of many well known s.s.b. operators who have become discouraged and have faded away, no doubt due to the chaotic conditions existing on the h.f. end of the 20 metre band.

Not only would these old-timers return, but also new stations would appear on the band as soon as they realised that this has become by custom "sideband DX territory".

Only in this way can international sideband operation make progress. Only in this manner can it assume the stature, within our great hobby, that it so rightly deserves.

See you on the "LOWER 40"—Soon!

—"Bob" VE3AYE (Sec. op. of VE3BWW),
Public Relations Officer, Ontario DX Association.

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NOTES

FEDERAL

NON ISSUANCE OF R.D. AND N.F.D. CERTIFICATES

Place getters in the 1961 Remembrance Day and National Field Day Contests will be wondering why they have not received their certificates. The truth of the matter is that all the Federal Certificates were damaged by fire and water last year, and so, pending insurance settlements and what-have-you, nothing much could be done about it.

Work is progressing on new designs for most of the W.I.A. Certificates, but it will be a few months yet before designs, art work and printing has been decided and completed. In the meantime a few of the old certificates have been salvaged—with the exception of the R.D., of which the remaining very few were damaged beyond salvage, and these have been gullitined around the edges, resulting in a reasonably respectable certificate which will have to suffice for the time being.

EX FEDERAL OFFICER ORDAINED AS MINISTER

Mr. John Rice-Oxley, VKSAKO, former officer of the Federal Executive, has recently been ordained as a Minister of the Church of England and has been located as Curate to St. Marks, Spotswood, and St. Paul's, Kingsville.

Educated at Camberwell Grammar School to leaving standard in 1949, John joined the Postmaster-General's Department and became a cadet draftsman. He nearly completed the Diploma of Electrical Engineering at the (then) Royal Melbourne Technical College during this time and in 1954 commenced as a draftsman with the P.M.G. Research Laboratories. During the next two years with Research, he completed his Diploma.

In 1956 John left the P.M.G.'s Department to commence a course of Licentiate in Theology at Ridley College, Melbourne, a course which he has now successfully completed. Although he has been inactive due to his studies, John hopes to soon get back on the air again.

G.E. HAM NEWS

Many will remember "Lighthouse Larry" of General Electric Company, U.S.A., and that excellent publication G.E. Ham News.

A recent letter from Lighthouse Larry advised that distribution of G.E. Ham News outside the United States is handled through the International General Electric Company. They ship quantities of each issue to their representatives in more than forty countries.

If you are interested in receiving copies of future issues you should write to:

R. W. Campbell,
Director,
Australian General Electric Ltd.,
167 Kent Street, Sydney.

Also G.E. Ham News' third bound volume and G.E. Ham News S.s.b. Package, second edition, are ready for distribution. These can be obtained by sending a money order to the value of four dollars to:

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I.A.R.U. YEAR IN REVIEW

As has been the custom, the December Calendar of the Union contains a brief report by the Hqrs. on the affairs of the Union for the past year.

Membership in the Union increased from 54 to 56, the Liga dos Amadores Radio de Angola and the Club de Radio Aficionados de El Salvador being welcomed into membership during 1960. Although in the course of the year the Hqrs. engaged in correspondence with several potential new members of the Union, none have so far resulted in a formal application.

Member Societies indicate a continuing growth in their membership, paralleling the increase in number of Amateurs throughout the world. The Radio Amateur Call Book Magazine currently lists more than 100,000 Amateurs outside the U.S. and possessions; the comparable figure

ten years ago was only 43,000. Neither figure includes Amateurs in countries from which statistical information is not reliably available, notably the U.S.S.R. In the U.S., the number of Amateurs increased from 90,000 to more than 200,000 during the past ten years.

The fourth meeting of the Region I. Division was held at Folkestone, U.K., June 13-17, attended by 40 delegates from 15 countries, plus six observers. The gathering discussed European Amateur allocations, governmental liaison, I.T.U.'s Panel of Experts, and a general review of the 1959 Geneva Radio Conference. The next meeting is contemplated for 1963 in Stockholm.

The I.T.U. gave notice, at mid-year, that Iran had withdrawn its objection, filed ten years ago, to communications between its Amateurs and those of other countries. The United States signed third-party message traffic agreements with Haiti, Honduras and Paraguay.

There was no international conference affecting Amateurs held during 1960, although in May, 1961, the new regulations of the Geneva Radio Conference came into effect. An extraordinary conference on frequency allocations for space communications is contemplated for 1963; preparatory work commenced in some countries during 1960. The Panel of Experts to study the problem of congestion in 4 to 27.5 Mc. is scheduled to meet in Geneva during 1961, and here again preparatory work in several countries commenced during 1960.

The Union Beige des Amateurs-Emetteurs reported extensive operation by its Amateurs when normal communications were disrupted in the Congo. A communication emergency net, headed by the official station of the Radio Club de Chile (CESAA) in Santiago handled much traffic during the earth quake and sea quakes.

WIBUD Retires

Arthur L. Budlong, WIBUD, I.A.R.U. Secretary and A.R.R.L. Secretary and General Manager, retired on Dec. 31, 1960. He had been with the League more than 37 years, and had been Secretary of the Union since 1948. We know all member societies will join the Hqrs. in an expression of deep appreciation for his many services to Amateur Radio over the years, particularly in the field of international conference participation, and in wishing him many happy years of retirement.

The A.R.R.L. Board of Directors elected John Hunton as Secretary of the League effective Jan. 1, 1961, at which time he also became Secretary of the I.A.R.U. as provided in Article 1U., Para. 4 of the Union constitution.

International Regulatory Matters

The next international regulatory event with potential effects on the Amateur Radio Service is a meeting of the Panel of Experts in Geneva, probably in Sept. 1961. The Panel has been assigned the task of studying the problem of congestion in the bands between 4 and 27.5 Mc., and of making recommendations as to the steps that should be taken for the purpose of relieving the pressure on those bands. The Panel's membership will consist of the four heads of the permanent organs of I.T.U. (Secretary-General, and chairmen of I.F.R.B., C.C.I.R., C.C.I.T.T.), plus up to seven additional persons chosen by the Administrative Council at its meeting in April 1961, from nominations made by individual administrations. The Panel will probably continue its meetings as necessary in 1962, after which a report will be prepared and submitted to the Administrative Council. The Council will then consider the report and recommendations and, after consulting administrations, will decide whether any further action should be taken, such as calling another international radio conference.

It is expected that the June Calendar will be able to report the list of panel members as chosen by the Administrative Council. Member Societies are urged to maintain liaison with their governments in connection with any activity involving participation in the work of the Panel of Experts, so that the interests of the Amateur Radio Service may be properly safeguarded.

Silent Key—G3DQ

We regret to record the passing of Mr. Wm. Radcliff Metcalfe, G3DQ, who was President

SILENT KEY

It is with deep regret that we record the passing of:—

VK3AGB—Pete Gibbons.
VK5LT—Pat Leonard.

of the R.S.G.B. during 1960. He succumbed on Christmas Day, 1960, after a long illness.

"Cliff" Metcalfe's progression to the R.S.G.B. Presidential Chair was remarkable. He became a member of the Council in Jan. 1955, upon his election to the office of Zonal Representative for Northern England. Two years later, he was elected Hon. Treasurer, an office he held while still acting as a Zonal Representative. In Jan. 1958, he became Executive Vice-President, and on Jan. 1, 1960, he succeeded Dr. Smith-Rose as R.S.G.B. President.

G3DQ was a most enthusiastic Radio Amateur. Licenced before the last war, he was a first class telegraphist, but during more recent years he used telephony a good deal on 3.5 Mc. For some time he was a member of the team of R.S.G.B. News Bulletin readers, helping to provide a service for listeners in the north-east of England.

SUMMARY OF I.T.U. MONITORING REPORTS

Here is a summary of unauthorised stations heard in the Amateur bands during the period May through August, 1960, as reported by the International Frequency Registration Board. Stations operating in accordance with the Atlantic City Convention (1947) are not reported. Stations heard in the Amateur bands only once or twice during the four-month period are not reported, either.

Freq.	Call/QRA	Type of Signal
7,008	APK	Broadcast
7,050	Calro	"
7,050	Paris	"
7,060	Peking	"
7,075	Ioanania	"
7,070	Moscow	"
7,080	Peking	"
7,081	Peking	"
7,100	U.S.S.R.	"
7,127	XEFA	Manual A1
14,287	NNN35	Automatic A1
14,303	IRL23	"
14,320	VLC15	"
21,000	OLU	Radio Teletype F1
21,001	OLU	Automatic A1
21,002	OLU	"
21,031	China	Broadcast
21,180	HLG39	Radio Teletype F1
21,300	ULV	Automatic A1

FEDERAL QSL BUREAU

Considerable difficulty is being experienced with the disposal of incoming cards for VK0 stations. This year's list of Antarctic Hams is the largest ever, and contains 26 call signs. Anyone having information which will help to place cards in the correct bands is requested to supply the information to this Bureau. Later it is hoped to publish a list showing full details of the 1961 team. Cards for some stations of the 1960 team are still on hand and the current mainland address of VK0ID, I. Douglas, ex Davis Base is required.

The Taiwan American Radio Club has opened a QSL Bureau. Cards should be sent either to: T.A.R.C., Box 24, U.S.T.D.C., A.P.O. 63, San Francisco, Calif., U.S.A., or to T.A.R.C., United States Taiwan, Defence Command, Taipei, Taiwan, Republic of China. The Club Secretary is John Grantham, W4OSG.

Hereunder is a full list of the licences issued to members of the 1961 Antarctic team, together with location and home State and other details:—

Davis:
VK0AW—A. Warriner (Tony), Vic. (QSL via VK2).

0DA—A. Brown (Alex), Vic.
0FT—F. Trager, Vic.
0MH—M. Hay, W.A.
0NL—N. Lied (Niils), Vic.
0VJ—B. Jabs, Vic.

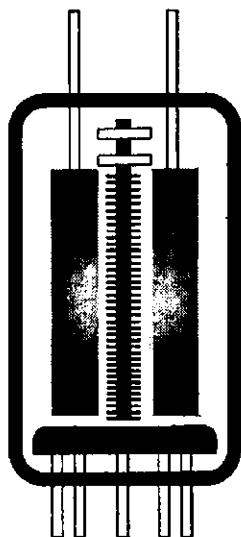
Mawson:

VK0CH—C. Harris, Qld.
0DW—W. Denham, N.S.W.
0WY—W. Young, Vic.

Wilkes:

VK0EH—E. Harrigan, N.Y. (U.S.A.).
0JB—J. Breckinridge (John), N.Y. (U.S.A.).
0LC—G. Hemphill, N.Y. (U.S.A.).
0MG—M. Berrigan, Vic.
0NR—N. Smethurst, W.A.
0PS—P. Stanafeld, W.A.
0RT—R. Torckler (Ray), N.S.W.
0SW—S. Church (Stan), Vic.
0TC—T. Cordwell (Tom), W.A. (QSL via VK2EG).
0VK—S. Grimsley (Steve), N.S.W. (VK2VK).
0WB—W. Burch, Vic.
0WE—W. Hogan, W.A.
0WF—W. Budd, N.S.W.
0WS—W. Saunders, Virginia (U.S.A.).
0WW—W. Wilson, Virginia (U.S.A.).

PHILIPS



TRANSMITTING AND RECTIFYING TUBES FOR MOBILE EQUIPMENT

The necessity of telecommunication equipment for sea and air transport is obvious. In this field, telecommunication equipment is often obligatory. In many other fields, however, a need for communication is equally felt, but the bulk and cost of transceivers of usual design has long been prohibitive. Faced with this problem, equipment designers and tube and component manufacturers, working in close co-operation, have gradually developed mobile transmitting equipment that successfully combines small dimensions, low cost, ease of operation, high and dependable performance. As a result, mobile telecommunication equipment is being used on an ever-increasing scale in numerous fields, as, e.g.:

- coasters.
- motor launches of shipping agencies, ships' chandlers, contractors of harbour works.
- small fishing boats.
- tugs (e.g. for direct communication with their tow).
- seagoing yachts and other small maritime craft.
- fireguard for contact with central office.
- taxi cabs for contact with the central point.
- doctors' cars for contact with their base.
- building firms for contact between remote or not easily accessible spots.
- public utility firms for contact with their outside personnel.
- service firms for contact with their personnel on vehicles.
- lonely farms in sparsely populated areas.
- airport vehicles.

Transmitting tubes

PREFERRED TYPES

Further additions to the range of "quick-heating" tubes will be announced shortly.

TUBE OUTPUT IN CLASS C TELEGRAPHY	TYPE OF TUBE	QOE02/15	QOE04/15	QOE03/12	QOE03/14†	QOE04/15	QOE03/20	QE05/40	QOE05/35‡	QOE06/40	QEL1/150	QEO8/200	PEL/100	TB2.5/300	QES/300	TB2.5/400	TBL2/300
		Double Triode (6935)	Double Triode	Double Triode (6360)	Double Triode (7893)	Double Triode (6360)	Double Triode (6893)	Double Triode (6252)	Triode (6146)	Triode (8042)	Double Triode (5884)	Triode (4 x 150A)	Triode	Power Pentode (6083)	Triode (5866)	Triode (8155)	Triode	Triode
	(W)	(W)	(W)	(W)	(W)	(W)	(W)	(W)	(W)	(W)	(W)	(W)	(W)	(W)	(W)	(W)	(W)
	2 Mc/s	5.8 7.2*	7.0 8.0*	14.5 18.5*	14.5 18.5*	26.6 35.0*	48	52 69*	52 69*	90	195	200	132	390	375	390	500
	20 Mc/s	5.8 7.2*	7.0 8.0*	14.5 18.5*	14.5 18.5*	26.6 35.0*	48	52 69*	52 69*	90	195	200	132	390	375	390	500
	30 Mc/s	5.8 7.2*	7.0 8.0*	14.5 18.5*	14.5 18.5*	26.6 35.0*	48	52 69*	52 69*	90	195	200	132	390	375	390	500
	60 Mc/s	5.8 7.2*	7.0 8.0*	14.5 18.5*	14.5 18.5*	26.6 35.0*	48	52 69*	52 69*	90	195		132	390	375	390	500
	100 Mc/s	5.8 7.2*	7.0 8.0*	14.5 18.5*	14.5 18.5*	26.6 35.0*	48	40 53*	40 53*	90	195			390	375	390	480
	120 Mc/s	5.8 7.2*	7.0 8.0*	14.5 18.5*	14.5 18.5*	26.6 35.0*	48	35 47*	35 47*	90	195			390	375	390	475
	150 Mc/s	5.8 7.2*	7.0 8.0*	14.5 18.5*	14.5 18.5*	26.6 35.0*	48	29 40*	29 40*	90	195			390	360	390	465
	200 Mc/s	5.8 7.2*	7.0 8.0*	14.5 18.5*	14.5 18.5*	20.0	48		24.0*	90	185			197	225		445
	300 Mc/s	5.8 7.2*	7.0 8.0*			6.5 8.0*	34.5			75	170						400
	430 Mc/s	5.8 7.2*	7.0 8.0*				23			66	155						350
	500 Mc/s	5.8 7.2*	7.0 8.0*				22			60	140						325
	600 Mc/s		7.0 8.0*				20										290
	890 Mc/s		7.0 8.0*														180
	960 Mc/s		7.0 8.0*														

The

Miniwatt

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PH649/61/E

Macquarie Island:

VK0FZ—F. Stean (Fred), N.S.W. (VK2FZ).
ORF—R. Frost, N.S.W.

The following have been members of earlier expeditions: VKs ODA, ONL, ORF, ORT and OTC. Further details may be had on application to this Bureau.

—Ray Jones, VK3RJ, Federal QSL Manager.

FEDERAL AWARDS

D.X.C.C.—Announcement is hereby made of the following four new and separate additions to the Australian D.X.C.C. Countries List:

- AP—East Pakistan (east of India).
- HK0—Bajo Nuevo (Columbian insular territory, Caribbean Sea).
- HK0—Malpelo Is. (west of Colombia).
- KH6—Kure Is. (north-east of main Hawaii group).

New Prefixes.—The Republics which formerly constituted French Equatorial Africa (FQ8) have been allotted new prefixes as under:

- Central African Rep. TL3
- Congo Rep. TR8
- Gabon Rep. TR8
- Chad Rep. TR8

Certain of the Republics which formerly constituted French West Africa (FF8) have been allotted new prefixes as under:

- Dahomey Rep. FF3
- Ivory Coast Rep. TU2
- Mali Rep. FF3
- Mauretania FF7
- Niger Rep. 5U7
- Senegal Rep. 6W8
- Voltaic Rep. FF3

Amend D.X.C.C. Countries List published in "A.R." Jan. '61, accordingly.

For the use of intending new members of the D.X.C.C., copies of the Countries List may be had on application to the Awards Manager.

50 Mo. W.A.S.—Award No. 22, with the addition of VK9, ZL, JA and KH5, has been issued to Roy Blake, VK3ZFM.

W.A.V.K.C.A.—Awards Nos. 160-165 have been issued during April to W6USC, ZL1AGO, K5KBH, W9IHN, W8KIA and CR7BC.

—Alf Klisick, VK3KB, Awards Manager.

NEW SOUTH WALES

MID MONTHLY MEETING

The usual mid monthly meeting of the N.S.W. Division was held on the second Friday of the month at Divisional Hqrs., 14 Atchison St., Crows Nest, where a very interesting and instructive evening was spent by what could be described as a record attendance of members for a meeting of this type.

The lecture arranged for the function was a tape recording of a lecture by Joe Reed, VK-2JR, on "Master Oscillators" and which was suitably illustrated by drawings and slides, together with suitable comments by Joe, who was also in attendance. All agreed that the subject was well handled by the lecturer and much information was derived from this lecture on what is a most important subject. Our thanks to Joe for yet another fine effort on our behalf.

GENERAL MEETING

The fourth Friday of the month being the day for the monthly meeting of the Division, Science House, Gloucester St., Sydney, some 50 members attended.

The President, Bill Lewis, VK2YB, opened proceedings and received an apology for non attendance from Graham VK2AGH. Two visitors were welcomed, Steve VK5ZE and Doug VK4ZDR.

Following the reading of minutes by the Minute Secretary, Max Pfeffer, VK2MF, the President paid tribute to the work done in the past by Norm Beard, VK2ALJ, on behalf of the Division and announced that Norm had recently resigned his position on Council.

Four full members and 12 associates were admitted to membership.

Bill Simons, ex-VK5SA, the lecturer for the evening, was introduced to the assembly. In opening his address on "Communications in the Department of Civil Aviation," Bill stressed that he intended to illustrate to members the manner in which the Department spent the money so kindly provided for them by the public. Bill did this by describing the activities of Airways Operations and Air Communications Control; showing the areas of operation on the many flight tracks and the manner in which control is effected on all types of aircraft. At the conclusion of his address, many questions were posed, indicating the interest

which the subject had aroused and we feel that all present now, at least, have a very healthy respect for the organisation which maintains such a record for safety as we have in this country. The vote of thanks to the lecturer was moved by acclamation on the motion of one of our visitors, Steve VK5ZE.

Pierce Henley, VK2APQ, Federal Councillor of the Division, in drawing attention to Federal matters, stressed on members the necessity of submitting logs for the coming Remembrance Day Contest. In the last Contest well over 100 logs were not submitted by participating stations in this State, which only results in this State showing such a deplorable total, despite the great amount of our membership. Frequent reminders will be given by the Divisional Station, VK2WI, on this matter prior to the Contest in August in order to correct this. Now is the time to make your resolution to send in THAT log promptly.

The proposal to introduce Novice Licences was discussed and the meeting ratified Federal Executive's motion to proceed with this matter.

Nominees were called for members to serve on the Dural Committee for the ensuing year and the following announced their intention to assist Council: VK2YC, VK2SG, VK2ZMM, Joe Pollock, Phil Irvine, and Peter Harding. More workers will be required, so contact with any member of Council will do the trick.

FUTURE LECTURES

From our Education Officer, Harold Burtoft, VK2AAH, we have details of lectures arranged for future monthly meetings.

For the June meeting, Eric Warren will talk on "Transistors at V.h.f." Mr. H. Edwards, of the University of N.S.W., will lecture on the "Measurement of Current in Parasitic Arrays" at a later meeting, and a further lecture is being arranged by Paul Free, of S.T.C., his subject being "Silicon Diodes."

With such a galaxy of lectures in the coming months, Council are expecting record attendances at future meetings, thank you.

TAPE SERVICE

Harold is also organising a service of taped lectures, all of a high standard, which are available to country clubs and groups on application to him. Three tapes are immediately available: "Single Sideband" by Leo McMahon, VK2AC; "Master Oscillators" by Joe Reed, VK2JR; "Transistors," by Harold Burtoft, VK2AAH; and we hear on the grapevine that a projected lecture will be one on "Suppression of Television Interference" which will prove invaluable to many in country districts as well as those in more settled areas. Many of these tapes are accompanied by drawings and slides in illustration.

PUBLICITY

With the recent inception of many new clubs, especially in country areas, comes the thought that it would be good publicity if, through these columns, details of coming meetings and functions could be included in these notes. Secretaries should take note that all such information should reach me here by the first of the month, and remember the delay in publication.

JUNE MID MONTH MEETING

News has just come to hand that a most interesting subject will be dealt with at the mid monthly meeting in June. The date is 9th June at Hqrs., 14 Atchison St., Crows Nest. Vol Molesworth, VK2VO, will discuss the "Wrecking of Disposals Gear" and will give details as to how he puts such equipment into serviceable condition. So, rally round, fellows, and get the gen from Vol on what must be a subject of interest to us all.

DATES TO REMEMBER

General Meeting, fourth Friday of the month at Science House.

Mid Monthly Meeting, second Friday of the month, at Atchison St.

V.h.f. meeting, first Friday of the month, at Atchison St.

S.w.l. Group, third Friday of the month, at Atchison St.

Council meetings on first and third Thursdays at Atchison St.

VK2WI transmits at 11 a.m. each Sunday on 3573, 7146 and 145.1 Mc.

VK2AWX transmits a summary of the VK2WI broadcast each Monday on 7050 kc. at 7 p.m.

Morse training is held on 3525 kc. each night commencing at 7.30 p.m.

Disposals are available to members at Atchison St. each Saturday afternoon.

HUNTER BRANCH

It's that antenna man again! Yes, I mean Harold 2AAH, who once again made the long journey from the big city to be present at the April meeting. Harold continued his lecture on antennae and, by the way the large gathering looked and listened, his visit was, as before, a great success. To those readers who did not come, you missed a most interesting lecture. About 100 slides were shown to illustrate what Harold had to say, but you will never know how much one can be fooled by pictures of feeder lines that are upside down. They looked OK to me, chaps.

Those present were visitors Messrs. D. Evans, VK2DE, E. A. Gibson, and L. T. Warden, and the following members and associates: VKs 2ZNF, 2SE, 2ZL, 2FA, 2ZNV, 2ZMO, 2R, 2AYT, 2ZIF, 2ZJJ, 2FE, 2PZ, 2YT and 2AKX, Miss Cowan and Messrs. Sutherland, Foster, Mullen, Forrest, Gray, Stobbs, Davis, Harker and McLachlan. All the regulars were delighted to see such a good roll up and we all hope that the trend towards bigger meetings which has been set will continue. I was looking forward to seeing Dave 2DE, but he sneaked away before the meeting ended. He was here on more important business than Amateur Radio though, as he'd made the journey from tucker box land to be present at his daughter's wedding.

An apology was received for the absence of Bob 2AQR, who, it was said, was away finding a new microphone diaphragm for the 122. Did you have to shout to get some modulation boy? Another lucky holidaying gentleman of late is Lionel 2CS who, among other jaunts, paid a visit to the Snowy Mountains Authority. I am not quite sure if I heard correctly, but I believe that I heard Lionel remark that he was glad to be a taxpayer. It sure must have had some effect. Jervis Bay Naval College also was included on the itinerary so that the Swains could visit their son, who is in training there. Ray 2NA, the transistor man, also claimed some of Lionel's visiting time and he arrived home just in time to make some progress with Donald Duck Mk. II.

Also making progress is our good friend, Allen 2KB. Allen has had a spell in hospital where he underwent a major operation, but reports now say that he is well on the way to complete recovery now and is home once again.

Harold 2AHA has not been heard on the air lately but reports have it that he is swinging the paint brush. Over Stockton way, Ron 2ASJ and Jack, his r.f. partner, have been heard looking for W6AL on Tuesday about 3 p.m. I don't know what has happened to Bill 2ZK lately. I notice that his backyard tree is still being held up by that piece of wire, but little r.f. is getting into it I'm afraid. Let's hear you soon Bill.

Let it not be said that v.h.f. gets no mention. Ian 2ZIF has his QRP mobile going on 2 and has worked DX as far afield as New Lambton. He uses 7½ well modulated watts. Jim 2AHT must have a super rx hooked on that folded dipole. He is able to give astronomical S readings on almost inaudible signals (at my place). Jim is getting some good DX. It is said he melted the coil in Max's S meter the other night. Max has a new antenna and what with the revamping his 1155's had, he's looking for a bag to throw over the speaker when the volume is turned right back.

Cliffy the microfarad man has a new (to him) 3BZ which he claims goes like the proverbial bomb on 10 ft. of wire. Remember I said Bob 2AQR had his 813 on dry batteries at Avoca, well he says it is not true. He claims that the signal came from a 122 in standard trim. Still he's a truthful gent, so I suppose we must believe him. Harry 2AFA is still nibbling at the DX. Following a 20 mx contact on c.w. with a DM one Tuesday, he received the confirmation on the following Saturday morning! Harry was so surprised that he sent a card in return the same day.

Signals have been pouring in on the new parallel dipole at Booragul, the hideout of the hamburgers, but very few have been staggering out. Main cause of the trouble seems to be the lack of a tx. Sherwood has one on the bench and he keeps threatening to "get it going today." However, what with A.O.C.P. quiz and the Leaving Certificate, he rightly says "not enough time." The permit to run 2AKX/P Booragul has been received and the good old ZC1 appears at times but the club

REMEMBRANCE DAY CONTEST

12th and 13th AUGUST, 1961

1800 hours to 1759 hours E.A.S.T.

rig should not be long now. More crystals have arrived from afar and the band is pretty well covered—40 anyway. The osc. goes well but there is an absence of drive, but fear not all will come good in the end. The club is going well and some prayers are being offered for the institution of novice licences and 3 w.p.m. as some of the boys seem stuck on that magical figure.

Well chaps, don't forget the meeting. It will be at the usual place, Tighes Hill University on the second Friday and for those without a calendar, that's the 8th. See you there.—2AXK.

VK2ATQ—BOYS' RADIO CLUB

The club hasn't been as active as we would like, and band conditions always seem a bit off when we are on. However a few ZLs and VK4s have exchanged reports on 20 mx.

We were pleased to meet up with 2ADZ, 2ZL, 2AQR, 2JR, 2ACZ, 2PF and 2NA lately. George 2ADZ is living about half a mile away, but 2AMU and 2ALA are even closer.

Welcome back to Bob 2IN, after his trip through the Never Never. Bob supplied endless quantities of spare parts for our projects last year, but due to lack of time, construction work right now is nil.

Reg 2AI has promised to pay a visit after the holidays and demonstrate his KWM. We are borrowing a s.s.b. tx for a week or two at the end of the month, so if that doesn't raise a burst of activity nothing will.—2AXK.

VICTORIA

At the May monthly meeting we had an "Auction Night". Len Moncur was the very able auctioneer and quite a few items were exchanged. For one item someone started the bidding at "a dollar." 3AKJ thought he'd be a smart Alec and raised it to "1 dollar 20." He laughed on the other side of his face when Len knocked it down to him for 9/8! Lots of fun was had and lots of gear was disposed of. Prior to the auction, Sid Clarke showed us samples of coaxial cables which are being used between Sydney and Melbourne and also for high-power v.h.f. applications. This was extremely interesting and got the meeting off to a good start. Thanks, Sid. Thanks also to Len who did a fine job of extracting the "dollars," and dispensing the gear.

This month, on the 7th June, Wednesday night, the agenda item will be a lecture by

Lex 3AIL, on s.s.b., linear amplifiers, electronic T/R switches, and the like. The last lecture he gave on this subject was outstanding, so be in it this month; 8 p.m. at the Royal Melbourne Institute of Technology, Radio Theatre, Wednesday, 7th June.

With regard to the library, we are missing the following books: Admiralty Handbook 1938, Vol. 1: Frequency Modulation, by Tibbs. Please return them at once, and it might be a good idea if ALL books out were returned so that our new librarian can sort out what's missing. Work has started on repairs to the building. This will cost money, so please if you have not paid your subscription yet, let's have it.

B.D. CONTEST

Yes, about 10 weeks to this annual event. Let's make the upsurge of activity in VK3 over the past year or so a very evident fact by all h.f. operators getting on the air. As you know the "big" States have little chance of winning unless MOST of us submit a log. Please keep this contest in mind—August is the month and crank up your gear on 80, 40, 20 mx. The v.h.f. boys are up to all sorts of capers, here is an opportunity for those of us on the "d.c." bands to do something—i.e. about 60 per cent. of VK3 stations submit logs for the R.D. Contest.

You think this is impossible? Well are YOU going to be one of them?

PERSONAL BITS

Keith 3YQ is back from Japan; glad to have you back Keith. David 3ADW on holidays up in the Alps somewhere. Michael 3ZEO and 3ZCZ back from the S.W. Zone Convention, said they had a beaut time. 3AP, another television star, on the children's session on Channel 9 of a Wednesday night, giving Amateur Radio a bit more publicity; very good! Ken 3KR working some rare ones on 15 mx like FQ8, 9U5, ZEs, etc., in the afternoons. He has a triband quad and home brew rig running 80w. to 813 final. He tells me that Keith 3DW is busy re-building his rig also with a Geioso v.f.o. and 813 final and hopes to be active on all bands before very long. Other Hams in Benalla are Bill 3JP, Jack 3PF, George 3ADZ, but not very active.

SOUTH WESTERN ZONE

The Zone Convention was held in Warrnambool on 29th and 30th April. A departure from tradition by the local group put the zone

annual meeting during the Saturday afternoon and thus allowed the members to devote the entire evening to entertaining the visitors. It was certainly a struggle to make the earlier meeting, but general opinion was that the effort was well worth while.

Our new President is Brian 3XN and he is supported by Jim 3ABT and Bob 3IC, the Vice-Presidents. The Secretary, alias, remains with Don 3AKN, but some of the burden now rests on the capable shoulders of Eric 3ANQ who fills the long vacant post of Publicity Officer. Eric will be in charge of these notes from now and may be found on 144 Mc. almost any night. If you do have anything and haven't a chance to write, try the old firm on 80 mx and we should get it through for you.

The field events were based at Jubilee Park outside the city. The weather was kind and a wonderful time was had by all, especially the harmonics. The 80 mx tx was hidden cunningly in an old tank in the abandoned school ground by Brian 3XN. The first two to arrive dead-beated. The organising committee had the forethought to read the speedometers of the participants first though and declared Michael 3ZEO the winner by one mile. The Geelong Club Perpetual Trophy, however, consoled the runner-up, John 3AGD. Michael also found the 2 mx rig hidden by Bill 3ZFG. There were no starters for the 8 mx hidden tx. The 80 mx fox hunt was the last event and again the fox, 3AKN, nobly assisted by 3ARJ, fell to Michael 3ZEO. The all-band scramble went to 3AKN on a count back from Bill 3XE and John 3AGD. Bill, however, took the DX prize for a contact with Kevin 3AHA at Kyneton on 80 mx during the scramble. The best mobile went to John 3AGD.

There were many other minor events and prizes. That stalwart of the nit wit network, Luke 5LL, drew the lucky programme and a special for the long distance he travelled. The harmonics all drew the prize for the hidden tx hunt and the ladies all for the best lunch ever.

Our thanks go to all who did the events, too many to name, to those who gave the prizes, especially to the YLs and XYLs who made the lunch and afternoon tea, and to Eric 3ANQ, Judy and Mrs. Giddings who did the thousand and one little jobs that always crop up. Lastly a special thank you to our visitors, David 5AW, Roy 3ZFM, Reg 3ZER, Michael 3ZEE and many others. Dare we mention Michael 3ZEO who promised to attend the zone meeting on behalf of the State Council and who arrived just too late with a most dubious excuse?

The W.I.C.E.N. operators met under the chairmanship of Jim 3ABT, the retiring coordinator and zone control station. Jim declined re-election to the position of co-ordinator and Fat 3ADN will be asked to do that job. The position of control station is to be rotated around the members. Skeds will remain at two per month. We hope to get on to some traffic handling very soon. Bill 3XE caused a stir by pressing for the use of c.w. and was (naturally) supported by 3AKN and Bob 3IC. Result was, however, inconclusive.

One result of the Convention at this location was the need for a link with Eric 3ANQ during the weeks previous and it was a pleasure indeed to meet him on his own ground, his beloved two metres. Quite a bit of activity here, too. David 5AW and Gordon 3AGV have mammoth signals. Gordon has over 100 stations confirmed and is waiting for his 100 Award Certificate. He is building gear for 288 Mc. now when he is not on the job of building the new a.c. extension to the R/T link with VK7 land. Other mighty signals emanate from Roy 3ZFM, Herb 3NN, Reg 3ZCR and Geoff 3ZFX. Reg's rig is one of those poultry farm sort and we couldn't (shame on us) unscramble it, but we will, never fear.

Brian 3XN has also come back to this band with stabilised (?) gear and others nearly ready include John 3ARJ and Bill 3ZFG. Bill 3XE has drawn a 522 from the Institute and will no doubt be a starter.

We also have made a rather shaky start on the 50 mx band to meet Bill 3ZFG at home. Bill has intentions of dropping the Z part with the help of Peter 3FX who can be heard using the key most nights for practice. John 3AMC and Eric 3XL are very active on 80 mx still.

VK-ZL CONTEST

PHONE: 30th SEPT. and 1st OCT.
C.W.: 7th OCT. and 8th OCT.
1000 hrs. GMT to 1000 hrs. GMT

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John hopes to have the break-in and vox working shortly and also the new 6 mx converter. Eric has been heard working Harry 3AIE frequently. Eric 3ZL has d.s.b. gear, plate modulated, on this band ostensibly looking for 2 mx contacts but, alas, appears to have been seduced by Thorb 3AFS into looking for DX again. His peak input is 15w. to QQQE/20. Norm 3EQ has taken time off to get mobile during the Convention. Norm and Les 3DX have been getting DX cards by proxy lately. The pirate station has been heard by several chaps and appears to be a local for he apparently uses 3AWQ also.

Peter 3APK has been polishing up the Geelong Club station 3AGL and put it on the air using vox too. Jack 3JX has a little black box tightly screwed up which he uses occasionally. Modulator is a nice shiny piece of brass. Welcome to Ron 3ZLP who can be found on 144.250 Mc. and will answer any DX calls as soon as that bug in the rx has been squashed. Wal 3UT has the urge again for 20 mx and is getting good reports of the long wire antenna. Keith, the l.w.l., has reverted to the other extreme now and has confirmation from the Korean f.m. station on 49 Mc. and is awaiting the prints of the Russian t.v. station from Vladivostok. Also, Keith is waiting for confirmation from 3AKN on a 144 Mc. report (so are we!!). So, from 145 kc. to 144 Mc., quite a varied diet!

Kerry 3AXT has been visiting VK5 and was heard from the shack of 5XA. Those two old timers Harry 3HF and Harry 3XI are in the news again. The latest from 3HF is the radio controlled lawn mower which will do the job quite happily as long as you remember to press the button. (There would be a catch in it somewhere!) 3XI located a young ZL boy whose father had died suddenly and whom the police were unable to locate. A nice bit of work over Amateur bands. Tony 3WB is still working on that mobile but during the Convention pressed into service that old warrior VL3KI/3KZ/3JD mobile 5 which rest with him over the winter. That outfit has to be seen to be believed and what a mighty signal. Welcome to 80 mx on wheels O.M. Congrats too to John 3AGD and Garland on the arrival of Olive YL.

The new relay from 3WI on 3.5 Mc. has been heard well over the zone area and at Jubilee Park during the Convention was only about one S point lower than the 7 Mc. transmission, both sigs being loudspeaker copy from the mobile whips.

The only portable station noted during the month was Kevin 3AKR portable at Puckapunyal, using a Type 68 set and piece of wet string. And so from here it is QRU. Thank you all who helped with these notes over the past year and please keep up the flow of gen for Eric 3ANQ who will now be doing the whole of the zone publicity work. It's over to you, Eric, and cheerio all! Best DX to you all and may your r.f. never grow less. 73, 3AKN.

EASTERN ZONE

The Eastern Zone Convention, held at Yarram on April 8, resulted in a further burst of activity throughout the zone. Keep it up chaps.

80 mx zone hook-ups have been held every Sunday morning at 9.30 a.m. with 3QZ, 3AIT, 3DY, 3QH, 3PR, 3BB, 3NY and John Batterlick being regular participants. I wonder if some of the other members of the zone could pull the switches on and add to the QRM on 3850 kc. on Sunday morning at 9.30—no t.v. to worry about at that hour chaps. CBF does the honours by replying to 3WI. The 2 and 6 mx boys in the zone are quite active, with 3DY, 3ZDP, 3ZAB and 3ZAQ burning up the air every Thursday evening. Ross is working quite a few boys down in Melbourne, with Peter 3ZDP following in his footsteps—just to show that it can be done. What about a few more 2 mx signals on a Thursday night chaps?

Peter 3ZDP at the moment in a lot of trouble trying to tame a QQQE/40; think I will have to get into the tile business and then I may be able to try and tame me a QQQE/40 also. Maybe Peter if you write to Phillips they will bring some out with nice pink plates.

The zone held a field day at Yarrigal Creek on Sunday, April 30, and the zone host for the day, Alf McCrell, was able to welcome 22 people.

Some of the boys went real Indian style, Comanche and Cheyenne type to be exact. Really worked too, with owner operator Bill 3AMH working some nice DX. A very hearty welcome to the zone Bill. Think a lock and chain on your gear is in order as all the boys really went for your outfit! While the boys were working (Ham Radio style), the XYLS and harmonics were gathering mushrooms. Look what you city boys missed by not at-

tending. Thanks Alf and Mrs. McCrell for a very enjoyable outing.

David 3DY working nice DX on 28 Mc. with a Russian station his best. David warmed his beam up with a Collins KWM2 the other night, so that could be the reason that the DX now rolls in. Sorry to lose George 3ZCG from the zone, our most ardent v.h.f. operator, best of luck, George. 3ASS, 3ZDP, 3DY and 3ZAQ occasionally work Melbourne on 2 mx and regularly work each other.

The Morwell High School Radio Club will soon be on the v.h.f. bands, as John Anderson has loaned his gear to the cause. Should any Ham, radio club, with particular emphasis on school radio clubs, like a contact with the Morwell High School, would they contact 3BB or the Eastern Zone Secretary. Listen for the club on the air of a Thursday evening and chaps, the welcome door-mat is out to anybody who likes to call personally.

WANGARATTA HOBBIES EXHIBITION

This exhibition was held in the Wangaratta Drill Hall on Friday and Saturday, 27th and 28th April, and was organised by the Lions Club for charity.

Hobbies stands included Scouting, guiding, pottery making, sewing, aircraft modelling, railway modelling, cycling, amateur radio, photography (complete with model in bubble-bath, posing for amateur photographers), woodworking, and a stand of dolls dressed in different national costumes.

The Amateur Radio stand was set up by Bruce 3QC, assisted by Noel 3ANS and s.w.l. John Meylands. John is a very keen s.w.l. and expects to sit for A.O.C.P. exam. in not too distant future. We're looking forward to his QRM. Tx used was 807 70w. plate and screen modulated to a 132 ft. dipole, centre fed with twin flex. Centre of the dipole was at top of the roof gable, the ends being supported by a tree one end, a kind neighbour's fence at the other. Rx used was an HRO, the whole station being Bruce's home station.

Acoustics of the hall in general were lousy, and we had a lot of trouble with p.a. loudspeakers, projector loudspeakers going flat out, etc. The din was appalling. On top of physical noises, we had some electrical ones from sewing machines, drills, band saws, model trains, etc.

Thirty stations were contacted altogether, including a few ZLs. We used 49 mx on Sat. afternoon, and 80 mx after tea on Fri. and Sat. Fortunately, 80 mx was quite good and signals were heard quite well despite the racket.

We found in the crowd a few radio minded young lads, and one or two lads (not as young) but still radio minded. One gentleman I remember gave up his call sign 3AS about 1930.

We met young Andrew Skewes, who is sitting for the ticket in October. Andrew is 16, still goes to school, but isn't lacking in ability on the microphone. Had to practically drag him away from it.

Another visitor to the Ham shack was Miss Janice Webb. Janice showed a keen interest in radio and very capably held a QSO with Dave 2DE at Gundagal. Her presence was a great asset to the shack as was evidenced by a noticeable increase in interest, both in the

audience and on the air. Her voice was perfect (we sneaked a listen in the monitor) and we are of the opinion that her presence gained us a few more contacts.

Janice herself had a hobby on display, namely pottery, so 3ANS tried his hand at the pottery and took home a vase as proof of his ability at "earthmoving".

Amongst the equipment displayed, were a Command rx, Compass rx, Eddystone rx, g.d.o., c.r.o., AT5 and 522 tx-rx. A centre loaded whip and 4 el. 2 mx beam, a QSL display, and some technical books on valve data, A.R.R.L., etc., completed the picture. A particularly nice piece of equipment was Bruce's portable tx-rx. This unit is a very compact rig, runs a 2E26 to 25w. with Class B modulation. The rx side is all there too. Amplified a.v.c. was very effective when this rx was used to relay operator's voice to the audience, who had trouble hearing the operator during transmit periods. The problem was overcome by turning on this portable rx to hear the main tx.

Keen interest was shown in our stand and we think our stand was as popular as any other—apart from the bubble-bath!

MELBOURNE UNIVERSITY AMATEUR RADIO CLUB

The club is functioning this year in much the same manner as before, meetings are being held in the Electronic Lab, on Friday evenings once a fortnight. The next meeting is on Friday, 9th June, 7.30 p.m.

Committed meetings have been held, and the committee for 1961 is as follows: President, Michael 3ZCZ; Secretary, Duncan 3LQ; Treasurer, Ian 3ZHR; Committee (elected): Max Burnet, Michael 3AVV, Stewart 3ZIS; (co-opted staff members: Ron 3AUB and John 3AKJ).

The boys are still searching for a "home" for the club station, 3ATM, as pressure on accommodation at the University is very great, this is a difficult task. The club equipment is being reorganised and they should be on the air again soon.

Plans are in hand for a club "do" on 1962 National Field Day. What about you organising club or zone, or some other group, show next year?

QUEENSLAND TOWNSVILLE

With the merging of summer into winter, we always looked forward to a change in the band conditions, but reluctant to say, this year has not lived up to expectations, although some nice DX has broken through on rare occasions. It can truthfully be said no new countries heard for quite a long while and those pile ups on the choice station are no longer heard. Maybe that is the reason for lack of operation by the locals. One time there were always a few on each band, but now it appears they are otherwise engaged. One or two re-building s.s.b. units, while Eddie 4WH, who has not been on the air for some years, putting the final touches to his hi-fi which will have tomorrow's inventions today.

A most welcome visit was paid by Middy and Mavis, ZSICD, who, after touring New Zealand, were prevailed upon to come up to sunny North Queensland and see our beautiful scenic resorts. Did my best to show all the places around Townsville before sending along to Basil 4ZW in Cairns to do the honours. No report as yet of their travelling in the district. Pleading to hear Rick 4VR has at last graduated from the laundry to a room upstairs which has been vacated by his son 4ZAP on his recent marriage. Rick says no more transformer losses due to moisture, etc. Will be able to chase the DX now in comfort.

At the last meeting of the local club, the tape sent along by 4WJ on t.v. interference was played to a fair audience. Power line interference seemed to be the highest on the complaints side, while the Amateur is well down the list. A whisper is that the local t.v. station will definitely be placed on Mount Stuart and served by a scenic road. So we still have a period of grace before worrying about t.v. gremolins.

Also at the club meeting it was decided to make Evelyn Bahr a honorary member in recognition of the first lady to gain a licence in North Queensland (well done). Evie is the XYL of Charlie 4BQ, who can be heard on most bands.

Claude 4UX returned from a sojourn in the southern States, brought back wealth of literature for the boys. The local Z boys can be heard each evening working the JAs on 50 Mc. A V56 promises to open up on this band very shortly. No KH6 there at present. 73, 4RW.

W.I.A.—QUEENSLAND DIV.



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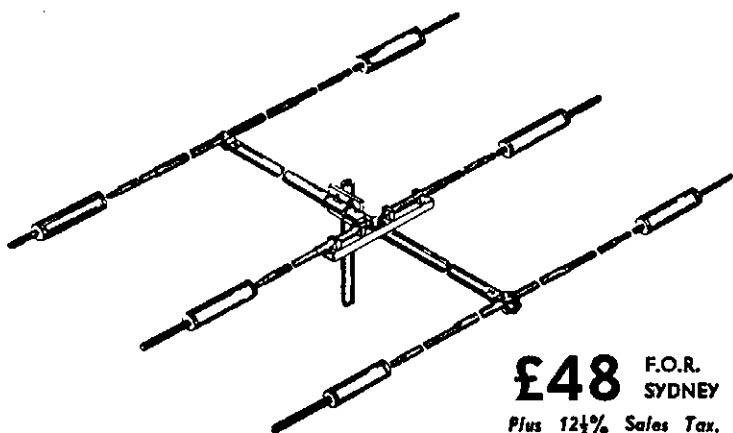
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SOUTH AUSTRALIA

A representative gathering of the members of the VK5 Division turned up at the monthly general meeting for April, at which Ron 5ZDC showed a large number of the slides that he took on his recent trip to the four corners of the globe. I personally had heard a lot about these slides, and with my usual, cunning I talked Ron into agreeing to screen them at a meeting in the future, thinking that I would be able to sit back in comfort and enjoy them from start to finish. In this I had forgotten to allow for the shrewdness of Council, who the moment that my back was turned and I had left for my holidays, immediately contacted Ron and persuaded him to put them on at the very next meeting, with the result that I still have not even glimpsed them. I have spoken to several who did see them, and I now realise that Council have again blotted their copy book with me, and whilst it was my intention to bury the hatchet with the new Council for 1961, I have now sworn to get my revenge unless they put on an encore for me in the near future. The vote of thanks to Ron for his kindness in placing himself at the disposal of the meeting was proposed by Rex 5DO, and the members present showed their appreciation in the usual manner.

Due to the lateness of the hour no business was transacted, although it was the intention of Council to distribute the many membership certificates now available. These will be, or have already been distributed to members, but if you have missed out, get in touch with the Honourable, and I use that word with some reservation, Secretary, and he will do the rest.

Incidentally, Brian 5CA filled in for me with the notes for the local paper each week that I was away, and taking it for granted that the membership certificates would be distributed at the meeting, he announced in the paper that the certificates had been distributed at the meeting, plus one or two incidents that were supposed to have taken place. Due to the number of slides shown and the fact that it was too late for any business, he was caught on the wrong leg for once in his life. I was very pleased about this, because for the month that he was writing the notes he made my efforts look like the ramblings of a nitwit, so much so that I tried to persuade him to keep on the good work for the rest of the year, with a very rude response on his part. Anyway, thanks OM, you more than held the fort for me, but did you have to set such an example for me to follow?

A very welcome visitor to VK5 this month was "Dud" Charman, G6CJ, Past President of the R.S.G.B., and a very keen and enthusiastic Amateur if ever there was one. He was visiting our fair State in his capacity of Chief of the Aerial Section of E.M.I., and everything possible was done by various VK5 Amateurs to make his flying visit as pleasant as possible, such as a visit to a Council meeting, a get-together of many of the boys as was possible, as many visits as he could cram in, and he departed for home convinced that no matter where he goes in connection with his commercial interests, Amateur Radio never alters. His farewell words were to the effect that he would be pleased to get back home to G land again in order to have a rest from the overwhelming hospitality that he had received in VK5.

Les 5AX at the moment of writing is kicking his heels up in VK7, and if all is to be believed is having the time of his young life. I have not heard him mobile myself, but heard Keith 5WI in QSO with him, although Keith was having a little trouble in copying him and was helped out by Comps 5EF acting as the relay station. Comps, of course, had his snorkel pipe on, and Les was able to copy him without any trouble, as did Keith.

George 5GG has been appointed to the VK5 Council to fill one of the vacancies created by the inability of Lloyd 5OK and Les 5AX to carry on. A good choice, if I may say so, and welcome George.

News from the South East of VK5 this month stresses the fact that very little activity, as far as Amateur Radio is concerned, is taking place. However, all is not lost because Claude 5CH still manages to be heard frequently on 7 Mc., mostly on Sundays, but the world is still waiting to hear the launching date of the new rig. Col 5CJ has temporarily resigned from my espionage staff, mainly because of his new job of managing the b.c. station SSE with its attendant extra time, but can be heard in contact with Peter 5FM at Crystal Brook, on 7 Mc., most lunch times. I know how busy you have been Col, you are pardoned. How is the family, OK? Leo 5GJ has secured a new rx (ex 5MS) and is now sitting back waiting for some of that famous DX to come forth

OBITUARY

PAT LEONARD, VK6LT

It is with deep regret that we announce the passing of Pat Leonard, VK6LT, of Adelaide, S.A.

His signal, mostly heard on 14 Mc., was familiar to both Australian and World-wide Amateurs for the many years that he resided in Port Lincoln. Shifting last year to Adelaide, he had only recently resumed activity on his beloved 14 Mc., and his signal will be missed by the many W Amateur Stations with whom he had skeds and contacts through the years.

To his sorrowing relatives we extend our deepest sympathy, and trust that the healing hand of time will help them over their path of sadness.

from the speaker. It must be there Leo, it used to boom forth for the original owner!

Ron 5VH has been heard occasionally on 7 Mc., but spends most of his spare time, and with his vocation that would not be much, in improving his gear. Erg 5KU is almost listed among those missing from the scene of Amateur Radio these days. The weather being what it is, I am certain that he is not gliding, he certainly is not on telephony, so going on past performances, I would assume that he is dah-dahing at times. Al 5ZCR is still active on 8 and 2 mx, and a little birdie tells me that he is swatting c.w.! Don't tell me that you are going to join the ranks of the "Squares." Al, think of the sykolog-psykolog-psykoll-well, anyway, think of the effect on the ranks of the a.c. boys!

A new licensee has bobbed up from Talpeena (is that right OM?). So far I have no name or call, but I believe he was a Z call and as soon as I can get further information I will be only too pleased to include him in the S.E. Roll of Honour. Anyway, OM, welcome to the ranks and hope QSO you some time. Don't you believe a word that they say about me. I am on the air. Stuart 5MS has not been very active of late. About four months ago he lost his voice and could not chase that elusive DX and has only just sufficiently recovered to have a bash on the air. He came to Adelaide a couple of times to see a specialist, and found time to attend the W.I.A. Picnic. He has also changed his occupation, is now at SSE, and is gradually picking up the threads of his skeds with his friends in G land and can be heard at times on the other bands. Thanks for the dope Stuart, can I count on an encore?

Arch 5XK, due to his location, just manages to scrape into this section, although for once I have very little news of infamous, or even famous events connected with him. I still have not quite recovered from the shock of being informed that he has no grizzles. Incidentally, I had a QSO with him recently and his wife told me that she remembered me as the wicketkeeper at the Picnic. I suggested that next time she view me from the bowler's end, I am a little more svelte from that end, the curves are a little more pronounced, if I might be pardoned for saying so. What's that Arch? Put it in figures, oh well, if you insist. 96-104-98!

Ken (ex 5BS, VS6DE, now G3HRY) dropped a line from G land renewing his subscription to the best Division in VK, and also wishing members of the VK5, the aforementioned Division, all the best, especially the Elizabeth boys, or as he describes them, the Elizabeth "Army". He is now a member of the "Best Amateur Radio Society in the World," his words not mine, viz. The Royal Air Force Amateur Radio Society (R.A.F.A.S.) and has been shanghaied on to the committee, apparently opened his mouth once too often! He can be heard operating from G8FC at the moment, as his rig is not yet set up.

The VK5 Divisional Journal number three bobbed up this week, and once again I must congratulate those responsible for the job on the excellence of their work. It is a splendid way of keeping the city and country members right up to date on the doings of the Division, just who is who, and what is what. My particular copy contained the list of the office holders in the Division appointed at the first meeting of Council, and although I was not surprised, it came as a shock to me to note that there was no mention of just who was the Publicity Officer or the Public Officer. Still I should be used to it now, that's all I have ever had from Council—ignore, ignore, and then some more ignore! Although I must admit, they have always provided me, with ample supplies of ammunition for these paragraphs!!

Harry 5EU is having a very frustrating time these days and is talking about taking down his beam because he cannot get any nearer than two S points in his chase after 5QX. Is that true or false, Harry? Keith 5EJ, whilst permanently based at Woomera these days, manages to get on the air from his Elizabeth QTH every second week, and can be heard on c.w. with 14 Mc. as the medium, to his complete satisfaction. John 5EV, contrary to all rumours, has not as yet moved to Woomera, but it won't be long now it is thought. No activity reported from this gentleman. Don 5TM and Clive 5PE still have their heads down and their (wait for it) feet up in the midst of the E.F.S. work, but are managing to get in a little time with their first love, Amateur Radio. Tubby 5NO and Jeff 5NQ are to be heard at all hours and in all places, chasing the elusive DX, and with their exploits being publicised in practically any radio magazine on the bookstalls, anything I might say would only be gliding the lily.

Steve 5HA is being heard more frequently on 14 Mc. these days and is also limbering up on 21 Mc. with the idea of giving this band a trial. Pete 5HB is alternating between 7 and 14 Mc., and his c.w. signals are getting results. Incidentally, his note is one of the best heard here for some time, and can be recognised long before he signs. Cyril 5DY, despite frequent trips to Woomera, has found time to erect a new garage and running true to form is now working on a radio control system to open the said garage doors. Ian 5QX, besides keeping his ears to the ground in the interests of the Division, has managed to work 100 countries in the past 12 months, but is now in the throes of designing a new tx, possibly because the second 100 countries is almost the hardest. At least that is what I am told.

John 5ZC can be heard at various times on 7 Mc., but in view of the fact that he was seen recently leaving the QTH of Ian 5QX at the nocturnal hour of 2 a.m. with a three element beam for 15 mx tucked under his arms and legs, it would seem that he is migrating. Peter Field, an ardent short-wave listener domiciled at Elizabeth, is only a youngster of some 13 or 14 years old, but if his enthusiasm for our hobby of Amateur Radio is any indication, another Elizabeth signal is well in the making.

Heard Ken 5IM and Charlie 2AXL, of Broken Hill, in contact on 7 Mc. the other evening, but I did not stay long to listen, mainly because the discussion was too technical for me. It seemed to centre around corns and the fact that Charlie spent all of his time at his vocation sitting down. Just what corns had to do with sitting down all day was beyond me, but then they don't call me "Pansy the pure of heart" for nothing!! Jim 5JK has been holidaying over on the Peninsular, but unfortunately for the trip his wife slipped over and they came home because walking was a painful business for her. Latest reports say that all is well and even if the holiday was interrupted, Jim is looking as fit as a fiddle.

Heard the University of Adelaide Radio Club (5UA) in QSO with the Prince Alfred College Radio Club (5PZ) on 7 Mc. the other day. Pat was the operator of 5UA and Roger was on the job for 5PZ. Believe it or not, I am an honorary member of the Uni. club (having passed through the University on my bicycle one day) and I receive regularly a copy of their excellent publication "Splatzer," which was up to this month edited by Col 5XY, who, incidentally, has an extra keen sense of humour, and the publication reflects this on nearly every page. Licensed representation in the club is good, including as it does, John 5DJ, Brian 5JR, Graeme 5XV, Colin 5XY, Brian 5TN and, to use the words of the editor, innumerable Z calls on the higher frequencies.

Shure and Begorrah, if it is not 4RW kissing the Blarney Stone in his notes on my behalf, it is that Spaepen Max 2ARZ hurling the doity insults at me in a letter to that Broth of a Bhoys the Editor. Whilst it is extremely gratifying to me to note that my humble efforts on behalf of VK5 are also being perused by some of the "Wise Men from the East," I feel that I must point out that what may be fact in VK5, could possibly be fiction in VK2, or even in some other Division, and my notes, believe it or not, are only written with VK5 in mind. Checking up at top P.M.G. level, after recovering from the shock of seeing my name in print, "The Portly One," I was officially informed that no machinery has been set up in Adelaide to receive the yearly fee for an Amateur station licence, other than the Receiver of Public Money, which is situated in a special section of the Adelaide G.P.O., and therefore, Max or no Max, poor taste or good taste, my paragraph in the April issue of "A.R." still stands, and I say again, why

NORTH WESTERN ZONE

Had the privilege of a quick visit to VK3 in April. 3ANG was my guide and we saw 3APL, 3OM, 3AHN and 3ARZ. Two things were most impressive, first the hospitality, and secondly, the very fine installations in evidence.

Once again an 80 mx tx hunt was held, but with very poor attendance. Something will have to be done. 7TT was the guinea pig—sorry the fox hid himself very well. Later it developed into a mobile "catch me if you can" stunt which was thoroughly enjoyed by both participants.

The bimonthly social zone meeting for May developed into quite an auspicious occasion as we were the guests at the Burnie Fire Brigade. The night was devoted to the official handing over to the Brigade of two-way radio gear, designed and constructed by members of this zone. Two vehicles roared away from the station and were controlled around town as a demonstration. Some very complimentary remarks came our way as a result of our effort and we came away too full for words—in more ways than one! We are grateful to Leon 7JP for the magnificent job he did in the final setting up and testing of the gear.

It has become the accepted thing now to hold hamfests in miniature at the Ferry terminal in Devonport. This time it was in company with 8RU and 8AX who had been "doing over" the Apple Isle. We look forward to meeting many more of the boys who anticipate visiting the mainland of Australia.

The 80 mx band has been quite good for several weeks and we have had some good ZL contacts. Looks as though our Kiwi friends will really come in as the year progresses.

Some interest is being taken in mobile gear around this way. It looks as though centre loaded whips will be the order of the day soon. In fact feverish activity is taking place with whips and someone will discover a new formula if not careful.

A spirited contact between 7XL and 7MS, both mobile, was heard the other night and a game of cat and mouse seemed to be in progress as they chased each other's frequency. Appears that the synchronisation of the automatic netting facilities synonymous to master and local oscillators incorporating signal frequency requires slight adjustment David.

Heard 7DA on the band the other night. Long time no hear David, so keep the heaters alight and turn the horizontal and vertical deflection off. Saw Sam 7SM receive his usual package of QSL cards via the Bureau the other night. As usual, we gaped and whispered, "how does he do it?"

Will conclude with another 7MX story. Tried out the 20 mx band recently. Nothing but loud hash. Not a signal of any sort. Examined rx from end to end. No go. Later found feed line had dropped off cubical quad. Problem of the month—how to solder a new feeder on the quad 40 ft. above ground? Answers must be the individual work of the contestant.

Cheers chaps, 7MX.

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SELL: Quantity unused crystals, mainly FT243 7 Mc. Send for list; cheap. Also new Grace magnetic stereo cartridge with transistor preamplifier; outstanding performer; cheap. Roth Jones, 131 Queen Street, Melbourne, Vic.

a whisper 6CS is going to a fringe area so will have his share of t.v.i. 8RW and 8BU often heard mobile on 40 mx. and of course 8XO on his visits to 8KJ's QTH. How is the fishing Herb? 8DI, a new comer to the bands is quite active with his 10w. and has many years of activity in front of him. One voice which will be missed in future is that of 6CO. Joe is on his way to Suva but hopes to be on the air soon with a VR2 call sign—CO for preference. Good luck Joe, and hope to hear you soon on 20 mx or perhaps 40 mx. The Crazy Gang will miss him.

8JM spent many hours on a mobile rig for his car, hoping to use it on the last long weekend. However, on his journeys some ignorant person, obviously not a Ham, crashed the back of his car and the result was no mobile activity. Bad luck John and hope to hear you mobile soon. 6 All Baba visited some of his 40 friends lately and was heard on his 122 portable. The ether fairly hummed during his wanderings.

S.a.b. is becoming a popular topic of rag chews and may be necessary the way the bands are becoming crowded. 8JO and 8MM can be heard on the lower bands trying to convert a.m. stalwarts. 8CL is interested in it or will be when he finishes digging up the worms. 73, 8PH, per 8ZCK.

TASMANIA

April 1961 can be regarded as a high spot in VK7. First, we now have the v.h.f. notes from the v.h.f. publicity officer, Reg 7ZAO, original transmitted on the 50 Mc. band, then re-radiated over 7WI, and this advance can only be regarded as a step in the right direction, and gives publicity to a very important segment of Amateur activity within this Division. Secondly, Terry 7CT has begun to re-radiate the 7WI broadcasts on 3872 kc, so we hope that the North and North-Western Zones will now be ensured of hearing the official broadcasts, no matter what the conditions. We would appreciate reports on the 80 mx transmissions.

On 18th April, a most enjoyable fox hunt on both the 3.5 and 144 Mc. bands was conducted, and we thank Charlie 7KS for operating the mobile 3.5 Mc. tx, and Reg 7ZAO for operating the mobile 144 Mc. tx. Again, this exercise showed what an excellent band the 144 Mc. band is for functions such as this. After the conclusion of the fox hunt, we all proceeded to the home of Brian 7ZBE, where sausages and other meats were cooked over a beautiful fire, and the supper, was completed by about the best coffee I have ever tasted. Thank you Brian for your oo-operation.

The club room fund received £218/- from the function, but we were disappointed in the roll up, and we ask for better support at the functions to come. The club room fund also benefited by £23/0 from the raffle of a fowl at the May general meeting.

Bill 7YY, his wife Franke, and daughter Helen returned home after their wonderful sojourn at Bond Bay about the middle of April. It is most interesting to talk to them about their holiday, and I personally found the stories about wrecked ships on the south-west coast of particular interest.

During April, Bert 3KU and Mrs. Clarke were amongst us. Bert tells me he is still a naturalised VK7 despite his removal from the State some years ago. Jim 8RU and his XYL were also within our jurisdiction for a few days and we hope you have returned home safely after a pleasant stay.

We regret the decision of Lon 7LJ to resign from the Federal Contest Committee. Lon has devoted himself to his work on this committee, and his ability to type has been invaluable. It has been Lon's work to prepare the reports for publication of the results of the various contests over the past two years, but in addition to that, he has attended the monthly committee meetings, and has contributed more than his share to the checking of logs in such contests as the Remembrance Day, involving at times working until midnight three times a week. Your efforts have been appreciated Lon.

Badges, both full member and associate, are now held by this Division in good supply. The cost is five shillings per badge.

The last note is somewhat discordant; the annual dinner held in March was a great success, except financially, due to the failure of ten acceptors not paying their subscription upon their failure to attend. Our Institute had to book for you, and accordingly had to pay for you. If you are at fault, please let us have your dinner subscription of a guinea per person and keep our finances satisfactory. 73, Ian, 7ZZ.

cannot we renew our station licence as easily as others associated with t.v. or radio? Why the "rose petal pink" Max, I would prefer the delicate colours of the pansy!!

News that Pat 5LT had passed on came as a shock to those who knew him personally and also to those whom he had contacted on his beloved 14 Mc., both in and out of VK. Active as a Radio Amateur for as long as I can remember, from Port Lincoln, it is only recently that he came over to Adelaide to reside and resume his Amateur activities suspended during his shift of QTH. To his relatives we extend our deepest sympathy and trust that time will ease the burden of sorrow.

Returning from my much publicised vacation, I found myself in the position of Mother Hubbard and her well known cupboard. My spies had transferred their allegiance to the "King of the Ducktalk" and looked like never coming back. A call to Keith 5WL a cracking of the whip by this truculent gentleman, a coming to heel of all concerned, and all was well. Thanks, Keith.

Norm Colman, my genial co-auctioneer at the Divisional meeting nights, has been a very busy man over these last few weeks and if rumour can be believed when dressed in his "Soup and Fish" he is Master of all he surveys. Good luck to you Norm. If ever a man has earned it, you certainly have.

Normally, nothing would now remain but for me to close these notes and settle back in a state of somnolence—sommoll—sommollolles—well, anyway, settle back and go to sleep for another month, but I cannot do so without thanking Comps 8EF for so ably filling in for me last month, even if in doing so he tore my good name to threads! and so nobly set the standard for 1961-62. His remark that at this time of each year Council takes a square look at the previous year's notes, confirms what I have been saying for years. "Square" is an apt description, and to those of us who move with the times and are "Hep" to modern thought, "Square" was unacceptably descriptive. Anyway, I can take it, after all I get eleven shots a year compared to his one, and if our barely concealed dislike of our individual methods of telephony helps to widen the boundaries of the Divisional notes, then we are both doing a little towards the greatest hobby, bar none. Please stand by to resolve my closing thanks to Comps. "Quack-Quack, Snort-Snort, Bleep-Bleep, and a couple of plopplops! Oh, by the way, these days all Divisional notes seem to end with the call sign, so why not mine? 6PS (PANSY to you).

WESTERN AUSTRALIA

The main event for this month was the Annual Meeting held in the Mend St. Hall, South Perth, which was attended by some fifty members including representatives of the S.w.I. Group and some visitors. Among these was 6XO who does not appear among us often enough. Business was rather prolonged and the meeting lasted till a late hour. A motion before the meeting caused some spirited debating and was finally decided in the negative. The election of Council produced some surprises, but the new members are welcomed and we trust they will carry on the good work of past Councils.

Activity on the h.f. bands has been quite brisk most nights, now the bands are entering their winter stability and becoming very popular. Several new call signs are heard such as 8DI, 8DC, 8RG, 8DR and others. We are getting quite a kennel of "Doggies" as well as the "Crazy Gang" 8CL, 8CW, etc.

The slow Morse sessions are well under way, thanks to the good efforts of 8PH and 8CW and their helpers. No doubt, when the listeners obtain their full tickets, they will acknowledge the help they have received. The best thanks would be to join the roster as 8DR has done. Bill has not had his licence long, but puts out a very good signal on his home-brew set. He even built his own wave meter.

8KJ and 8WL manage some contacts between t.v. stations but all the boys in the fringe areas are finding difficulties with t.v. Perhaps VK2ZL could give them some hints. Heard

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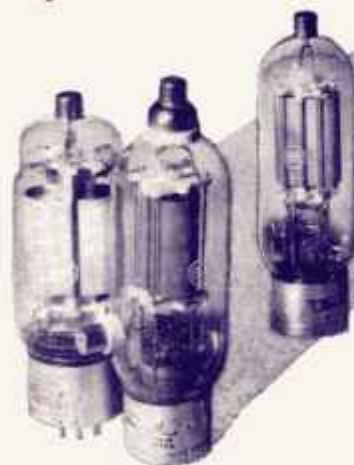
In later years the production of fine porcelain, bone china and pottery has centred in England and Germany, where modern craftsmen have shown that far from dying out, the art of the Potter is flourishing.

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Full story to appear in a later issue.

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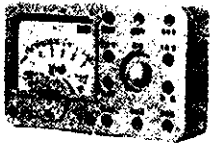
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Kc.

VK3WI: Sundays, 1030 hours EST, simultane-
ously on 3873 and 7148 Kc., 51.016 and
145.25 Mc. Intrastate hook-ups taken on
7135 Kc. Individual frequency checks
of Amateur Stations given when VK3WI
is on the air.

VK4WI: Sundays, 0900 hours EST, simultane-
ously on 7148 Kc. and 14342 Mc.
Intrastate hook-ups taken on 7105 Kc.

VK5WI: Sundays, 0900 hours CAT, on 7148
Kc. Intrastate hook-ups taken on 7125
Kc. Frequency checks given when VK-
5WI is on the air and also by VK5MD
by arrangement.

VK6WI: Sundays at 0930 hours WAST, on
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7085 Kc.

VK7WI: Sundays at 1000 hours EST, on 7148
Kc. and 3872 Kc. Intrastate hook-ups
taken on 7115 Kc.

EDITORIAL



AMATEUR RADIO IS A WAY OF LIFE

Amateur Radio to many of us has
become a way of life. Unlike other
hobbies, Amateur Radio provides
a vital contact with the other man—
whether he be your countryman or
from some remote part of the world
—a contact which opens the gate for
an international understanding of
the other man's problem in a way
which all the newspaper, broadcast
programmes, television programmes
and other mediums cannot surpass.

As a hobby which can be conduct-
ed from your own home it provides
in an instant that contact with the
outside world which would take
hours, days, weeks, months and per-
haps years to make by other means.
This contact opens the gate to free
thinking about "the way the other
man lives"; it takes you to his
"garden" and he to yours; it gives
you an insight into his way of living
as compared to yours; and above all,
it gives you an oral international
communication unique to your
hobby.

This way of life must never be
left to "drown"; it is a way of life
which we, as Amateurs, have as a
legacy from those early pioneers
who paved the way to make such
unique communication possible at the
press of a switch. To this end we
should be vigilant in every phase of
our art in order that our require-
ments are always available to us
and that we give to our hobby what
we expect to gain from it.

The Wireless Institute of Australia
is proud to represent the Aus-
tralian Amateur Service in all its
problems. What concerns you will

be its concern. What it can achieve
for you will be yours. But it must
have your moral and financial sup-
port, and you can encompass these
requirements by remaining a mem-
ber and encouraging others to join.

RECONNAISSANCE

In the summer and spring Amat-
eurs the world over turn to the out-
doors for recreation and the healthy
pursuits of outdoor activity, some of
which is given to maintenance on
the station aerial systems which are
a hardy task in the autumn and
winter seasons.

July is getting well into winter
with dark, wet mornings when the
rain and dew doesn't dry out until
midday and the cold evenings start
with the sinking of the sun around
fiveish. July is the commencement of
that three-month winter period when
time can be devoted to the shack and
all those things which the warmer
months could not drive you inside
to do.

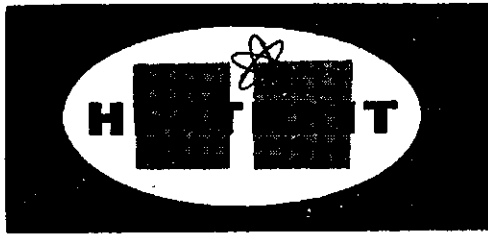
There would be few Amateurs
who could honestly say that he had
nothing to do with his hobby other
than to walk in, sit down, switch
on his rig and have a number of
QSOs throughout the year without
some thought to "other things he
wanted to do in connection with his
hobby."

The winter months is the time to
do these things so that more time
in the open is available when the
warm months return. So take stock
of that list of "things to do" and
get them done during July, August
and September. By September
spring is here again and the out-
door life calls . . .

FEDERAL EXECUTIVE

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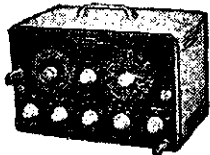
"Y" sensitivity 0.09v./inch, 4 c.p.s. to 1.2 Mc. Rise time 0.25 microseconds. Sweep 20 c.p.s. to 150 kc. Input 105-125 v.a.c. 50/60 c.p.s. 65 watts. Weight 22 lb. Price £44/12/-.



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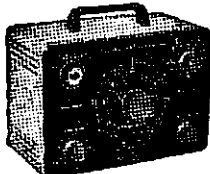
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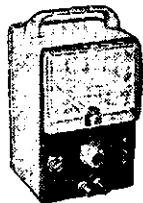
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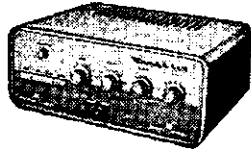
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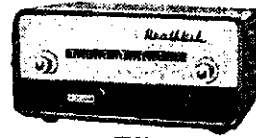
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S-88



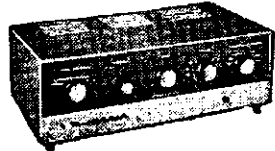
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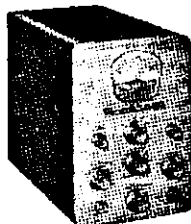
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KNOW YOUR CAPACITY

E. J. CAWTHON,* VK5JE

IN a recent issue of a popular radio publication the author of a certain article described how he had experienced considerable trouble with his c.r.o. and had eventually found "leaky" capacitors to be culprits. His comments suggest that there are probably many more obscure faults being experienced by constructors who are blissfully pinning their faith in the capacitors manufactured many years ago.

I have a vivid memory of having received a packet of unused capacitors from a W2 friend just after the war and being curious about their breakdown voltage decided to "megger" them. To say that I was amazed to find the majority of them showing a leakage around the one megohm mark is putting it mildly—I hope the dustman has never tried to use them!

The article on the c.r.o. started my train of thought working again, so recently I decided to go through my junk box and do some more testing. I am certainly glad I did, because over 60% of them have now been discarded. Readings of 0.5 to 5 megohms were quite common and I can only assume that this state of affairs must exist in hundreds of other junk boxes.

For the experienced constructor it is a matter of where the capacitor is placed in the circuit as to what degree of leakage can be tolerated and one which is unsuitable for anode coupling may be quite satisfactory in a low voltage circuit.

LEAKAGE VARIETY

Recently a class of new recruits to our art were required to construct an experimental two-stage amplifier and an opportunity was taken to demonstrate the wisdom of pre-testing all capacitors prior to installation. The circuit was somewhat similar to that shown in Fig. 1, using a 6V6 output tube but it could represent any amplifier or the output stage of your receiver. The set was wired using a new capacitor which read "infinity" and the anode current of the 6V6 was approximately 30 mA. consistent with reasonable quality. The capacitor was removed from point "X" and the "suspected" capacitors inserted with the result that the anode current varied from 30 up to 80 mA. with attendant severe distortion. I'm willing to bet that under normal circumstances the coupling capacitor would be the last item to be suspected and one can imagine the feverish changing of tubes, checking of resistors and allied components in an effort to cure that distortion.

Should we find it inconvenient to insert a milliammeter in the anode circuit, as shown by "A" in Fig. 1, then a check can be made by placing a voltmeter across points "B", taking care the meter is of sufficiently high resistance so as not to greatly disturb the normal working conditions of the cir-

cuit. Any increase in anode voltage caused by a faulty capacitor being inserted at "X" will cause the voltage readings to increase. Any capacitor suspected of being faulty should be put aside and tested as soon as possible, after which (if you decide to keep it for future use) suitably inscribe it with a "skull and crossbones" plus "poison" label.

A glance at Fig. 2 will show how the "leaky" capacitor in conjunction with the following grid leak forms a voltage divider from the h.t. plus voltage on the anode of V1 to ground, and under some circumstances will buck out the negative grid voltage. There can even be a positive voltage applied with the disastrous results previously mentioned.

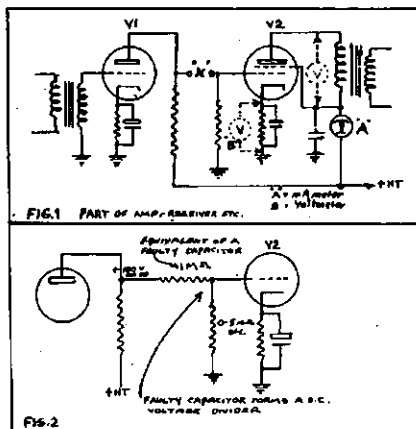


FIG. 1 PART OF AMP. RECEIVER ETC.

FIG. 2 EQUIVALENT OF A FAULTY CAPACITOR

"OPEN-CIRCUIT" TYPE

A rather rare specimen of the capacitor family is the "open-circuit" type which pops up occasionally to cause its own particular brand of bother. This can be, in the case of anode coupling, "no sound," or in a by-pass position, oscillation and unexplainable "screwy" effects.

Recently I acquired from a picture theatre an amplifier which had been discarded as unsatisfactory and thinking it would make a nice modulator, put it on the bench for test. It utilised a phase splitter driving a push-pull stage and it certainly did not give any where near its rated output, in fact one of the output tubes did not seem to be doing any work at all.

After checking all components for rated values, the only things left were the 0.1 μ F. coupling capacitors, and on a substitution test the one from the cathode of the driver was found to have an "internal open circuit". There is no sign of loose leads on the capacitor and it has a heavy moulded case, also it is a brand that I had not previously encountered any trouble with. I have a collection of these specimens but am glad to say they are rather rare unless, of course, they have been subjected to physical mal-treatment.

TESTING

Well let us see if there is any way in which we can easily test our capacitor provided it shows high insulation resistance. As we all know, a capacitor will acquire a charge, the value depending on the electrical size of the capacitor and the applied voltage, and that it will discharge on joining its connecting leads together. If we place our capacitor across a source of voltage and, noting the polarity, discharge it through a milliammeter we will get a certain "kick"—the degree of which will depend on the voltage used and the sensitivity of the meter. Care must be taken that we do not damage our meter and it may be advisable to use a "multimeter" and try the higher voltage scales first. If a reasonable deflection can be obtained on the meter, it can be used as a fairly good indication of capacitance value.

In the case of small values, the headphone test will be found very handy. The capacitor is momentarily placed across a suitable source of voltage and then headphones placed across it, whereupon a "click" will be heard—the degree of which will give a reasonable indication of its value. It is a good plan to check any capacitor against a few more of similar value and then we at least know it has some appreciable capacity.

It is advisable to keep the hands away from the leads to prevent any accidental discharge as false readings may be obtained.

With the increasing tempo of constructional work being undertaken by the Amateur fraternity, I hope that the foregoing remarks may save some of them hours of frustration and they will get the habit of "Test Before Installing" and "Re-check Occasionally".

This article has dealt with the older type capacitors and I hasten to add that very little trouble has been experienced with new capacitors bought over the counter in the last year or so. ●

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MODIFICATIONS TO THE BC348 RECEIVER*

J. P. MOORE, G3IKR

FOR about two years after being licensed the receiver in use at G3IKR was a BC348. True, it had had minor modifications carried out, such as removal of the generator, rewiring of the heaters and the addition of an extra audio stage. Basically, however, it was still a BC348 and as such had several drawbacks, viz.: (i) Lack of selectivity; (ii) Rather noisy, especially on the h.f. bands; (iii) No bandspread; (iv) Did not tune two Amateur bands (21 and 28 Mc.).

After about two years, the performance, which had been quite good originally, began to fall off and the noise level increased. It was felt that some of the capacitors were no longer as good as they might be. Accordingly, the decoupling capacitors in the r.f. and mixer sections were removed and were in fact found to be of low resistance, and therefore useless. It was decided that, if good results were to be obtained once more, the receiver would have to be virtually completely re-built. At the same time, a number of alterations to overcome some of the drawbacks mentioned could be carried out.

coil boxes were removed by undoing the screws on top of the chassis, removing the switch rod, and unsoldering the various connections.

In each of the r.f. and mixer coil boxes, a $\frac{1}{4}$ " hole was drilled and fitted with a grommet as shown in Fig. 2(a). The wires which originally went to the grid top caps of the valves were removed from inside the cans, and pieces of new wire arranged to pass through the grommets. Plenty of spare wire was left for ease in connecting up, the leads being cut later to the exact length required. It was necessary to screen the grid wire of the 6AK5 from the grid pin to the coil box—in some cases this might not be needed.

The sides of the oscillator coil box were next removed. The 15K ohm mixer cathode resistor was replaced by a miniature 5K ohm potentiometer mounted in a convenient place on the front of the box (i.e. the side nearest the front of the receiver). The coil boxes were then replaced. (Note: If the bandspread modifications are to be carried out they should be done at this stage.)

The changes in valve and circuit capacities. This was done by using a signal from the station frequency meter, adjusting the calibration first with the oscillator trimmer and then the r.f. and mixer trimmers for maximum response using the "S" meter as an indicator. The 5K ohm potentiometer in the mixer cathode was adjusted to give maximum signal-to-noise ratio on the h.f. band. It was adjusted by ear and found to be not too critical.

The rebuilding of the "front end" alone gave a very worthwhile improvement in signal-to-noise ratio.

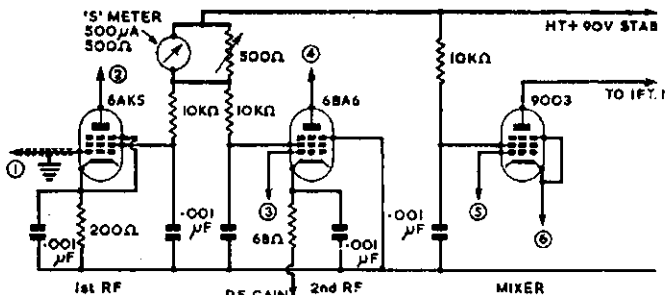


Fig. 1.—Circuit diagram of the modified "front end." The numbers 1 to 6 correspond with the numbers in Fig. 2(a).

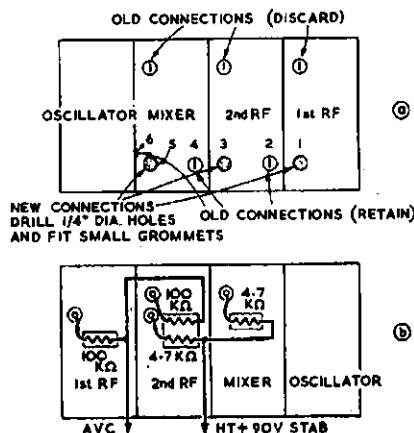


Fig. 2.—(a) Connections to the coil packs viewed from the front of the receiver. (b) Rear view of the coil packs showing the connections.

CONVERSION TO DOUBLE SUPERHET.

Changing the receiver to double conversion involved a fairly extensive rebuild. First, all the wiring and small components following the first i.f. transformer were stripped out, leaving only the valve-holders and i.f. transformers in position. The last i.f. transformer was, however, removed and replaced by the third i.f. transformer (85 Kc.) from a BC453 Command receiver.

A small sheet of 18 s.w.g. aluminium was cut to fit the space formerly occupied by the generator and on it were mounted the two remaining BC453 85 Kc. i.f. transformers, a crystal holder, and octal and B7G valve-holders.

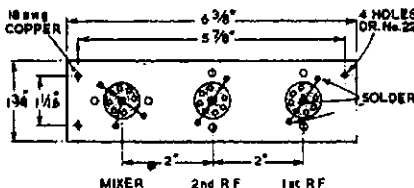


Fig. 3.—Underneath view of the new "front end" sub-chassis showing the positioning of the valve-holders and screens. 18 s.w.g. copper screens, 1 in. deep projecting about $\frac{1}{2}$ in. beyond each valve-holder. Soldered to centre spigot and pin 4 in each case as well as to chassis at both ends.

The modifications to be described were done in three stages with some considerable time interval between the second and third. Readers may, of course, carry them all out together, and this is probably the best plan. The three stages were:

- (1) Rewiring the "front end" using more modern valves (Fig. 1).
- (2) Rewiring the remainder of the set and conversion to a double superhet (Fig. 4).
- (3) Modification of the coil packs to provide bandspread on 7, 14 and 21 Mc. as described in "The Short Wave Magazine" for Dec. '53.

The present article deals with stages (1) and (2) only.

NEW VALVES FOR THE "FRONT END"

The small sub-chassis carrying the 6K7 r.f. valves and the 6J7 mixer was removed entirely, care being taken to preserve the wire which goes from the anode of the mixer (pin 3 on the 6J7) to the first i.f. transformer. The four

A new sub-chassis was constructed from 18 s.w.g. copper as shown in Fig. 3. Aluminium would be equally suitable, but if copper is used the small valve-holder screens can be soldered directly to the chassis.

Three ceramic valve-holders (polystyrene or p.t.f.e. would do just as well) were mounted as shown and the small screens soldered in position. A very small blowpipe was found to be better than a soldering iron for this operation. (Great care would be necessary if polystyrene or p.t.f.e. holders were used.)

The first three stages were wired up according to Figs. 1 and 2(b). Small disc ceramic capacitors were used for by-passing, and all resistors were $\frac{1}{4}$ watt rating. The new sub-chassis was then screwed in position and connected up to the coil packs and power supplies. It should be noted that the uppermost of the two connections at the front of the oscillator section goes to the 6.3 volt heater supply. The lower connection goes directly to the stabilised 90 volt supply.

It was found necessary to re-align the r.f. section of the receiver after carrying out these alterations due to

* Reprinted from R.S.G.B. "Bulletin," Aug. '58.

The three-position switch on the front panel was removed and a 5K ohm wire-wound potentiometer mounted in its place as r.f. gain control. The combined a.f./r.f. potentiometer was removed and replaced by a ½ megohm audio gain control. A single-pole toggle switch was installed for a.v.c. on/off control. The output valve-holder was replaced by an octal type for a 6J5 audio stage. The output transformer was removed and a small sub-chassis cut from 18 s.w.g. aluminium to take its place; on this were mounted a B7G valve-holder and a small potted output transformer taken from the BC453. The circuit was then wired up as shown in Fig. 4, group boards being used where possible for the small components.

The use of the original 915 Kc. b.f.o. is not really recommended, but when the modifications were carried out an 85 Kc. b.f.o. coil was not available. The 915 Kc. b.f.o. is quite stable and produces a T9 note, but as the main interest at G3IKR is telephony working, the b.f.o. has never been altered. For serious c.w. work a variable injection b.f.o. at 85 Kc. is recommended.

The value of Rx in the b.f.o. anode circuit was found by trial to give optimum injection and depends upon the circuit layout. A value of 68K ohms is suggested as a start.

No details of the audio stages are given as some people like 10 watts of hi-fi, others being content with a low power stage driving headphones only.

The circuit used in the writer's receiver incorporates a "Selectoject," an EL91 being used as a low power output stage giving ample volume with a 5" speaker.

In spite of previous articles to the contrary, a 1 Mc. crystal is perfectly satisfactory as a second oscillator, although in fact a 500 Kc. crystal will work equally well. Accurate 1 Mc. beats are produced throughout the tuning range which are useful for band-edge marking. The frequency can be adjusted to exactly 1 Mc. by adjustment of the trimmer across the crystal. The other trimmer in the second oscillator circuit should be adjusted to give sufficient injection; its setting is not at all critical.

Re-alignment will be necessary after these modifications have been carried out. Originally the receiver was realigned using the station v.f.o. and the "S" meter, as no proper equipment was available. It was afterwards checked using a wobblator and oscilloscope and found to be very near the optimum position. No details for re-alignment are given as it is felt that those who carry out these modifications will have the necessary "know-how" and probably the equipment required to do it satisfactorily.

The provision of bandspread has been fully described elsewhere¹ and will not be dealt with here. Suffice it to say that the modification is very worthwhile both as regards actual bandspread and the increased performance effected by the better L/C ratios which are obtained.

RESULTS

Results have been better than expected, although it was unfortunate that a standard BC348 was not available for direct comparison. On the DX bands the modified receiver compares favourably with an AR88 as regards signal-to-noise ratio and sensitivity and runs it a close second for selectivity, the main disadvantage being lack of variable selectivity. After three years' use the writer is still unable to work all that he hears, probably due to the long wire aerial which is in use. Ninety-seven countries have been worked, mostly on 21 and 28 Mc. phone with comparative ease. On the latter band a modified RF24 unit, using 6AG5 valves, feeds into the receiver on 7 Mc.

¹ "Bandspreading the BC348," M. A. Ryan (ET7D), "Short Wave Magazine," Dec. '55.

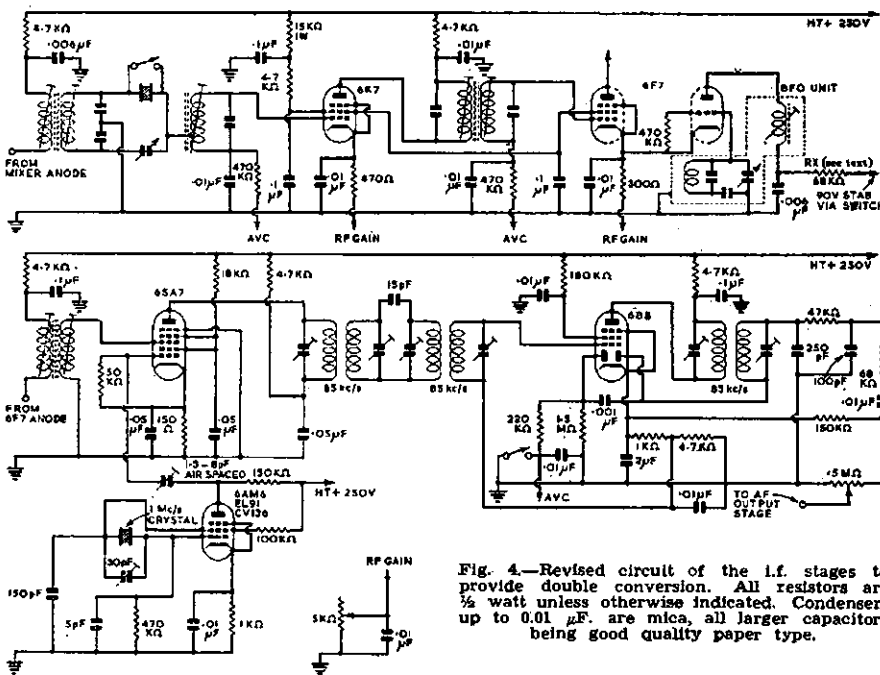


Fig. 4.—Revised circuit of the I.F. stages to provide double conversion. All resistors are ½ watt unless otherwise indicated. Condensers up to 0.01 μF. are mica, all larger capacitors being good quality paper type.

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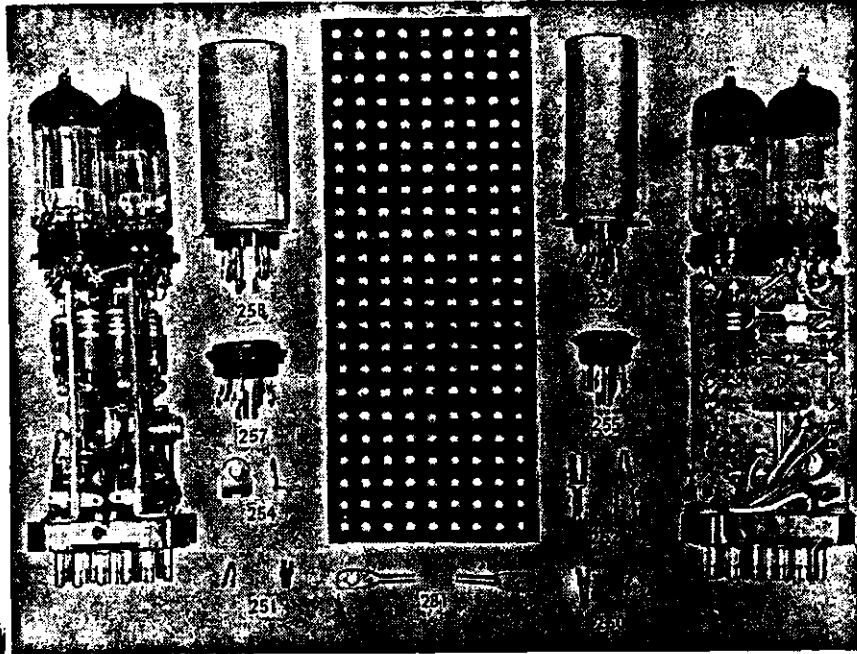
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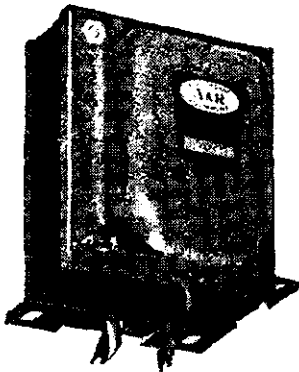
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2064	125	340 315	135 TAP 125	6.3 C.T.-2.25 6.3-2.25	16	16	4 15	3 1/2	2 1/2 x 2 1/2	3 1/2 x 3 1/2	VLN 34
2065	150	290 265	115 TAP 105	6.3 C.T.-	6	10	5 10	3 1/2	2 1/2 x 2 1/2	3 1/2 x 3 1/2	VLN 34
2066	190	320 265	125 TAP 105	6.3 C.T.-	6	7	6 8	3 1/2	3 x 2 1/2	4 x 3 1/2	VLN 34

Note* — Effective Transformer Series Resistance referred to Secondary

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FURTHER NOTES ON THE BC221 FREQUENCY METER

ALAN H. REID,* VK3AHR

THE BC221 ("Bendix") Frequency Meter is certainly a very valuable instrument in the Ham shack. Apart from its main purpose in life, it is useful for lining up tuned circuits, as a source of audio frequency tones, as a v.f.o. for the transmitter, etc., etc. An article by VK2AQU in "A.R." last November discussed the accuracy of this meter and, in the hope that I can add something to this interesting subject, I offer some further comments.

To my mind, it seems quite pointless discussing the accuracy statements published by the manufacturer at the time these meters were put out. It is a long time ago, and at least some of the operating hazards mentioned are not encountered in Ham use. Rather I prefer to make my own calibration; this is not such a long job as it might sound, as accurate calibration is required only from 3500 to 3700 Kc. My method, as given below, is based on Models "AF" and "AL", but I believe it applies to all meters of the BC221 type.

RE-CALIBRATION

First of all, inspect the meter closely for mechanical deficiencies and clean off any signs of corrosion. With a beat note audible in the headphones, check that all controls, etc., are free of noise and that the unit is "solid" electrically. The h.t. power supply should preferably be regulated and the meter warmed up for at least 15 minutes before proceeding with calibration. Actually, I allow at least one hour stabilising time.

With the station receiver tuned to WWVH on 15 Mc., and with its b.f.o. off, pick up some output from the meter by means of a short length of wire attached to the BC221 antenna terminal. This wire may be several feet long and is draped in the vicinity of the station receiver front-end. There should be no need to connect it electrically to the receiver antenna terminal although this might be permissible if it turned out to be necessary.

Turn the BC221 mode switch to the "crystal check" position and a beat note should be heard in the receiver. This is the 15th harmonic of the 1000 Kc. crystal within the meter, beating with the carrier of WWVH; it should not vary when the frequency meter tuning dial is moved or when the station receiver is detuned. If no beat is heard, check your coupling arrangements; if still no beat, then either your crystal is zero beat with WWVH (as it should be) or well off frequency.

The nameplate on the front of the meter is held on with four screws. Remove this and you will see a screw-driver adjustment which is a small variable capacitor wired directly across the 1000 Kc. crystal. Turning this should allow you to hear both sides of the beat note in the receiver. Set accurately to as close to zero beat as you can estimate and replace nameplate. This final setting should be done during the interval that WWVH is not

sending out an audio frequency tone. This interval occurs every fifth minute, during which the one-second ticks remain and a voice and code announcement is given out. The standard crystal within the BC221 is now set to 1000 Kc. to a high order of accuracy.

Now to check how the calibration of the instrument has stood up against the shocks, temperature and humidity changes and general abuse of the last couple of decades. The calibration book lists ten "crystal check points" in the low band and fourteen in the high band. When the meter was ready for calibration in the factory, the corrector was, no doubt, left untouched in one position, probably the centre of its range, throughout the entire calibrating procedure. The readings on the dial of all these check points would then have been noted and printed on the bottom of the relevant pages of the calibration book, as well as against the respective frequencies in the body of the book. After this, no doubt all the other readings in the book were filled in using external known frequencies at the required close intervals.

It seems to me important to note that, when the meter was brand spanking new, all the C.C.P.'s. would have been "spot on" when compared with the readings in the book, once the corrector was set to any one of them. The corrector is fitted, of course, to allow for changes in value of the two oscillator inductances and for capacity changes (in the tuning capacitor and elsewhere) that would undoubtedly occur with time. Should the working range of this corrector get too far over to one side or the other, it may, incidentally, be centralised by two parallel pre-set capacitors (one for low band and one for high band) mounted at the side of the chassis. See VK2AQU's article for further details of this.

All BC221's I have used, and probably all such units in use today, require correcting to the various C.C.P.'s. as one proceeds from the bottom to the top of each range. The calibration book says "correct at the nearest check point and go right ahead," but what does the thinking Ham do if two neighbouring check points disagree by a sig-

nificant amount and he wishes to establish a frequency somewhere in the middle? For instance, one meter I owned was 3 Kc. off the C.C.P. at 14,667 Kc., after correcting accurately at 14,000 Kc. Re-calibration was obviously desirable when working around 14,300 Kc. My present BC221 happens to agree within about 300 cycles at the points just mentioned so I just split the difference when setting the corrector and take the readings in the book as sufficiently accurate.

It is apparently not well known that there are many other C.C.P.'s. throughout the range of this frequency meter. These are genuine, usable crystal check points and I have a schedule of 40 of them throughout the low band and 45 in the high band. Many others of weaker intensity could also probably be identified and used.

The following table shows the five listed C.C.P.'s. between 3500 and 3666.7 Kc., each with its approximate relative output and make-up details.

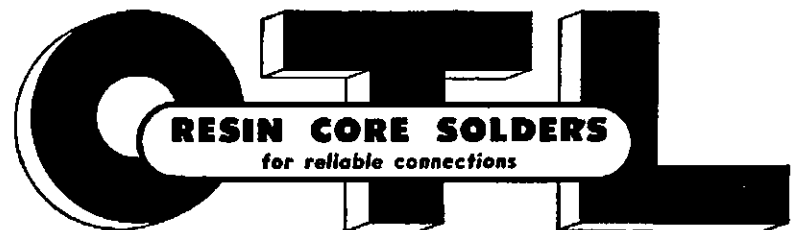
C.C.P. No.	Het. Fund. Freq.	Rel. Output mW.	Het. Harm.	Xtal Harm.
34*	3500	34.0	2	7
35	3571	0.3	7	25
36	3600	3.4	5	18
37	3625	0.2	8	29
38*	3666.7	25.0	3	11

* Listed in calibration book.

This table shows, for example, that one would expect to hear the 5th harmonic of the heterodyne oscillator beating with the 18th harmonic of the crystal, at an intensity of about 3.4 mW. in the headphones. This will occur at 3600 Kc.

The above five frequencies covering the Ham bands are probably sufficient to enable the preparation of a large-scale calibration curve for the meter over this range. I would expect this curve to give readings, at 3.5 Mc., within 250 cycles of the true frequency and to retain this accuracy, under Ham conditions, for years. A loss of accuracy would be made evident, if and when it occurred, by the necessity to use the corrector when moving to the higher check points, after setting on that at 3.5 Mc. ●

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REMEMBRANCE DAY CONTEST, 1961

A handsome perpetual trophy is awarded annually for competition between States inscribed with the names of those who made the supreme sacrifice, and so, perpetuating their memory throughout Amateur Radio in Australia.

The name of the winning Division each year is also inscribed on the trophy. In addition, the winning Division will receive a suitably inscribed framed photograph of the trophy.

Objects

Amateurs in each Call Area (this includes those in Australian Mandated Territories and Australian Antarctica) will endeavour to contact Amateurs in all other Call Areas (VK1 and VK2 are considered to be the one Call Area. Likewise VK5 and VK8.)

Date of Contest

12th and 13th August, 1961.

Duration

From 1800 hours E.A.S.T., 12th August, to 1759 hours E.A.S.T., on 13th August, 1961. A period of 15 minutes' silence will be observed by all stations on 12th August, immediately prior to the start of the Contest when an appropriate broadcast will be made from VK3WIA and relayed by the Divisional Stations.

RULES

1. There shall be four sections to the Contest:

- (a) Transmitting Phone.
- (b) Transmitting C.w.
- (c) Transmitting Open.
- (d) Receiving Open.

2. All Australian Amateurs may enter the Contest whether their stations are fixed, portable or mobile, but only members of the W.I.A. are eligible for the Awards. Portable-mobile operation is defined as transmitting and/or receiving equipment which is not connected to any private or public power mains or plant.

3. All Amateur frequency bands may be used, but no cross-band operation is permitted.

4. Amateurs may operate on both phone and c.w. during the Contest (e.g. phone to phone, c.w. to c.w., or phone to c.w. and vice versa), but may submit an entry for only one of the above Sections listed in Rule 1.

An Open log will be one in which points are claimed for both phone and c.w. transmissions.

A contestant transmitting on phone but receiving on c.w. must enter for the phone section (and vice versa). Refer to Rule 11 concerning entry in logs.

• The Federal Contest Committee of the Wireless Institute of Australia wishes all Australian Amateurs and Short Wave Listeners to participate in the Annual Contest which is held to perpetuate the memory of those Australian Amateurs who gave their lives for their country during World War II. It is held on the week-end nearest to the 15th August, the date on which hostilities ceased in the S.W.P.A.

5. Only one contact per station per band is allowed and arranged schedules for contacts on other bands is not permitted.

6. Only one licensed Amateur is permitted to operate any one station under the owner's call sign. Should two or more operate any particular station, each will be considered a contestant and must submit a separate log under his own call sign.

Contestants operating stations other than their own shall be referred to, for the purpose of these rules, as "substitute operators". Their operating procedure shall be as follows:

Phone contacts: Substitute operators will call "CQ Remembrance Day" followed by the call sign of the station they are operating and the word "log" followed by their own call sign.

C.w. contacts: Substitute operators will call "CQ RD de" followed by the group call sign comprising the call sign of the station they are operating, an oblique stroke, and their own call sign.

Contestants receiving signals from a substitute operator will qualify for points by recording the call sign of the substitute operator only.

7. Entrants must operate within the terms of their licences.

8. Cyphers: Before points may be claimed for a contact, serial numbers must be exchanged and acknowledged. The serial number of five or six figures will be made up of the RS (telephony) or RST (c.w.) reports plus three figures starting from 001 for the contact and which will increase in value by one for each successive contact. If any contestant reaches 999, he will start again with 001.

9. Entries must be set out as shown in the example, using only one side of the paper, and wherever possible standard W.I.A. log sheets should be used.

Entries must be postmarked not later than 2nd September, 1961, and addressed to the Federal Contest Committee, W.I.A., Box 851J, G.P.O., Hobart, Tas.

10. Scoring will be based on the table shown:

SCORING TABLE

		To							
		VK0	VK1-2	VK3	VK4	VK5-8	VK6	VK7	VK9
From	VK0	-	6	6	6	6	6	6	6
	VK1-2	6	-	1	2	3	5	4	6
	VK3	6	1	-	3	2	5	4	6
	VK4	6	1	2	-	3	6	5	4
	VK5-8	6	2	1	3	-	5	4	6
	VK6	6	1	2	4	3	-	5	6
	VK7	6	2	1	4	3	5	-	6
	VK8	6	1	2	3	4	5	6	-
	VK9	6	1	2	3	4	5	6	-

Note.—Read table from left to right for points for the various call areas.

In addition a bonus of 25 points may be claimed for the first contact in each call area on 50 Mc. or above.

11. All logs shall be set out as in the example shown and in addition will carry a front sheet showing the following information:

Name..... Section.....
Address..... Call Sign.....
Claimed Score.....

Declaration: I hereby certify that I have operated in accordance with the rules and spirit of the Contest.

Signed.....
Date.....

All contacts made during the Contest must be shown in the log submitted (see Rule 4).

Entrants in the Open Section must show phone and c.w. contacts in numerical sequence.

12. The right to disqualify any entrant who, during the Contest, has not observed the regulations or who has consistently departed from the accepted code of operating ethics.

13. The ruling of the Federal Contest Committee of the W.I.A. will be final. No disputes will be entered into.

14. Certificates will be awarded to the winners of the phone, c.w., open and receiving sections in each call area (Northern Territory will count as a separate call area). There will be no outright winner for Australia. Further Certificates may be awarded at the discretion of the Contest Committee.

The State to which the Perpetual Trophy will be awarded shall be determined in the following way:

To the average of the top six logs shall be added a bonus arrived at by adding to this average, the ratio of

EXAMPLE OF TRANSMITTING LOG

Date/Time E.A.S.T.	Band	Emission	Call Sign	RST Nr. Sent	RST Nr. Rcvd.	V.h.f. Bonus	Points Claim.	—
Aug '61	7 Mc.	A3	VK5XU	59001	—	—	—	—
12 1802	"	"	VK6RU	56004	—	—	—	—
12 1805	"	"	VK4RZ	47135	—	—	—	—

Note.—Standard W.I.A. Log Sheets may be used to follow above form.

EXAMPLE OF RECEIVING LOG (VICTORIAN S.W.L.)

Date/Time E.A.S.T.	Band	Emission	Call Sign Heard	RST Nr. Sent	RST Nr. Rcvd.	Station Called	V.h.f. Bonus	Points Claim.	—
Aug '61	7 Mc.	A3	VK5XU	59001	—	VK3XU	—	2	—
12 1802	"	"	VK6RU	56004	—	VK9DB	—	5	—
12 1805	50 "	"	VK4RZ	47135	—	VK5QR	25	3	—

Note.—Standard W.I.A. Log Sheets may be used to follow the above form.

logs entered to the State Licences, multiplied by the total points from all entries.

Example:

$$\frac{\text{Average of the top six logs} + (\frac{\text{Logs Entered}}{\text{State Licences}} \times \frac{\text{Total of Points}}{\text{from all Entrants}})}{\text{Acceptable logs shall show at least five valid contacts.}}$$

The Trophy shall be forwarded to the winning State in its container and will be held by that State for a period of twelve months.

Note. The F.C.C. emphasises the need for strict observance of Rule 9 in the Transmitting Section and Rule 3 in the Receiving Section.

RECEIVING SECTION

1. The Receiving Section is open to all Short Wave Listeners in Australia, but no Transmitting Station may enter.
2. Contest times and logging of stations on each band are as for transmitting.
3. All logs shall be set out as shown in the example. Logs must show first the call sign of the station calling (not the station being called), the serial

number sent by it and then the call sign of the station being worked. The scoring table to be used is the same as that used for transmitting and points must be claimed on the basis of the State in which the receiving station is located. A sample is given to clarify the position.

It is not sufficient to log a station calling CQ, nor is it permissible to log a station in the same call area as the receiving station.

For purposes of the Contest, VK1 and VK2 are considered to be in the same call area, likewise VK5 and VK8.

4. A station heard may be logged once on phone and once on c.w. for each band.

5. Club receiving stations may enter for the Receiving Section of the Contest, but will not be eligible for the single operator award.

However, if sufficient entries are received a special award may be given to the top scoring receiving Club station. All operators must sign the Declaration.

6. Awards. Certificates will be awarded to the highest scorer in each call area. Further certificates may be awarded at the discretion of the Federal Contest Committee.

1960 "CQ" C.W. Results

Number groups after call letters denote the following: Band, final score, number of QSOs, zones and countries.

VK2GW	A	326,696	593	76	118	
VK2APK	..	14	55,944	282	28	44
VK3ADB	..	A	45,360	214	34	36
VK3YD	..	14	5,800	60	17	23
VK3TL	..	14	5,616	78	13	13
VK3APV	..	14	5,460	67	14	14
VK3XB	..	14	5,148	58	15	18
VK4SD	..	14	5,680	52	18	22
VK4XW	..	7	3,660	68	10	10
VK5JT	..	A	12,628	102	23	21
VK5MF	..	A	5,920	58	21	19
VK5RX	..	14	9,780	76	17	28
VK5LD	..	7	720	15	7	9
VK6RU	..	A	260,678	486	73	114
VK7SM	..	A	58,236	235	41	51
VK7KA	..	14	13,912	110	21	26

★

First All Asian DX Contest

Results of the First All Asian DX Contest, conducted by the Japan Amateur Radio League, are now to hand. The outright high score was 4X4JU with 55,000 points. Australian scorers were (M indicates multi-band operation):

VK9XK	.....	M	2640	pts.
VK5NQ	.....	M	2067	"
VK2GW	.....	M	1470	"
VK6RU	.....	M	567	"
VK7WA	.....	M	342	"
VK7JB	.....	M	240	"
VK5JT	.....	M	24	"
VK2DI	.....	28	220	"
VK4SD	.....	14	368	"
VK5KU	.....	14	72	"

FIRST ALL ASIAN DX CONTEST

1. Contest Period: 30 hours from 2000 GMT 26th August, 1961, to 1600 GMT, 27th August, 1961. (During the last week-end, August, every year.)
 2. Contest Call: Station participating in this Contest may call "CQ AA".
 3. Bands: The following Amateur bands may be used during the Contest: 3.5, 7, 14, 21, and 28 Mc.
 4. Type of Emission: C.w. only.
 5. Type of Competition: (a) Single band, single operator; (b) Multiband, single operator.
 6. Equipments: There is no limit to the number of tx's and rx's allowed and competitors may use the maximum power permitted under the terms of their licence.
 7. Serial Numbers: (a) For OM stations: The serial numbers of five figures will consist of the RST reports plus two figures of their age. (Example: If your age is 35, number will be RST plus 35.)
 - (b) For YL stations: The serial numbers of five figures will consist of the RST reports plus the figures of "00" (zero, zero).
 8. Points and Multiplier: (a) For Non-Asian stations: A contact only with an Asian station will count one point and a multiplier of one for each Asian country on each band.
 - (b) For Asian stations: A contact only with a non-Asian station will count one point and a multiplier of one for each non-Asian country listed in DXCC and WAE country lists.
 9. Scoring: (a) The score of each single band is the country multiplier for that band, multiplied by the total contact points on that band.
 - (b) The total of all band score is the same of country multiplier of all bands, multiplied by the sum of contact points on all bands.
 10. Awards: A certificate will be awarded to following operators of every country. (a) For single band entry: highest scoring operator on each band; (b) For multiband entry: the highest scoring three operators.
 11. Special Award: In addition a special cup will be awarded to the highest scoring single operator on multiband in each continent.
 12. Deadline: All logs must be postmarked not later than 30th September, 1961. Send all logs directly to J.A.R.L., Attn. Contest Committee, P.O. Box 377, Tokyo Central Japan.
- Details of log pro forma may be had on application to the W.I.A. Federal Contest Committee or the Federal QSL Bureau.

A MESSAGE FROM HONG KONG

As President of the Hong Kong Amateur Radio Transmitting Society, I (VS6DS) would like to take this opportunity which has been kindly offered by VK3YQ, to send greetings to the President, officers and members of the Wireless Institute of Australia, in this the 31st year of our existence as a Society.

Although small in numbers, we lack nothing in interest, and our enthusiasm makes up for our smallness, enabling us to play a not insignificant part in the field of Amateur Radio. Nevertheless we look to the Wireless Institute of Australia and the New Zealand Amateur Radio Transmitting Society as being the natural leaders in the field of Zone 3. We, like you, hope that in combination with other Societies in the area it will be possible to create further activity under the auspices of the International Amateur Radio Union for the benefit of all Amateurs in this zone.

Of particular significance in this respect and which I would like to draw attention to at the present time, is the very vexed question of intruders in Amateur bands, for it seems to us that it would be better by far if we could pool the information which becomes available on these intruder stations, so that a case could be made to the International Amateur Radio Union for Zone 3 as a whole, rather than representations on a solely national level.

As members of an international body we are constantly reminded of the good fellowship which is automatically engendered in the pursuit of our hobby, and in our constant contact with each other across natural and international boundaries. In this connection I trust you will forgive me if I draw your attention to a particularly fine example

of the spirit which has recently occurred.

In Hong Kong we publish a small newsletter, and we are very pleased to see occasional extracts reprinted in the more ambitious magazines of the larger organisations. This news-sheet of ours is intended primarily for local consumption, and when recently an appeal was made to local members for back numbers of various publications to complete the Society's volumes, the fact that this item would also be read by others was entirely overlooked.

To our surprise, a few weeks later a parcel of "QSTs" containing all the missing numbers arrived unannounced with the compliments of the Secretary of the Amateur Radio Relay League. This was indeed a surprise, and does demonstrate the international fellowship which exists in the field of Amateur Radio, but a further surprise was in store for us, for via VK3YQ, we have now received quite independently from Mr. J. Lancaster, the Federal Secretary of the W.I.A., the back numbers of "Amateur Radio" which we also were missing. As an unsolicited and totally unexpected example of the spirit of Amateur co-operation, I consider this would indeed be very hard to beat.

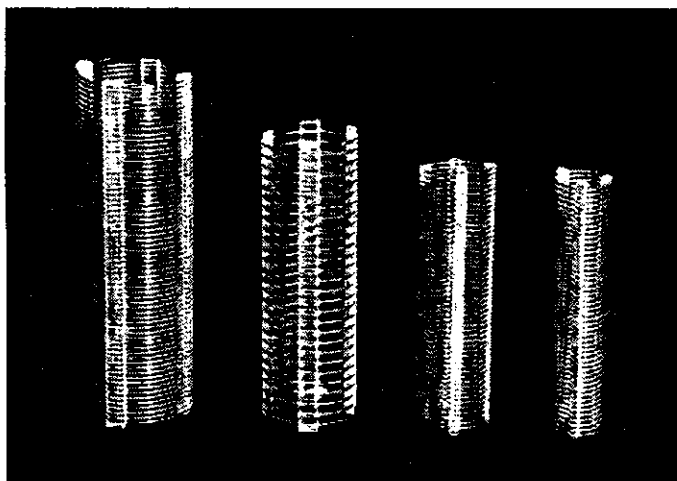
In wishing you all the very best of luck and plenty of DX from Hong Kong, may I quote a few lines from Kipling which used to appear in our pre-war magazine under the title of Radio Amateur, which expresses far better than I can, the spirit of Amateur Radio:

Only the master should praise us
 Only the master should blame
 No-one shall work for money
 No-one shall work for fame.

[The above was taken from a speech by VS6DS, recorded in Hong Kong by VK3YQ, and printed by "A.R." for general interest of all Australian Amateurs.—Ed.]

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No. 2-08	3/4"	8	3"	No. 3006	6/3
No. 2-16	3/4"	16	3"	No. 3007	6/3
No. 3-08	1"	8	3"	No. 3010	7/4
No. 3-16	1"	16	3"	No. 3011	7/4
No. 4-08	1 1/4"	8	3"	No. 3014	8/5
No. 4-16	1 1/4"	16	3"	No. 3015	8/5
No. 5-08	1 1/2"	8	4"	No. 3018	10/6
No. 5-16	1 1/2"	16	4"	No. 3019	10/6

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				L.	W.	H.		
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UM1	30	60	120 mA.	3 7/8	3 1/4	3 3/4	5 8	£7 12 6
UM2	60	120	200 mA.	5 1/8	4 1/4	5 1/4	11 8	£10 13 3
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AMATEUR ACTIVITY AT 1961 ALICE SPRINGS SHOW

The second annual show was held on 19th and 20th May in bright, warm, 70 degrees weather, under cloudless skies.

Bill VK8EW set up his gear in the machinery pavilion (so-called), but a better name would have been the miscellaneous pavilion! Two calves were in a corner barely 30 feet away and did they give any QRM? Ask anyone we worked! Those poddies wanted their Mums, and they told the world—literally!

Considering the modulated milk bottles already mentioned, spark-plug testers, sewing machines and a portable chain-saw, among other things, we did quite well, working 37 stations in 11 countries.

Ralph VK8NK popped into the pavilion occasionally to help Bill and me (VK8UX) keep the rig on 21 Mc. during the day, and on 14 and 3.5 Mc. at night. Graham Jenkins, who is waiting for his full ticket to be issued, enjoyed a couple of goes at the mike.

To maintain public interest (which was the object of the set-up), only those stations with good signal strengths were QSOed. Quite lively interest was shown by the public and several people enjoyed saying "Hello" to somebody in a distant land, but a surprising number suffered from "mike fright". The interest shown by teenagers, both girls and boys, was gratifying.

On Saturday, Ken VK3KR told us that Graham VK3QZ was at Ayers Rock with a Type 3 on 80 metres and would be in The Alice on Sunday. Sure enough, when I went out to the Motel, there he was stringing wires from hills and trees with gay abandon. Later that night he put an f.b. signal down into VK3 to keep an eight-way sked.

Stations worked from the Show included a number from VK2, 3, 5 and 6 on various bands. ZL3RB joined in a round-table of eight stations on 80 mx on the Friday night, and VK9RO was worked on 14 megs.

21 Mc. DX included 4S7GE in Central Ceylon and who had to survive some QRM. K6SHA, who was S9 for a 40-minute yarn; W6YWL, who had to rush off to watch his favourite t.v. show; KH6DJV, Kimo, who was very happy because it was pay day, and kept up the chatter for 1 1/2 hours, S9 all the way; K7BCX from Portland, Oregon; ZL1PV, VK9PJ, K6YCI who came back to us on c.w.; WA6LCK, who gave us a fine contact for the listening public; VS1FE, David's 25 watts put in a tremendous signal—he had been climbing up and down his tower in 85 degrees and high humidity to adjust his cubical quad, but the result was worth it; ZETJR was cooking a very early breakfast, but was putting out an S9 plus signal at the same time; 9M0AE rounded off a couple of days' operating.

Bill's rig was a Gelofo front-end feeding a buffer and an 813 final at 100 watts, and an H.R.O. receiver. The aeriels were dipoles fixed to lengths of water-pipe which were hoisted and tied to the tennis-court floodlight standards, giving about 40 feet in all.

I reckoned that I had spark-plugs in my ears at the end of the second day, but we felt that we had given Ham Radio a boost up here in the Centre.



STATISTICS RE DXCC

To work DXCC is not an easy task due to the lack of Amateur stations in various countries. If it is assumed that you can readily work one per cent of the Amateurs in a particular country, then you should have no difficulty in obtaining the following contacts: CE, CM, CO, CNB, CP, CR7, CTI, CX, DJ, DL, DM, EA, EL, F, FA, G, GI, GM, GW, HB, HC, HK, I, IT, JA, KA, KH6, KL7, KP4, KR6, KZ5, LA, LU, OA, OH, ON, OQ5-0, OZ, PA0-P1, PY, SM, SP, TG, TI, VE, VK, VO, VU, W-K, XE, YN, YU, YV, ZE, ZL and 4X4.

But this amounts to only fifty-four countries so that to reach DXCC it will be necessary to work say two per cent of the remaining Amateurs in the other countries which have fifty or more licensed stations. These countries would be: DU, EL, HH, HP, HR, KG6, VK9, VQ2-N, VQ4, YS and 4S7.

By so doing you have added another eleven countries; thereby making your total sixty-five, but you still have to work an additional thirty-five countries which will have fifty or less Amateur stations. To obtain DXCC is a difficult task from the statistician's point of view (which neglects the m.u.f., language difficulties, and the XYL.) Therefore it is a hallmark to show DXCC on your QSL card so congratulations to those who succeed.

Book Review

'A TO Z' IN AUDIO

By G. A. Briggs with R. E. Cooke as Technical Editor.

This 224 page book provides a comprehensive technical dictionary of terms applied in audio. It is very well illustrated and many engineers would find it a very useful reference book. Several cartoons amply express a point and the clear diagrams help the text.

Various illustrations are actual do-it-yourself projects, so the book has a practical as well as a theoretical use. It would be a very useful adjunct to the audiophiles library and could prove a popular addition to any library. The reader will gain from reading this book. The price is 26/6, post free.

Our copy was supplied by McGill's Authorised Newsagency, 183 Elizabeth St., Melbourne.

'HOW TO USE GRID DIP OSCILLATORS'

By Rufus P. Turner (No. 245 in the Rider publication series).

This 103 page booklet covers in ten chapters the full scope of that most useful instrument, the g.d.o. Every Amateur should be familiar with the g.d.o., but after reading this well prepared and amply illustrated booklet, he would be in a better position to obtain the maximum advantage from this very versatile piece of gear.

This is a practical booklet and each chapter shows how a specific measurement may be made. Whilst the writer shows how the measurement is to be made, this reviewer considers that it would be an advantage to also state the limits of inaccuracy in the method adopted, however this comment should not detract from an excellent publication that the progressive Amateur should have for ready reference. The price is 26/9 plus 1/- postage.

Our copy from McGill's Authorised Newsagency.

'RADIO AMATEUR'S HANDBOOK'

38th Edition, 1961

After thirty-five years of publication by the American Radio Relay League, it becomes difficult to review a book that has won such world-wide acceptance, so this review will be directed towards those who already possess an old edition of the A.R.R.L. Handbook. If the reader does not already have a copy it can be said that this book is a must for every Amateur shack. It is also a book widely found in other locations where electronics are used, and research laboratories, schools, libraries, universities, etc., all find it a valuable reference source.

The twenty-five chapters have become standardised during the years as regards their format, but each edition sees the addition and deletion of various data. For this reason it is well worth while purchasing the latest edition, even though you may already have an earlier copy.

The first three chapters follow the principle of briefly telling the facts regarding the electrical cornerstones of radio, capacity, inductance, and resistance. The fourth chapter outlines the

semi-conductor devices which are playing an increasing important task in electronics.

Construction of receivers is fully dealt with in chapter five, and well illustrated diagrams make the construction an easier task. Chapters six to twelve deal with all facets of transmitters, and the associated transmission lines, aerials, and wave propagation are covered in the next three chapters.

V.h.f. receives special attention with a further three chapters devoted to this art. Then chapters 19 to 24 cover the other parts of Amateur Radio such as mobile, test gear, measurements, and b.c.i. and t.v.i.

The final chapter (25) is particularly useful as it covers vacuum tubes, and this index provides a most comprehensive data sheet which is an excellent reference source.

The A.R.R.L. Handbook, if intelligently used, will provide the construction details, theory, and general information required by every Amateur Radio operator. It is a standard reference work which is an essential part of every Amateur shack.

Our copies from McGill's Authorised Newsagency, 183 Elizabeth St., Melbourne, and Technical Book & Magazine Co., 282 Swanton St., Melbourne. Priced at 46/3 plus postage.

'TUBE AND SEMICONDUCTOR GUIDE'

By T. J. Kroes, Philips Tech. Library

This 180-page booklet, 6 x 9 inches, is a most valuable addition to any library or organisation which deals with electronics.

It comprises eight sections plus a translation text in French, German and Spanish. The sections are: interchangeability list, valves radio, cathode ray tubes, transmitting tubes, microwave

K6TQN TO CO-ORDINATE

CIVIL DEFENCE

Robert L. Spencer, Snr., K6TQN, 507 Santa Clara Ave., has been appointed group co-ordinator of Civil Defence with the additional duty of Air-Sea Rescue Unit Information Officer for Peninsula Group 2, Civil Air Patrol.

The announcement was made by Major E. W. Farmer, commander of the First Air-Sea Rescue Unit based at the Port of Redwood City.

Farmer, who lives at 1674 Alameda, said the newly-named liaison officer between Civil Air Patrol and Civil Defence will co-ordinate the air-sea search and rescue activities of the local organisation with city and country directors of Civil Defence and disaster mobilisation for drills and exercises and radiological detection.

Robert K6TQN, a Redwood City business executive, last September was appointed radio officer for the Redwood City Civil Defence and Disaster Communications network and is a graduate of the O.C.D.M. radiation detection and instrumentation course. He is married and has one son, Robert Jnr., 18, presently stationed in Germany where he is attached to the 24th Engineer Battalion of the Army.

50 Mc. W.A.S.

Call	Cer. Add. No. Cntr.	Call	Cer. Add. No. Cntr.
VK2WJ	13 4	VK8DW	3 1
VK3ZFM	22 4	VK3RR	6 1
VK4HR	4 3	VK3HT	7 1
VK3GP	5 3	VK2AEZ	10 1
VK2ABC	8 3	VK3XA	11 1
VK2VW	9 3	VK3GM	12 1
VK5GG	18 3	VK3ACL	14 1
VK5ZAX	20 3	VK3ZD	16 1
VK5ZBL	21 3	VK2HO	17 1
VK4RY	2 2	VK3ZEA	18 1
VK5SLC	1 1	VK2WH	15

tubes, industrial types, miscellaneous, and semi-conductors.

Each section contains recommendations for the preferred tube type, a classified list, base connections, socket diagrams, and general data pertaining to that tube type. A most useful feature is an explanation of the tube designation code, which covers European and the E.I.A. system.

This is a well prepared and solidly bound booklet, and this no doubt reflects the hard wear it will take when purchased. It will prove a most valuable addition to all who have to concern themselves with tubes (valves) and rapidly require to ascertain their salient characteristics, then decide upon the preferred type.

Our copy from Philips Electrical Industries Pty. Ltd. Copies should be available from any Philips office or large booksellers. Price 17/6 plus postage.

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Correspondence

Any opinion expressed under this heading is the individual opinion of the writer and does not necessarily coincide with that of the publishers.

ROSS HULL CONTEST

Editor "A.R." Dear Sir,
It is appreciated that letters to the Editor concerning specific discussions can only be granted a limited time and space, but I trust that this very important subject has not to date been dispensed with.

With the exception of a brief reference to a letter by 4ZAA, as mentioned in David 3QV's most recent correspondence, it would seem that the V.h.f. Group in Queensland is as complacent as everyone else, including F.C.C., in regard to existing rules.

If the comments heard from other States towards the end of last season, and if the many differences of opinion locally are any indication, then the necessity of modifications must be undoubted, but on the surface, with the exception of letters and notes apparently accompanying contest logs, little concrete effort seems to have been made to develop generally acceptable changes.

This is the basis of the letter from 4ZAA to which David refers. It was compiled not as a singular effort, but consisted of the nett result of joint opinions from all of the v.h.f. operators in Brisbane—those interested in the Ross Hull and those who see no value in operating under the present rules.

Unfortunately, although quite some months have passed, we have not been favoured with a reply, and it is to be hoped that these suggestions have not been summarily dealt with along the lines of the closing paragraph of F.C.C.'s presentation of the result in June issue of "A.R."

The contents of that letter are too lengthy to be repeated here, but suffice to say that for every change recommended, every justification possible has been given from our point of view as we feel it affects all States.

Let us not be unduly critical—the F.C.C.'s job is a most exacting and difficult one, and if it is felt widely that changes are necessary, then let each of the V.h.f. Groups do the right thing and prepare in detail every change that members consider warranted and give all possible justification. After all, it cannot be ex-

pected that all the members of the Contest Committee would have the specialised knowledge and experience of V.h.f. Contests which makes us call for the changes.

Six detailed proposals must produce reasonably unanimous agreement, or at least provide a very definite basis on which to analyse requirements.

I have no doubt that F.C.C. would be only too willing to review arguments presented in this fashion—or should they require it—have no difficulty in finding representatives in each State who could quickly, together, even by correspondence, produce the alterations most generally accepted.

We have little enough time left now—when we consider the amount of work involved in altering rules and in publishing them—so let each of the Groups prepare concrete proposals rather than, with due regard to the excellence of their efforts concerned, stab vaguely in the air.

—D. B. Hughes, VK4BZ.

DECADE COUNTERS

Editor "A.R." Dear Sir,
Re AFDR1, who does the Magazine Committee think they are kidding? Presumably AFDR1 stands for April Fool's Day Rx No. 1, or maybe April Fool's Dream Rx No. 1. Maybe with another 9 tacked on to the £s department of the price, the story would look a little more convincing.

The idea of hooking a decade counter on to the communication Rx is technically interesting, but of course it's not new, and the practical solution bristles with problems. Counters are available commercially which count up to 10 megs, but at a price. Marconi have one for £788 sterling, if you're interested.

In this application, the counter is only half the story. The h.f. oscillator would require to have superlative stability and the b.f.o. also requires to be of high stability, in addition problems of accurately centring the signal in the i.f. passband present themselves. Double conversion above 10 Mc. would be necessary and this would complicate the counting procedure.

The writer has started preliminary work on a decade counted MN26, which will be fed from a xtal locked converter with switched xtals for the h.f. bands a la 75A4. It is proposed to use transistorised decades up to 10 kc. and the last three decades will use valves. I would be interested to hear from anyone else who is working along these lines.

—I. F. Berwick, VK3ALZ.

OBITUARY

CHARLES WELCH WALKER, VK4CU

It is with deep regret that we record the passing of Charles Welch Walker, VK4CU, of Clifton, Qld., on 12th May, at the age of 62. Chas. also held the portable call sign of VK4DQ.

Chas. was held in great respect and high esteem by the hundreds of Hams throughout the Commonwealth and New Zealand who had contacted him over the years on 80, 40 and 6 metres. He was a great exponent of v.h.f. and was well known for his portable work, having gained first place in the National Field Day, 22/9/51.

He was a member of the Old Timers Club (A.R.R.L.) and was indeed an Old Timer as his A.O.C.P. was No. 10 and was issued on 24/10/24. He was associated in the very early days, transmitting on the broadcast band, with VK3KR, who is still active.

The great respect in which he was held by the people he so faithfully served in the town of Clifton was evident by the estimate of 650 people who attended his funeral. He will indeed be sadly missed on the bands.

He is survived by his widow and three daughters.

KEITH HAWKES, VK4HP

Keith Hawkes, VK4HP, of 13 Railway Parade, Wynnum, who was born in Victoria on 14th March, 1934, was laid to rest in Hemmatt Cemetery on Tuesday, 30th May, 1961. He became seriously ill last February.

Keith, who had been employed in the Telegraph Branch of the P.M.G., was known as a good c.w. man. He was extremely well liked in his section, being a worker for the "Sparks Club" of that section, and on hearing of his illness, his workmates presented him with a new 23 inch t.v. set. To his sorrowing mother and two brothers go the deepest sympathy of the W.I.A.

TED DODDY, VK6WH

HARRY TARBOTTON, VK6HT

It is with regret that we record the passing of Ted Doddy (VK6WH) and Harry Tarbotton (VK6HT).

Ted, particularly in the days following the First World War, was a great pillar of the VK6 Division. He held several offices in which he did yeoman service in the cause of Amateur Radio. He was President of the Radio Society which was originally the Subiaco Radio Club, for several years and wherever Amateur Radio existed, Ted was a great organiser and helper.

Harry Tarbotton spent most of his Radio days at Albany and was for many years an able and willing helper for the Institute. A couple of years ago, Harry gave Amateur Radio a rest, taking on a motor boat in his spare time.

VK6 owes much to both Ted and Harry and their passing within a week of each other were sad days for Amateurs in the West.

Our condolences are extended to Mrs. Doddy and her grown-up family, and to the relatives of Harry Tarbotton.

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Amateur—from £3 each, plus 12½% Sales Tax.

Regrinds £1/10/-.

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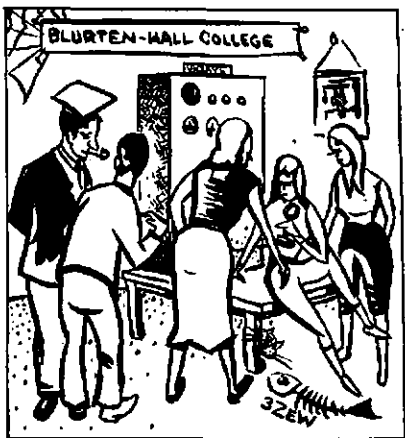
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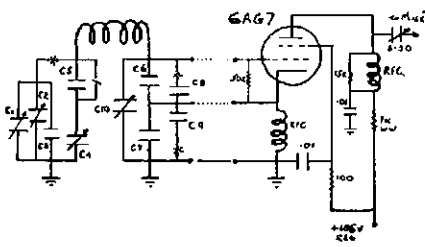
SIDEBAND

Bud Pounsett, VK2AQJ
6 Alice Street,
Queanbeyan, N.S.W.

MIXER AND CONTROL CIRCUITS AT VK2ON (Second Part of Series)

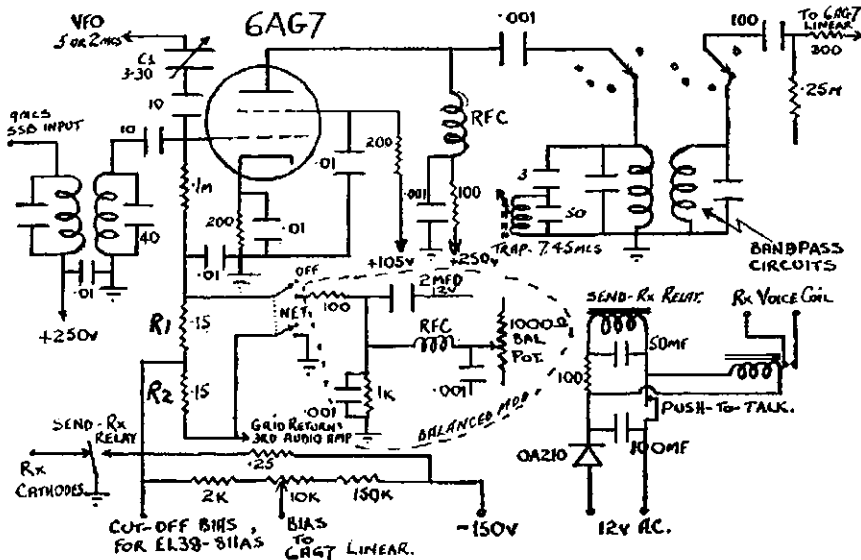
This latest evolution of the mixer stage uses a 6AG7 valve. The first edition used a 6U8 as infinite impedance mixer but the output was rather poor. The present circuit gives 13v. output for about 2v. of 9 megs. input. The output was measured by noting the start of grid current at the first linear stage which has variable grid bias 3-13 volts from a separate bias source (OA210 rectifier).

Double-tuned circuits are used where convenient to reduce spurious frequencies. Injection from the v.f.o. (6AG7) is controlled by the 30 pF. concentric trimmer C1. The correct setting (about 3 pF.) is such that there is almost no grid current flowing in R1. With the v.f.o. on 1.85 megs. (7.15 meg. operation) the spurious 7.4 meg. 4th harmonic signal increases markedly if grid current flows and conversion conductance is near optimum with r.f. excitation just less than bias voltage (3v.). It may be better to switch in two concentric variables, one for 5 meg. operation and one for 2 megs.

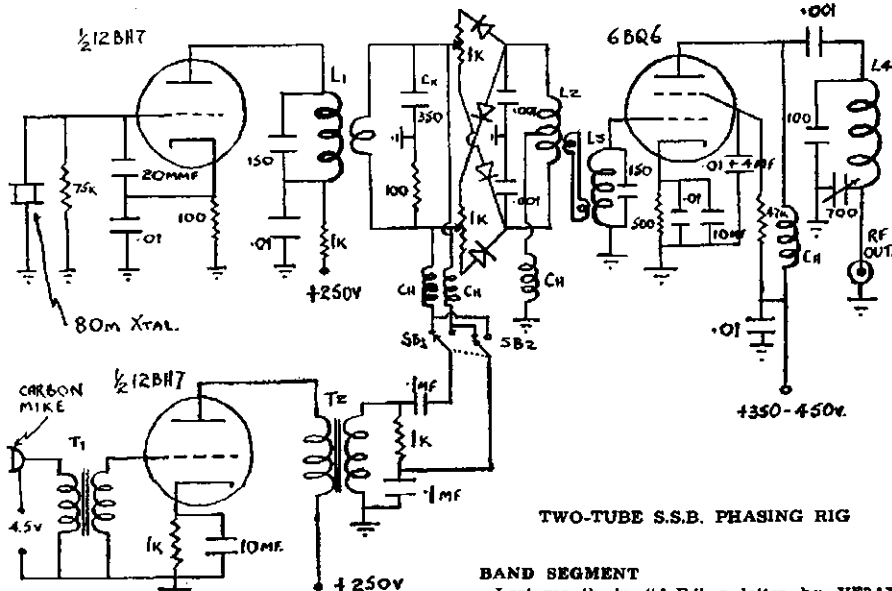


THE V.F.O. AT VK2ON

The band-pass circuits are switched, one for each band. Slug-tuned plastic unshielded formers, 2 1/2 x 1/4 inch do a good job here. Fixed condensers of 120, 75, 35 pF. are used for 80, 40 and 20 mhz bands. Stagger-tuning with close coupling gives good transfer across the whole range 3.5-3.8 megs. Across the 40 mhz plate coil is an absorption circuit tuned to 7.45 megs. (adjust with v.f.o. on 1.86 megs.). Using correct v.f.o. injection and this trap circuit, reduces spurious output from the tx to zero. Subsequent linear tuned circuits are three and each has a trimmer or tuning condenser to be peaked up.



VK2ON MIXER AND CONTROL CIRCUITS



TWO-TUBE S.S.B. PHASING RIG

BAND SEGMENT

Last month in "A.R." a letter by VESAYE appeared concerning the 14,100 to 14,140 kc. segment of 20 mx. I for one, and there are many supporters, thoroughly endorse the suggestion. By the very marked lack of DX stations at the "top of 20," it seems that the W/K QRM has proven just too much for stations outside of the U.S.A. If we ALL use the lower 40 kc., the position will quickly become workable and it will not be very long before we will be enjoying contacts with the U.S. under similar conditions as prevailed before we "lost" that top 50 kc. I must say I was amazed to hear a W6 asking another W, "Why does the DX want to migrate to the low end?"

TWO-TUBE S.S.B. PHASING RIG

Or Get Your Friends' Feet Wet With 7 Watts!

Leo Bolsvert, WHIE, has come up with the end-all of simplest sideband transmitters, this man, is the least! We have the S.S.B. A.R.A.'s journal "The Sidebender" (Feb. '61) to thank for this information.

This little rig is clean cut and wrung out to the very minimum of parts that will put out a clean s.s.b. signal. First off, the r.f. signal is fixed phased and so is the audio, but due to the fact that we are using a carbon mike with its limited audio band pass, it really works out fine for fixed phasing.

Measurements were made in actual operation and we came up with these figures:

- 1,200 cycles—30 db. suppression
- 2,500 cycles—20 db. suppression
- 500 cycles—15 db. suppression.

This may not be commercial s.s.b., but it sure beats the pants off d.s.b.!

Construction of this unit requires no special parts and at that, the percentages are real loose. It is only necessary that the tuned circuits resonate at the operating frequency and that the audio coupling transformer have a 600 ohm output to the diode modulator. For this purpose I have used an ARCS rx output transformer.

It is important that as little as possible of the xtal oscillator voltage get into the fields of the coils L2-3-4. Keep the osc. coil L1 as

(Continued on Page 15)

FARTS LIST

- L1—35 turns No. 30 wire. Link, 12 turns No. 30 on cold end.
- L2—16 turns No. 28 wire. Link, 6 turns No. 30 to centre of coil.
- L3—35 turns No. 30 wire. Link, 6 turns No. 30 on cold end.
- L4—50 turns No. 28 wire on 1/2 inch coil form, slug tuned.
- Coils L1, L2 and L3 are wound on 1/4 inch coil forms, slug tuned.
- All capacitors marked "/M" are mica; all others can be ceramic.
- Cx—350 pF. for 75 metres. One half capacity doubles frequency.
- T1—Carbon mike to grid transformer.
- T2—Plate to 800 ohms.
- Ch2 or 3 pie chokes (not critical).
- D1—1N38, 1N64 or most any diodes providing they are matched.
- R1, R2—1,000 ohms, carbon pots.

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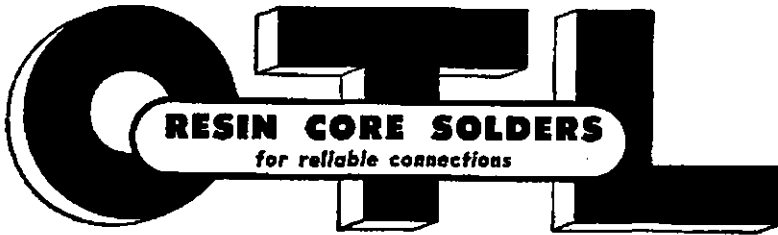
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PREDICTION CHART, JULY '61

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DX

Alan Shawsmlth, VK4SS
35 Whynot Street, West End,
Brisbane, Qld.
Phone 4-6526 (7 a.m.-4 p.m.)

Here on the middle East Coast on 7 and 14 Mc. at least, conditions have been pretty fair, although the L.P. circuits to East and West have been mostly out.

On the majority of days, the 14 Mc. band has been open East from about 0400 hrs. G.M.T., in a wide sweep, from KL7 to South America. While around 2000-2130 hrs. G.M.T. the short path to Europe is still good, but does not last long.

7 Mc. has opened up, for a while, around 1000-1200 hrs. G.M.T., on many nights, with DX from North and South America; also, the Europeans and Asians can be heard around 1930 hrs. G.M.T., but very hard to work.

While most of the more common prefixes can be heard and worked daily, there has been a marked absence of anything new or hot.

NEWS AND NOTES

ZD7SA, St. Helena, has been heard at odd times at approx. 0700 hrs. G.M.T. with a fairly strong signal around the middle of 14 Mc. (Workable East path.)

TJ2FZ, Costa Rica, also fairly regular, in the early afternoons and sometimes in the mornings on 14 Mc. around 2000 hrs. G.M.T., but now hard to work at later times. He QSLs smartly.

ZM6AB, British Samoa, also 14 Mc., was heard once or twice, wading through long queues of Yanks, around 0430 hrs. G.M.T.

5UYAC, Niger Republic, could be heard at the start of the month around 2045 hrs. G.M.T., but now conditions are against a good QSO at this hour.

DU9BSP will be QRT by now, but if you worked him I reckon he would be OK for WP.X.

Has anyone worked KG1AA (Greenland) on 14 and 21 Mc.? I have heard several prefixes calling him, but so far he's not audible here. Time 0430 hrs. G.M.T.

UA1KED, Franz Joseph Land, is active on 14 Mc. around 0400 hrs. G.M.T. I hear him getting very good signal reports, but the time of his operations would make it almost impossible to work him here on the East Coast. This also applies to KG1AA.

Most must have heard and many worked VK9GP, but in case you don't know, he is on Norfolk Island and a new country.

5N2RSB is still going and was heard during the month on 14 Mc., around 2030 hrs. G.M.T., in the middle of the usual dog-pile.

Ex-VK9BH is off to 9M2 land soon for two years. You can QSP any cards for him to BERS195—likewise with ex-VK0GB and ex-VK0ED.

Ex-VQ8BBB is now permanently in Mauritius and hopes to have a new VQ8 call sign shortly. He is with the Navy there (see QTH).

ACTIVITIES

Laurie VK2AMB lists the following—7 Mc. phone heard: VK9GP (Norfolk Is.); 14 Mc. c.w. wkd.: I1XK, G13CVH, LASHE, UQ2AE/M; 14 Mc. c.w. heard: UP2KAF, VR3L. QSLs received: CM2QN, CO2MS, VQ1HT, VS9OC, ZL4JF, LA1NG/P, LA3SG/P (Jan Mayen), VS9MB, OA3D, 5ASTA.

Ken VK3TL notes the 20 mc band is really opening up in the late afternoon for W. land. Quite a few Europeans can be heard, if you can get through the QRM, hi, hi, and this made the month a quiet one. Worked on 14 Mc. c.w.: DJ4DN, DJ4VK, DL1XZ, DL7EN, EA1GZ, G2FAS, G3ASG, G3HTU, G8QB, G1-3NSM, G13OQR, HB9VL, HB9ZY, I1WBX, LA-5VH, LU0AC, SP6OM, UA1HA, UA6LD, UA8BZ, UA0KDA, UA0KFG, UA0KID, UA0KFM, UA-0LU, UI8KAA, VP9EP, XZ2BB, Y06XI. Worked on 14 Mc. phone: C2NBK, ZE7JR. QSLs received: BV3HPT, AP2MR, BV1US, IT1TAL, JZ0PH, JZ0PM, MP4MAH (Oman), LU3WU, SM3XJ, UA3KND, UA3KOA, UA0EH, UA0U, VK2FR (Lord Howe Is.), VP8PV, VQ8BM, VR-1F, VR2BC, VS6EQ, OA4DT, VS9MB, VS9OC, XW8AL, XZ2TH, YN4AB, YUIEH, ZB2AD, ZK1AR, ZSSOE, ZS6ARI, 4X4JU, 48TEC, 5ASTF.

Hal VK4DO has not been very active during the month and finds Europeans over the long path ceased to be heard, and 21 Mc. band dead when he listened. 14 Mc. c.w. hrd.: W, K,

KH6, KR6, JA, KA, I15BR, LA7RF/M, ZK1AR, ZM6AB, UA0KFM, UA0KKS, 14 Mc. c.w. wkd.: W, K, KH6, JA, VE, CTIDJ, DJ2RE, DJ5PN, DL1AM, DL1EE, DL1SO, DL1YA, DL1VW, G3ASG, I1DOL, LA1Y, OA4ED, OESUR, OK-2BBI, OK1NR, OK1WD, SM5VI, SP8ART, UA0ZB, UA0KJA, UA0EW, UA3DV, UA6LI, UA6LD, UA6MK, UBSMZ, UQ2AE/MM, 14 Mc. phone hrd.: W, K, KH6, KR6, BV1USE, VE6, VE7, VR4CB, 14 Mc. phone wkd.: W, K, KH6, VE, YV, VR4CB.

Eric BERS195, although absent from home for half the month in VK3, lists the following—7 Mc. c.w.: DM3RDA, JA2JU, JA3AQN, JA-8AEB, OH7NF, OH8NG, UA3KKB, UA3KQD, UBSZV, YU5FQR, YUSHUV, 14 Mc. c.w.: BV-1USA, FB8XX, FB8ZZ, HC1FG, MP4TAC, PY-7MP, UB8AE, UOSKAB, VR2DK, YV3CD, 4X4FU, LA6CF/M, LA7RF/M. Eric received the following QSLs during May and included in the list is VQ8BBB, which brings his total confirmations to 269. (This is truly a worthy score. Congratulations!) They are EA8BW, FA8VJ, HV1CN, KR6R, KW6DG, LA1LC (Jan Mayen), MF-4DA, TI2WA, UJ8KA, UJ2KB, UR2AT, VP4WI, VQ8BBB, VS1HA, VS6EQ, ZS6AYS, 4STEC, 5ASTA, SM5KV/9Q5.

Years truly managed to work on 7 Mc. c.w.: KV4CL, VE7AOK, YV5DE, YV5ANT, YV2BJ, OA4FM, 14 Mc. c.w.: VP5CH (Grand Turk Is.), VR3L, ZC4PB, VP5CH air mailed his QSL.

The above activity reports are nowhere near sufficient. Let's have some s.s.b. news and has anyone worked anything of note on 21 and 28 Mc. during the past few weeks?

ADDRESSES

- 5ASTA—John Garrett, P.O. Box 638, Tripoli, Libya.
VR3L—Via G3MKG, C/o R.S.G.B.
VP4WI—C/o Don Compton, 1712 Merritt Parc Dr., Orlando, Florida, U.S.A.
Ex-VQ8BBB—H. Figon, La Visitation, Vacaos, Mauritius.
XZ2BB—P.O. Box 449, Rangoon, Burma.
3V8CA—Syd. S. Wagoner, C/o U.S. Embassy, Tunis.
VP5CH—Charles H. Heisner, Grand Turk A.A.F.B., British West Indies; or G.M.R.D., P.O. Box 4187, Patrick A.F.B., Fla., U.S.A.; or via K4FOJ, A.R.R.L.
VQ8HB—Via R.S.G.B.
FR7ZD—Guy Hoarau, 600 Tamponne, Reunion Is.
FQ8HO—Via R.E.F., B.P. 26 Versailles, Seine et Oise, France.
CR7LU—Lucia S. Santos Tome, Manica e Sofala, Belra, Mozambique.
TI2FZ—Jose A. Zuniga, Box 1816, San Jose, Costa Rica.
TI2WA—Jack Hangen, Box 45, San Jose, Costa Rica.

SUMMARY

Prediction for July: Not so good, over all. Conditions in May: Did not appear to be up to the Prediction Chart. The Graphs of L.P. circuits, in particular, were most generous to us of low power, or maybe, we need better receivers.

The effort of David VK3QV on 29 Mc. phone, and that of Don L2022, was surprisingly good. The times I listened on 21 and 28 Mc. there was no sign of Amateur activity. Unfortunately, the Tropical Regions of VK land, where one would expect DX perhaps to be a little better, on the high frequency bands during the winter months, has few active Hams. Unless Old Man Sol really blows a gasket or two, I feel July, on the h.f. bands, will be crook. However, the spice of DX lies in its elusiveness and uncertainty, so keep listening, just in case.

14 Mc. band should be good to the East in the afternoons and fair for a short period in the mornings to the North and West. Keep your ear on 7 Mc. around 1030-130 hrs. G.M.T. for South America, and if you think you are good enough to bust through about three layers of European QRM, some DX should be possible on 7 Mc. in the early morning.

Long Range Prediction is for many, many years of Low Solar activity (approx. forty years). This needs some thought; it means that the higher frequency bands will be mostly out; it means a migration to the lower frequency bands and with added European QRM on 7 Mc. now, I can't imagine what this band will be like. Also, there will be need for better antennae and it creates a paradox, inasmuch as those Hams who are contemplating more expensive gear, may not, in practical terms, realise the worth of it. Those who want to stay on 21 and 28 Mc. will have to snoop much longer, for much less.

This month no "hot" DX news is to hand from W4KVV, whose printing press is out of action.

I would like to thank John VK2ZR for sending me the notes and wish him good luck in his future work. We will miss you, John, as there is never enough VK activity, and I, for one, found your notes very valuable. My thanks also to VK2AMB, VK3TL, VK4DO, and BERS195.

Did you hear about the Ham who asked his "sweet" young thing what she knew about Millwatts? "Oh yes," she responded brightly, "I know her husband. He's a pug and a wolf." "Her husband..." "Yeah, Killer Watts."

73, Al, VK4SS.



SIDEBAND

(Continued from Page 13)

far from the other coils as possible to avoid trouble in nulling out the balanced modulator. The diodes must be matched in pairs as to forward resistance. Don't think that by adding an extra audio tube and xtal mike that you will improve the rig. The secret of the quality is in the carbon mike and its limited band pass; and added band pass in the audio section will cause the fixed phasing to go too far out at both ends. If you want to build this rig for use on any of the other bands you can do so by making the tuned circuits resonant at the desired frequency but keep in mind that the r.f. phasing unit will have to be changed to present about 100 ohms to the balanced modulator and the link. This means that you will need only one half the capacity of Cx for twice the frequency.

Tuning up the rig is simple; unbalance one pot and tune all coil slugs for maximum output. Tune the out ple network L4, and output capacitor for maximum. Then adjust the balance pots for minimum output. You are now in business and ready to be called a liar for it is not possible to build a phasing rig with only two tubes! Or is it?



AMATEUR ARTIST

Amateur Radio is not the only interest which absorbs the spare time of Arnold Holst, VK3OH. He is also an expert artist with oil paintings in which his ability extends into almost every field—portraiture, nature study and landscape. Arnold Holst recently presented to the Federal President of the W.I.A. an oil painting of the Victorian Division's building in Victoria Street, East Melbourne, done from a vantage point on the nature strip opposite the building. Although, because Arnold is an amateur, we call him an amateur artist, his paintings are definitely in the professional field, and his painting of the VK3 rooms will always be a reminder of his ability in the world of art.

W.I.A. D.X.C.C.

Listed below are the highest twelve members in each section. New members and those whose totals have been amended will also be shown.

PHONE

Call	Cer.	C'tnt- No. ries	Call	Cer.	C'tnt- No. ries
VK5AE	45	256	VK3ATN	29	204
VK6RU	2	253	VK6KW	4	202
VK6MK	43	248	VK4HR	12	192
VK4ET	21	221	VK4RW	23	184
VK3WL	14	221	VK3BZ	3	176
VK3AH0	51	211	VK3GB	50	171

C.W.

Call	Cer.	C'tnt- No. ries	Call	Cer.	C'tnt- No. ries
VK3KB	10	289	VK4HR	8	218
VK3CX	26	279	VK3XU	48	213
VK4FJ	29	284	VK7LZ	17	212
VK3NC	19	238	VK6RU	18	211
VK3FH	18	236	VK3YL	39	203
VK3BZ	6	222	VK5RX	23	196

Amendments:
VK3ARX 68 153

OPEN

Call	Cer.	C'tnt- No. ries	Call	Cer.	C'tnt- No. ries
VK2ACX	6	289	VK3BZ	4	231
VK4FJ	32	267	VK3HG	3	225
VK6RU	8	263	VK3LU	45	225
VK6MK	74	252	VK7LZ	23	223
VK3NC	77	236	VK3XU	61	221
VK4HR	7	233	VK5KU	13	216

Amendments:
VK3AH0 78 215

S W L

Maurice Cox, WIA-L3055
Flat 1, 37 Boyd Crescent,
Olympic Village, Heidelberg,
N.23, Victoria.

On Sunday, 17th May, 18 members of the VK3 Group visited the High Park Receiving Centre, 3 miles outside of Kilmore. We had a wonderful time; there were AR88s, a 51J, a Super Pro. and a G.E.C. general-coverage rx. The antennae were rhombics, huge things, 70 ft. high, and a lone T type. The gang and I will never forget the sight we saw and the knobs we twisted.

I am sorry that all the VK s.w.l. couldn't see it. One's mouth drooled. High Park is the A.B.C.'s overseas monitoring centre; it's from where you hear the Test Cricket in England. Our thanks go to Bert VK3KU for having us and for showing and explaining all those wonderful receivers. A special thanks to Bert's XYL for putting on a lovely afternoon tea, and to the P.M.G. Dept.

It will not be long now before the two S.w.l. Awards will be official; I heard last week that they are before Federal Council.

On Friday night, 2nd June, 11 of the boys went to see Radio Lyndhurst, the A.B.C. Regional short wave stations. Once again they came away with more knowledge and had supper again. I thank the P.M.G. and their officers. The VK3 Group thank Ian Woodman for the sterling job of arranging these visits; you Ian are very much appreciated by the Group.

I will have shortly for sale, Russian Call Books, f.b. for you keen s.w.l'ers. Price is 10/- and 20 will be available. First come, first serve.

All the VK gang wishes to congratulate Charles Thorpe for winning the Listeners' Section of the Ross Hull Memorial Contest. Charles hails from VK4, no wonder he won. Charles Abernethy took the VK2 award—congrats. Chas., and yours truly the VK3. Mac Hilliard is doing a sterling job on the VK3 Sunday morning broadcasts; keep it up. Also his new 10 transistor communication receiver (portable) is giving him very good results.

CORRESPONDENCE

Thank you the following for your letters: Barry Thomson ZL149, DX37A, Doug Allen, new Sec. of VK2 Group (congrats. Doug), Chas Abernethy, Dave Jenkins, Mac Hilliard, Craig Cook, Afton Westcott, Peter Field, Peter Drew, Geoff Sharp and Nev. Fisher. Thank you fellows. Barry Thomson was the ZL s.w.l. who came to Shepparton with us at our Convention; well he's back home in ZL land and he's very happy to be home working. He says his countries score has slipped rather badly, he's only got 244 countries confirmed, last four being UL7A, UO5BK, 9USMC, and MF-47AC; not bad eh? Barry tells me to look for HB9TL on 7th June; he is going to a country between Kuwait and Saudi Arabia and will operate s.s.b. using the call 9K4A. Barry sends his regards to the VK3 gang and especially 3ZGD and wonders if he is still going to ZL land for his holidays.

Doug Allen L215 writes his first letter to me as the new Sec. of VK2 Group. Hope all goes well with you and the Group. Doug. He has a mighty fine set-up at his QTH and the following is the line-up. Main rx AR7 with slight mod. plus a Q5er i.f. strip inserted between 4th i.f. 455 kc. and the 6G8 detector. The Q5er is less b.f.o. and det./audio and feeds 85 kc. from 3rd i.f. into AR7 det. and diode load. Original 4th i.f. 455 kc. connections, along with 455 kc. b.f.o., feed into input of Q5er and a.v.c. The a.v.c. is wired to the Q5er on same lines of AR7. The modifications of the AR7 include replacing 1st i.f. 6U7 with EF39/VR53. No alteration save earthing pin 1 is required, gain, 600 gm. higher, added one only 100 kc. xtal calibrator, ex two-in-line rx. Result, 1 x 13 tube plus power supply, AR7 with double conversion, s.s.b., xtal calibrator. Doug also has a BC455 7 Mc. rx with a Hallicrafters S53 and a SCR522. A mobile rig is of a Pye TRP1 transceiver using a type 34A generator supply and a 12 ft. centre loaded whip. At his home in the Blue Mountains, the antennae are a 7 Mc. half wave dipole; half wave 7 Mc. long wire, both up 35 ft. at angle of 80 degrees to each other, and they feed into a switching panel. Well that's mighty nice, Doug, am sure quite a few of the boys will be interested to read that.

Chas. Abernethy: he's a nice guy. Tells me he's sent out 202 reports and cards in the past 12 months, ending 30/4/61, and that completes his first 12 months as a listener. In that time he has received 16 countries confirmed, plus 55 cards received; he was fourth in the R.D. Contest last year listeners' section, and first in the State award of the Ross Hull Contest this year, and he's happy with the results. Keep up the good work; by the way, he has a very nice helpful daughter, Joan, she helped him put up his antennae and she's got brains, too, have just read half a page all about her. Look after him Joan, he's good.

Dave Jenkins, of Orbest. I want all his scores for the DX ladder, but I have to wait as he's busy building a transistorised converter which is well under way with 10 coils wound and all the parts mounted. It will be plug-in coils which he prefers. It's xtal controlled with expensive xtals, such as for 3.5, 7, 14, 21 and 28 Mc. It feeds into a b.c. rx, but later will build a transistorised b.c. rx. It will have mixer and osc. with the one transistor into a transistor regenerator 455 kc. i.f. The later will be as good as (he hopes) two i.f. stages and a b.f.o. will give a single signal selectivity effect for c.w. reception. A germanium diode will be used for the det. and that will feed into the transistor audio stage. Also on the chassis there will be room for a 2nd i.f. stage and b.f.o. coil in case the regen. i.f. is no good.

Dave uses a three dipole antenna for 14, 21 and 28 Mc.. It consists of three separate dipoles each fed with the same 72 ohm feeders (should use coax, but uses ribbon). He has one pole up, the centre of the three dipoles is at the top and the ends come down semi-vertical. Each one favours Europe, i.e. broadside on. It is necessary, Dave goes on to say, that one must have a fair angle between each antenna and to have them fairly tight to avoid shorting, unless insulated wire is used. There is no reason why two more dipoles shouldn't be used in addition, one for 80 mx and one for 40 mx. He gets good results with his on 40 mx and by using one side of it, it works f.b. on 80 mx.

A letter to hand from our worthy President of the VK3 Group, Mac Hilliard. He writes that after seeing Bill's (3ARZ) set-up one night, Mac has decided to re-organise his shack. The first project will be to get well organised on 2 and 6 mx, so he's looking around for a 6-9 Mc. Command rx and will feed his new 2 mx converter into it and he hopes 6 mx. Then he's going to try rotating his beam from the shack (lean out of the window, Mac, and use your paw!) Mac heard Bill's converter (6 mx one I presume), he realised how poor his is, so Mac is going to properly organise himself on the v.h.f. bands. I wish you success.

Craig Cook, with Kevin 3ARD, on 31/5/61 at the Oakleigh Technical School (during their Education Day), worked on the hobbies display. Craig put his Marconi and one of his friend's AR8, a three valve regen. 15 mx plus a 2 mx converter. 3ARD went on the air at 3 p.m. and 7.30 p.m. for the boys' benefit. Kevin worked K2JSC and K2IKP for the 2 m. Most of their trouble was QRM from electric trains and amateur photographers at the display, but Kevin mentioned the schools' display to them. Craig says thanks very much Kevin for your effort. A 15 mx rx will be in use shortly that Craig is building.

Afton Westcott, of VK4, found little or no activity on 14 Mc. during week days now. From last August, Afton has sent out 330 cards and he is very satisfied with the results. At the time of writing (26/5/61) he has 48 countries confirmed, heard 157 and 25 zones confirmed. Jolly good work Afton, you sure went past a few in the DX Ladder.

Peter Field, of Elizabeth, A.S., has logged a hefty fist full of stations of late. During his school holidays he passed through VK3 to VK2 to visit some local Amateurs there. He has just got a RF26 converter going on 6 mx, he's logged 30 stations in two weeks. Peter is another s.w.l. that was knighted by WATK. On the 5/5/61, the night the Ws put up the space capsule, Peter listened for two hours to K4ONM on 14 Mc. s.s.b. re-broadcasting the space flight.

Peter Drew, L6021, of Wedlands, W.A. He is very interested in the forthcoming contest and says it's about time as it's too far between R.D. Contests. I agree Peter. He sent off a list of eight Elizabeth stations received by him to 5FY, and hopes to obtain the Elizabeth award. Says 20 mx is bad at his QTH, but best times of listening are 0500 to 0900 G.M.T., and 1100 to 1300 G.M.T., and the bands seem only to open about once a week. He heard an SM6 on 80 mx, but low and behold, he was /MM 200 miles south of VK6, running 680 watts!

From the Apple Isle, down south, comes a letter from Geoff Sharp. He's only been active s.w.l. for 12 months and listens to both Am-

ateur and s.w. b.c.; he's heard 40 countries on b.c. with 32 confirmed on the Amateur bands, has heard 12 countries with 6 verified plus 42 cards and 3 letters from Amateurs. Geoff uses a No. 19 set, 2-8 Mc., of six tubes and a five-valve d.w. set, also a 20 mx converter and pre-amp. He's rather isolated, being 200 miles from Hobart and has nobody to talk to and discuss activities. This boy is very keen, he was down in his shack at 5 a.m. the other day and picked up three new countries on the 40 mx band—Pakistan, Monaco and Bulgaria. He then asks me about report forms, a QSL card and any international DX clubs. Also a circuit for a converter suitable for a No. 19 set, 2-8 Mc., as he is not happy with his present converter. Can anybody help him there? If so, his address is Geoff Sharp, 30 Josephine St., West Ulverstone, Tas.

Now for Nev. Fisher of Oatlands; he's 18 years of age and works in the R.I.'s Dept in Hobart Nev. sent me some beautiful coloured photographs of his shack and rx; they were beauties. He's erecting a 7 Mc. ground plane antenna. The radiator (33 ft.) is being mounted on a 40 ft. pole with the bottom of the radiator 20 ft. off the ground. Other projects include a squelch circuit for the rx, an antenna coupler, 288 Mc. rx, and a frequency meter, plus a 3 el. 14 Mc. beam; he's not busy is he, just kidding us, hi.

They have 12 new members in the Group down there and they are busy keeping them entertained and getting them gear, etc. A c.w. class has been started in the Group with 7GV as the instructor (that's what the VK3 Group is going to do, too) and a tape recording by Mike 7ZAV/7007 (what's on the tape, fellows?), and visits are on the agenda for the next couple of meetings. Nev. sent me a photo of your rx and ant. for showing on this page. I am sure all the boys will be interested. Next month I'll tell what gear the VK7 boys use (receivers).

F/O. Len Cook, of Darwin, is interested in being the first s.w.l. in the N.T.; so very shortly he will become a member of the S.w.l. Group under VK5. His equipment will consist of a Quad II. a.m. tuner through to a S22 control unit plus a power amp. He got the bug off Chuck 8TB.

DX HEARD

40 mx: Peter Drew, L6021, c.w. heard: Ws. UAOKID, JA8YJ, JA4AJ, JA3CGY; phone: Ws and a weak CE in Chile. The Ws seem to be coming through fairly well with QRM and QRN.

20 Mx—Peter Drew, L6021, phone: OD5BU, FB8ZZ, VRIG, FB8XX, 8M2DQ, UO5PK, OK-1BK, VVSACV, ZE1JR, FB8AA, VFP6V, VV-5AHR, SP5ET, OE7CH, FB8CQ, Z88JJ, VP9VV, F8UI, V7HCB, CR7CI, 457GE, UA3KAG, VP-9WB, KH6DKS, OE8UE, KW6CGA, EA3JE, KA8RH, XE1FB, BV1US, SMSV1, CR7GF, FR-7ZD, FB8BC, plus plenty of Ws, Gs, ZLs, VEs, ZSs, VUs, and lis. Afton Westcott (VK4), a.m. phone: 457EC, G3NNT, HK3LK, HM1AA, OD-5AY, PK4HT, SMSDLA, VO5FK, VK0FZ, VU-2SR, K5THB, W8BNH, XE1HC, ZS6JL, F8XT, KH6BFF.

21 Mc.—Afton Westcott, phone: CTIVE, EP-3HS, ET2VB, G1RY, IIPAC, 9K2AY, OK3KGI, UA0LC, VS1DN, ZE1JR, ZS1DC, MP4BC, VP-9AHP, 9U5PD, PK2SPt.

28 Mc.—Afton again: W7AAY, ZS1KW, ZS-6AXI, ZE2JF.

50 Mc.—Afton: JA1EDO, 2ATQ, 2AWG and 6Z1.

DX LADDER

	Con- firm.	Zon. No.	Conf. No. of Cards
L3042 Eric Trablcock	268	277	40 6853
L3074 M. Hilliard	57	185	24 150
VK4 A. Westcott	48	157	25 —
L3055 M. Cox	31	198	19 89
L3072 T. Heywood	15	90	11 21
L2211 C. Abernethy	18	51	15 55
L5031 C. Hutchesson	7	96	6 18
L6021 P. Drew	13	156	11 24
L5039 P. Field	8	118	— —
L2057 R. Wood	3	3	3 3
L2159 R. Thompson	2	73	2 2
L2215 D. Allen	2	18	— 5
L2052 T. Mills	2	14	2 2
L2214 J. Walker	1	8	— 1

Well, the ladder has grown again in size. The important column is the countries confirmed. Those who have no countries confirmed will not appear in the ladder.

Warning.—If there are no alterations to any of the above scores, each three months they will be omitted until I am advised. Sorry, but that's the way it is, remember we only have one page.

Also I would like to say that I write more than you see in print, but it is omitted because of space. So I repeat, no alterations in ladder, then you are out. 73, good DX, Maurie L3055.

VHF

David Tanner, VK3AAU
17 Wolsley Street,
Mont Albert, Vic.

This month, as you can see, the notes are arranged a little differently from usual. Any comments, good, bad or otherwise would be appreciated.

Six metres has once again lapsed into the usual winter quiet, although one or two openings have been reported. On March 4 2ZCI and 2ZGM worked 4NG. The 24th May saw 2ZDM in contact with 7ZAI, 7ZAO and heard by others. Apparently there was very little activity at the time. On May 14, a VK2 full call was heard in Hobart at about midday but no contact made. 6 mx activity in all States seems to be at a very low ebb except perhaps in VK6. Roy 6RY, reports that HLKA and the Russian t.v. below the band have been in weakly at times but no JA openings yet.

VK0VK at Wilkes in the cold south has an automatic keyer to run a 100w. rig beamed on the U.S.A. Unfortunately the frequency is not given but we hope to have more details soon. K2QXG may be able to supply some information.

Two metres seems to be the band at the moment with quite a few stations reporting contacts of further than just over the back fence.

Hugo 2WH worked Graham 2ZXY and Paul 2ZPJ portable at the Gib near Bowral, a distance of about 155 miles on Sunday, May 21. 2ZGM says that others should be able to find plenty of contacts in the south west if they care to try from the hills around Sydney. 3ZER is still running his nightly skeds between Ballarat and 5AW in Penola. Ron was heard complaining recently about the consistency of the signals, seems as though the only time they don't make a contact is when one of them is not on. Ron has quite a large number of stations both in VK5 and VK3 within about 150 miles to the west and has apparently worked most of them recently.

Garry 5ZFM is looking for VK3 contacts each night at 2000 hours. Garry has passed the c.w., so the use of c.w. might help to find the rare ones. The week-end skeds between 6BO and 6WG have been going on with quite good results. On Monday, 29th May, 3NN was heard in Melbourne at good strength by quite a few but Herb shut down to watch t.v., much to the delight of several local eavesdroppers.

The boys in VK7 seem to be well on the way to proving the old story, that any stations within a hundred miles or so can make contact as long as skeds are kept and the gear is good enough. On May 28, 7ZAO was heard by 7LZ and 7PF and carriers believed to be 7LZ and 7PF have been heard by 7ZAI, 7ZAK and 7ZAO. The sked time is Sunday, 2000 to 2030 hrs. and the Hobart gang are inviting participation by any of the VK3 boys who may be interested.

Geoff 2ZGM at Ungarie has quite a few active 2 mx stations around him in the Forbes to Tumut area. He has a 4X150G final under way and would like to hear from people to arrange skeds. Monday night at 2000 hrs. is a popular time in his area, but calls on the hour and half hour almost every night could produce results. 2ZBP should be producing a better signal in the not too distant future as he has stacked long yagis on the drawing board. Eric 2ZEC in Griffith has a long yagi up which has made a remarkable improvement to his 15w. on 2 mx.

VK5 activity on 2 mx seems to be concentrated near the VK3 border with the following stations reported by 3ZER: Rod 5ZCD at Mundalla on 144.48, Tony 5ZAI at Bordertown on 144.3, running 30w. to a 12 ft. yagi; also Bill 3ARM at Serviceton North on 144.72 and 3SV on 144.3 at Castlemaine. 3NN at Yanac, 3ZLJ and 3FO at Maldon and 3JW at Bendigo are also active and quite a few of these have been heard in Melbourne.

Viv. 5ZCC and Noel 5ZAS are building gear for 2 mx and Neil 5AW is believed to be organising a v.f.o. possibly for mobile or portable use.

7ZRJ on 144.4 is expected on in Launceston quite soon. An improvement in equipment is noted in Hobart with low noise receivers and long yagis (how long?) are the rule.

3JW at Bendigo on 144.18 is on every evening at 7 p.m. working 3ZCJ and other Melbourne

stations, once again showing that a hill in the way, this time Mt. Macedon, is no barrier to signals. Other new ones in the city include 3ZJ, 3ZDU, 3AON, 3ZLT on 144.65, 3ZJW, 3AEV and 3ARZ, mostly running 522 tx's. 3ZLG on 144.8 at Belmont near Geelong also heard.

New v.h.f. stations in VK5 are 5ZCH in Kimba and 5ZDX, both on 6 mx. 5ZFG has been experimenting with d.s.b. on 6 mx, but seems to have abandoned some. Maybe he's lopping off one sideband. 5ZDV at Elizabeth is quite active, also on 6 mx.



Bob VK4NG (Rockhampton, Qld.) is one of the best known v.h.f. operators in Australia. On 50 Mc. he uses 60 watts input and his antenna is a four element yagi.

1296 megs. is apparently becoming quite popular in VK2. Barry 2ZAH has his tx and rx working and has had one-way contact with Dick 2ZCF over a five-mile path. Dick should have his tx going by now. Operation on this band is at the high end, crystal controlled, multiplying from 144 megs. The 2ZAH converter is similar to one in March "QST". It's quite a simple device using a crystal mixer and also a crystal diode multiplier.

The 10,000 meg. band may also receive a shot in the arm as a number of RT181/PG-30 frequency converters have appeared. Bob 2ZAR has evolved a conversion of this unit for use as a rx. Anyone requiring information should contact him.

5AW is now running 80w. to his QQE06/40 on one metre so it looks as though I'll have to get my own powerhouse back on the job. The 288 meg. here runs a 6/40 final also at 80w. Exciter stages are three 5763s followed by a QQE03/20 tripler. Drive to the 6/40 runs over 2 mA. through a 47K grid leak. The antenna to be used is a 24 ft. long yagi with 23 elements. The same tx and antenna have been used to work 7LZ and nightly skeds were successfully



Lance VK4ZAZ, another Rockhampton v.h.f. operator, who uses 120 watts input on 50 Mc. and a four element yagi.

kept with 3ALZ a couple of summers ago between Melbourne and Maffra which is also a rather obfuscated path slightly over 100 miles.

Stabilised gear is in use at 5ZDZ and we note that VK5 has seen the light and changed to horizontal polarisation. 5ZFQ and 5ZBI are also active on 288, the latter with a m.o.p.a. Stabilised gear is also being used very successfully on 288 in VK6 and the mod. osc. and super regens. have faded away.

Several of the VK6 gang are also operating on 576 megs. and 1296 looks like finding a few takers too. Maybe some DX via the moon is being contemplated.

New stations on 2 mx in the deep south are 7ZAS, 7ZAZ and 7ZAX with more to come. A number of communicators are being constructed by the Hobart gang and they hope to be able to interest some newcomers in v.h.f. through these units. 7LZ is still chasing his 100 VK3 QSLs, but still has a way to go. Col and Peter 7PF recently visited the southerners and spurred them on to greater things.

Fox hunts and scrambles are still quite popular, the former being quite a good way of introducing the YL or KYL to the lighter side of the hobby. Intending participants should be warned by the experience of John 3ZAI who has been neatly caught (by a YL). Congratulations?

Additional rules for VK3 scrambles to commence in June are as follows: Six mx: one point per contact, and on 2 mx: one point for city-to-city contacts and three points for city-country contacts. Separate scores to be kept by city and country stations. The control stations for the first period will be 3ARZ on 144.5 and 3ZGP on 50.26. Neither control station will participate in the scoring.

COMING EVENTS

VK2 Group July meeting on Friday 7th will be a forum on v.h.f. mobile with Jim 2PM as chairman. August meeting on Friday 4th with a lecture by Barry 2ZAH on practical 576 and 1296 meg. gear and a demonstration of equipment. Night fox hunts on July 19 and August 16. The mid-winter contest will be held on the week-end of July 8-9 from 1900 hrs., Saturday, to 2200 hrs. Sunday. All v.h.f. bands, cross-band operation permitted, stations may work each other every three hours, one point per contact. Logs to VK2ZAH and VK-2ZDP. The South-West Convention is not so far off so a little mobile gear should be in the course of construction for that event.

Next VK3 meeting on July 19. Field day rules will be finalised and the agenda item will be "Mobile Equipment". See you there. VK3 slow Morse transmissions are now originating from 3ARZ on 144.5 each Sunday night from 7 p.m. Relay on 50.16 is by 3QV. A Wheatstone tape machine is used to ensure good sending and m.c.w. is used to enable the people with simple receivers to copy it.

The next meeting of the VK6 V.h.f. Group will be held on 24th July and a good attendance is looked forward to.

That's all for the revised notes this month, new scribes please note the new address and my closing date of Friday before the 8th of the month. Thanks to 2ZDF, 2ZGM, 3ARZ, 3ZER, 4BZ, 5BQ, 5AW, 6RY, 6LS and 7ZAO for all the information.—3AAU.



QUARTERLY EXAMINATIONS FOR W.O.C.P.

The Radio Branch, Melbourne, advise that, due to the increase in the number of candidates for quarterly examinations for Wireless Operators' Certificates of Proficiency, it has become necessary to re-arrange the dates for such examinations in order to distribute more evenly over the full year, work relating to the marking of papers, the notification of results to candidates, and the issue of certificates.

The new arrangements were introduced with the Commercial and Broadcast Certificate examinations in June, 1961, and the Amateur examination to be held in July, 1961, and they provide for alteration of the existing dates in accordance with the following table:

Examination: First Commercial, Second Commercial, and Broadcast.

Date to be held: The first Tuesday of March, June, September, and December.

Closing Date for Applications: The eighth day of the month preceding the month in which the examination is to be held.

Examination: Amateur and Amateur Limited.

Date to be held: The third Tuesday of January, April, July and October.

Closing Date for Applications: The twenty second day of the month preceding the month in which the examination is to be held.

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NOTES

FEDERAL

RADIO FREQUENCY ALLOCATION REVIEW COMMITTEE

Federal Executive of the W.I.A. is aware of reference to possible changes in Amateur frequencies published in an overseas magazine. Pending announcement by the Post Master General of the recommendations of the Committee, it would be in the interests of the Amateur Service to refrain from making speculative announcements of this nature.

"PROJECT NEEDLES" PLANNED FOR THIS YEAR

"Project Needles," the U.S. proposal to put into orbit a belt of dipoles as passive reflectors, is scheduled to be implemented this year. This was announced at the Second International Space Symposium in Florence, organised by the Committee of Space Research of the International Council of Scientific Unions (C.O.S.P.A.R.).

The intended orbit is to be polar and the dipoles ("needles") are to be of copper. The height of the orbit above the earth's surface will be 1,000 miles and the belt will probably remain near its original orbit for about a year. After that it will cease to be a useful reflector.

AWARD FOR G's

The Mullard Award for 1960 has been made jointly to Enid Bottomley, G3OHB, and Graham Thomas, G3OGT. The Award Committee considered that "The fortitude and courage shown by Miss Bottomley and Mr. Thomas provided a fine example of personal service to the community."

They are both patients at St. Teresa's Home in Cornwall, one of the Cheshire Foundation Homes.

ARMY SIGNALMEN MAKE RECORD MARCH

Five Army Signalmen recently undertook a march from Bathurst to Ingleburn (N.S.W.) a distance of 130 miles and took 6 1/4 hours to complete the arduous journey in full marching kit order. They broke the existing record by 4 1/2 hours and were joined over the last 12 miles by Ken Scott, VK2XS, who had cooperated with the signalmen's unit, 504 A.S.S.U., last year in monitoring test calls from a mobile Army transmitter.

Of the Army signalmen's effort, Ken said, "Thank Heaven I was in the Air Force during the War and not in the Army" (At least the signalmen could not be classed as P.B.I.!)

FEDERAL QSL BUREAU

The Malayan Amateur Radio Transmitters' Society has submitted the following proposals to the I.A.R.U.:

1. Power input should be restricted to a maximum of 250 watts to the final amplifier on 10, 15 and 20 metre bands.

2. C.w. operation should have a separate segment at the lower end of the 10, 15 and 20 metre bands as follows: 10 mx, 200 kc.; 15 mx, 150 kc.; 20 mx, 100 kc.

3. Traffic handling on the 10, 15 and 20 metre bands should be confined to c.w. except in cases of a National Emergency.

All QSL cards for the Island of Aruba, Netherlands Antilles (PJ2A—, PJ3A—, and PJ5A—) should be sent to the QSL Director, Aruba Amateur Radio Club. The A.A.R.C. will handle cards for all the Netherlands Antilles Islands, Surinam, Central America and the Caribbean area. The address is Aruba Amateur Radio Club QSL Bureau, P.O. Box 43, Seroe Colorado, Aruba, Netherlands Antilles.

HK3LX seeks phone skeds on the 7 Mc. band from 0730-0830z daily. He carefully tunes 7070-7100 kc. for calls.

Divisional Managers please note that cards for VK8GP, Norfolk Island, should be routed to VK3 where his father, VK3AOM, will attend to same.

Robb Gurr, VK9RO, is now attending to QSL affairs for VK8, since the departure of Russ VK9XX.

The Taiwan American Radio Club takes great pleasure in announcing the issuance of B.V. Award Number One to Mr. R. A. Catmur,

VK5FY. Mr. Catmur's certificate, endorsed for c.w., was issued on 9th May, 1961. The W.I.A. and the Elizabeth Radio Club, of which Mr. Catmur is a member, take great pride in this accomplishment.

—Ray Jones, VK3RJ, Federal QSL Manager.

NEW SOUTH WALES

MID-MONTHLY MEETING

The attendances at the mid-monthly meetings of the Division have improved greatly over the past few months, and an almost capacity house was present to see the slides and hear the comments of Bill ZEG illustrating the activities of A.N.A.R.E. in Antarctica. Bill, it will be recalled, has made two excursions into these regions, one to Macquarie Island and the other to Mawson, and was able to give the audience the benefit of his wide experience. The slides were of excellent quality and with his comments all were able to appreciate the hazards of life in those regions and to realise that the fellows on these expeditions are doing an excellent job for Australia.

Further meetings are being arranged and are held on the second Friday of the month at Divisional Headquarters, 14 Atcheson St., Crows Nest, and one such in July will be the playing of one of the many tapes in our rapidly extending library. Do not fail to be there at 8 p.m., an interesting and instructive evening is assured.

MONTHLY MEETING

Monthly meetings come and go over the years, and despite all our good intentions, some of the lectures heard recede into the background of our memory only to be recalled at some future date, possibly many years after. The lecture at the May meeting, however, was one which I doubt whether any of the large audience will ever forget, and was one which was full of the type of material which all Amateurs enjoy. Leo ZAC presented a discourse on Phasing-Filter Sideband Generators in a manner which left no doubt in anyone's mind that here is a sideband generator which appears to be easy to get going and which would be more stable than many of the phasing rigs in common use today. Accompanied by ample roneod circuitry, the information of the lecture was complete in every detail.

Following this feast, Keith ZBK gave a short talk on the new Barium-Titanate type of Filters which are now being developed here in Australia, and showed how they can be used, in fact had with him an example of the use of such filters.

The vote of thanks was moved to the lecturers of the evening by Wal ZSA. Five new members were admitted to the Division at this meeting.

CLUBS

A new Club has been formed at the headquarters of the 2/9 A.A. Regiment at Haberfield and will undoubtedly appear on the air in the near future.

The recently formed Orange Radio Club announces the acquisition of their call sign, VK2AOA, the transmitter being completed and operative.

All Clubs are invited to supply the Divisional Correspondent with information of their activities so that they may receive adequate publicity, which can only lead to increased membership. Remember the time lag in publication which is of course unavoidable, and have all information in to us by the first day of the month.

HUNTER BRANCH

Do-it-yourself lectures. This is the latest news from the Hunter Branch. I don't know whose idea it was, but the evening of 12th May saw this novel arrangement put into practice. The Branch meeting listened to no less than five of our own members giving practical hints and ideas. Those doing the talking were Keith ZAKX, 78 rx modifications; Stuart ZAYF, test and measurement equipment for 2 mx; Stan ZAYL, a practical frequency meter; Les ZRJ, Departmental requirements for mobile operation, and Gordon Sutherland, wave shaping with one control.

SILENT KEY

It is with deep regret that we record the passing of:—

VK4CU—C. W. Walker.
VK4HP—K. Hawkes.
VK6HT—H. A. Tarbotton.
VK6WH—E. A. Doddy.

The attentive audience included a welcome visitor, Bill ZCW and the following members and associates: VKs Z2L, Z2QR, Z2CS, Z2XT and Z2FZ; Helen Cowan and Messrs. Blyth, Forrest, Mullen, Finlayson, Stobbs, Gray, Munn and Foster. Those who could not be present were Varley ZSF, Harry Z2FA, John Z2XQ and Tom Davis, Max McLachlan and Mac O'Brien. Even as I write this, I remember that one of the above names now is entitled to use a call sign. I have pleasure in introducing our newest Amateur, John Gray, VK2ZJG. At long last, John has his call. At one stage he thought he was going to be left out of it all, but the powers came good in the end. I have no idea what gear John will be using, but Z calls please take a look for him soon.

You will notice that Varley could not be there on the last meeting night, but he did come along to Bill's most recent social gathering and has almost recovered from his recent illness. Pleased to know you are feeling better Varley. You'll never guess whose car failed to start on the evening of 24th May at Bill's place. Well, perhaps Bill will tell you the details, but I can say that it was cracker night and that the member waited until all the other boys had gone and that the N.R.M.A. patrolman fixed it with a smile (or was it a laugh).

A few minutes before all this, we had been standing in the middle of the road admiring the new Z2T beam which answers to the name of Thunderbird. What with t.v. aerials and other appendages Bill certainly has some hardware above his roof! It works though as Gordon and Stuart will tell you, having talked to a KL7 on s.s.b. with effortless ease on that same evening. We are told that Mr. Hall inaugurated communication by breaking into a W QSO and having ten other Ws come back to him! How about that! He was late to bed that night.

Have you heard Charlie Z2RV on 7 Mc. c.w.? Harry says it is true and Jack, second op. at Ron's (Z2SJ) has a card for him from an LA7 mobile marine. Keep up the good work Charlie! Ron, too, is still putting out an f.b. signal on 7 megs, and he has been on 20 as well. The c.w. contacts with California please Ron no end, so Jack says, and I'm sure we are all delighted to know the Stockton crew are progressing so well.

Our hard-working but transmitterless President, Stuart, is building a talking box. Whether this will be used for Monday night broadcasts is not clear, but it is going to be a modern affair with 15 watts and a transistor modulator on 40. It is rumoured to have some of those QQ stroke something or other in the final, so here's hoping. I don't know what remedy can be prescribed for the re-broadcasts at the present, but they just about reach this QTH and Zulu Zulu's talking back modulator just seems able to put enough intelligence on the carrier to be understood in Newcastle. Pity those poor Hams with 10 minus watts! Still, we can listen to some fine Chinese National music when Z2WX fades out. "There's not a chink in the band," said a local wag the other day. How about 7050 night-times?

The expectant associate, Gordon, must be sure of his exam. result and apparently intends going for the Morse pretty soon because he is looking for certain crystals for a converter on the h.f. bands. Better speed it up Gordon, for when the sunspot number drops a bit further we'll be lucky to hear Z2NA outside Beresfield.

Is it true that Bob from Westy has a barrage balloon ready for one end and a big hook on the top of Sugarloaf for the other end of an s.l.f. antenna? Won't it be grand on the s.l.f. band. We'll be getting QRM from dog whistles. At least this will fit in nicely with the duck decoys we'll need to receive the s.s.b. which Lionel hopes may soon emanate from D.D. Mk. II.

Z2IF has found that accumulators have a short life indeed on a 522 and the last report I heard was that he had now bought another car just to keep the batteries charged. You'd better get some clues on transistors Ian or else get one of those pedal machines. One CQ equals 493 pedal revolutions or thereabouts.

Chris, Z2PS is looking with longing at a certain mast at Adamstown and wondering if it will go along the lane and through his back gate. He is sure it would make an ideal companion for the present angle iron structure. John Z2XQ has been heard on 80 mx phone so the spies tell me. I do hope that 80 keeps improving and that more of our local boys use this band.

VK2WI has been coming through more strongly each Sunday, and some of the boys listen to this transmission in preference to 7146. One 80 mx only man, Jack Z2KQ, is heard now and then with a mighty strong signal. Jack also helps out with the slow Morse at times. At least one local associate has told me how much he appreciates the work done by

the morse roster boys. You are doing a fine job chaps in providing an unparalleled service. Heard Les 2R7 last Sunday calling in to 2WI from Brisbane with an f.b. portable signal. It is said that Les has a massive generator to run this gear. I suppose that's the one that was seen at Blackalls last year under the bonnet. Just as well Les does not have a Renault or it may be difficult to find which is the motor. On the way back from Brisbane, Les and Sylvia will be calling in on Tas 2GV in the furthest reaches of the Hunter Valley.

Amateur activity at 2AYL's is at a low ebb apparently as Stan is doing additions to the laundry and building the new sun porch. I expect really that the laundry is only a disguise for Stan's new shack while the other family members are kept happy sitting in the sun. Rodney 2CN has been heard but not seen and Bill 2ZK is still hard at it confusing young students. Please a little more activity from Kotara, Bill.

A lucky Terrace resident, Mac ZZMO, recently spent a few days in the sister city of Wollongong. Mac has some crystals now as well so this may mean more activity on 2 from the distant suburb with the two Z calls. You should get a good signal from ZZJG, Mac!

A deal of r.f. has been floating about over Teralba lately with Harry 2AFA having regular skeys with the hamburgers from Booragul. It is a real treat to hear Harry on regularly again, especially on 7 megs. The local library has a pretty picture book from the U.S.A. showing perverse t.v. screens. Harry has borrowed this book and reckons there's just no picture to describe what happens to t.v. at Teralba. Apparently the only way out of it is to be like the man next door who has a mighty mast. On winter days the top of it goes out of sight—just like the signal says Harry. A high pass filter was built but the folks have been unable to try it out because no picture could be found.

Bob 2AQK has been roaming around again and has paid visits to several of the near North Coast gang, namely Ben 2ABT, Les 2LM and Bill 2AEY, the termite man. I believe he was looking for a balance weight for his "S" meter needle so that it would get off the stop. Readability 3, strength 0 indeed! Ben must have caught some of the wander fever too, because he went off on a jaunt to VK5, apparently so he could hear Zulu Zulu's signal at a reasonable strength.

Bill is happy though or at least he gives one that impression because he is actually buying a new call book but it's going to take him weeks to transfer all his notes from the old one, so if you hear a large slab of silence from Pheny Bay, you'll know the reason. Bill was glad to receive a visit from Lee 2AXK the other day and I bet he showed him the ZL R/C bridge. This is a mighty machine chaps. It is transistorised but the only transformer which will work in it is the same size as the one outside on the pole, and it won't quite fit in the box with the other components. Also out Toronto way the new beam at 2AHT has been lifted aloft. A large crew was employed to do the rigging, but it certainly seems to have been worthwhile and Jim's antenna farm just keeps growing. No wonder he works the DX! What a mighty signal.

The Booragul boys have at last begun regular transmissions from the school. The club tx is working well now, but only 100 per cent on c.w. The modulation is still not the best but this will be cleared up, I feel sure. If you have the time, the boys would appreciate a shout and you can expect to hear them on 40 phone at 1300 and 1530 each day except Thursday. The signal is low power but the antenna seems to be helping a great deal and reports received to date have been most encouraging. Ian hopes to contact a W on 7 c.w. shortly if conditions hold up. As an activity for Technical Training Week, four of the boys paid a visit to 2WI on 4th June. Dave and the boys at Dural were most helpful and the boys were very impressed with what they saw. They are determined to clean up our own operating position so that we may change over with one switch after seeing the system in operation at the Divisional station.

One of the amusing incidents of the visit took place when one of the lads took a flashlight photo in the studio with a blue flashbulb. As if by magic, engineers appeared from all directions to see which 866 had exploded. The boys are most thankful to those stations who have sent QSLs and promise to QSL all these chaps just as soon as the cards are printed.

If you are interested in wrecking disposals gear and lack the courage to pick up the sidecutters then bring yourself along to the July meeting of the Branch to be held on Friday week (that's the 14th) at the University of N.S.W., Tighes Hill. Vol 2VO has promised to give us the clues on this very subject and we are expecting a rapid turnover of junk in members' shacks following the meeting. So

bring a notebook and pencil and I'll see you there. If you'd like to see some super sideband or watch a thunderbird in action, come to Bill's on the 26th. Anyone in Cook's Hill will tell you where he lives and you will be welcome. Come along and let me have some news for this column. And if you're interested in meeting a lucky associate, see Belmont Bob. He won a fiver in the local consultation recently (and I had half shares). And if none of these activities interests you, then use Amateur Radio to keep 40 and all the other bands busy. Let's convince the powers that we need it all. 73, 2AKX.

CENTRAL COAST SECTION

At the weekly hook-up on 3650 kc. at 8.30 p.m. on Monday night recently half of the stations were on sideband. The area now has five on this mode and five others are working towards this end. The latest convert is Major 2RU and his equipment is an HT37. These phasing type excitors have a very natural tone and the sideband suppression is excellent. Your scribe, 2ON, has had excellent results with the 102 ft. flat-top G5RV antenna described in Jan. "A.R." A 29 ft. length of 300 ohm ribbon is used for the matching section.

Congratulations to Reg. 2AI on his brand new daughter. Geoff 2AI has his quad working on 14 megs and the results with 50 watts of a.m. are really good. Turning the handle in the shack is the method used to direct its fire. Ken 2AFH and Frank 2AFJ from Peels Ridge are now directing their thoughts to 144 megs. At least they should escape t.v.l. living in the bush. Bob 2IN has a tx on 144 now and is frequently heard on 7 megs. Wally 2AXH is active on most bands these days. He showed some very nice coloured pictures of New Zealand at a recent Gosford Radio Club meeting.

Trevor 2TM rattles the key for the slow morse sessions on 3.5 megs. Unfortunately at the weekly net an interpreter is required. This will be remedied when Trevor rebuilds the modulator. Harry 2LX is enjoying a trip to Japan with members of Rotary. Ernie 2EH is holidaying at Los Angeles for a few months and we hope to hear him from there before long.

Len 2AMU has a keen second up and is undergoing a gradual re-orientation towards s.s.b. technique. What a pity orange trees take so much care and effort to make them grow! On this point, Alec 2AAG also agrees. Alec is very pleased with his tri-band beam but is puzzled why a DL station receives him at 5 x 9 and he has to report 4 x 6. Maybe they have excellent rx's over in Europe.

BLUE MOUNTAINS SECTION

Due to annual leave there were no notes from yours truly last month covering the Branch meeting in April. On this occasion, Bob 2ASZ gave a lecture on his mobile all-band tx from 3.5 to 28 Mc. and including 2 mx. Bob also added some very helpful hints and kinks regarding his 2 mx tx and outlined the general principles of a complete station. Eleven members were in attendance to deal with the little business to hand. Another Civil Defence Operation similar to Op. Picnic is coming off towards the end of the year, so chaps, how about 2 mx mobile?

The May meeting was very well attended, VKs 2ADF, 2QA, 2HL, 2ASZ, 2ZFB, 2ART, 2RM, 2NK, 2AVK, 2IJ, 2ZDK, 2ABK, Jack Ferris, Ken Moore (ex-3AVK) and Bill Smith. Messrs Wallas and Baker from the volunteer Bush Fire Brigade spoke to members regarding communications. They outlined the various areas and radio requirements. One problem arising is when more members turn up at the base and require redirection to other fronts of the fire. Another is notifying changes in fire directions and also general emergency calls. The usual ragchew and supper followed and a good night was had by all.

Heard Alec 2EX making up for lost time with Bill 2ZL on 40 the other day. The tx, according to Alec, appeared a bit cranky—was all right here. Al 2ZFB now transmits and receives on 2 and getting ready for mobile. Bob 2ASZ is looking for contacts on 530—so turn your beams to St. Mary's fellows.

The lecture for June meeting (as usual on the third Friday) will have been given by Harold 2AAH on Antennae by the time you read this.—73, 2ADA.

VK2ATQ—BOYS' RADIO CLUB

Back on the air after the holidays and we hope to be more organised this term. Contacts are usually short, through lack of time and Frank suggests dinner-hour be extended till two o'clock! John saves time by listening and transmitting simultaneously—until the OM gets within range.

Construction is almost completed now on a higher powered final (parallel 6146s) for c.w.;

next project must be to improve the antennae somehow.

Nice to have a yarn with Booragul High School ops, 2AKX/P. Our strongest signal so far has been 2ALA/M who happened to be right in our street one afternoon. We've been listening for Harry 2LX, who is in Japan at time of writing, but no sign of him yet.

VICTORIA

Not much this month. About the only things happening that I've heard about are the repairs to the building, which have somewhat limited our activities; the great work being done by the V.h.f. Group, especially Bill 3ARZ; the last monthly meeting which was a great success, over 50 people present to hear an excellent lecture; the brief visit of Arthur 3AUL and Bert 3BV to Melbourne; Alan 3AEL, our Federal Councillor, successfully losing his tonsils.

Is there someone who is on the bands regularly (even a country member could do this) who could, each time he works a band, make jottings over the month and send them in as VK3 Div. notes? I am unfortunately occupied three nights a week with work this year, and find it very difficult to be about to get news.

There have been a few kind people who wrote me with news, thanks I am happy to write up the news if it's sent to me by the end of each month, but as a news hound, this year I'm a dismal failure.

Anyway I went to the monthly meeting last month and heard an excellent lecture on linear amplifiers, Class C, Class A, Class AB, etc., grounded grid operation (which seems to be the best) and many other interesting facts on s.s.b. operation. Lex 3AIL, who we thank very much, gave the lecture and all agreed it was very worth while. This month we hope to have the University balloon team to show us their gear, explain their research and generally entertain us on this aspect of research in which we recently took a part. Be in it! It was a good roll-up last month, hope it is this month.

New members admitted were Neil Duncan, a junior; John Beckett, 3ZCB; Geoff Thompson, 3AC; and Rex Dale, an associate. Welcome to these new members. Max Hull, the Federal President, was at the meeting and was cordially welcomed by the VK3 Division.

The foundations were found, and work started on the front wall as we went to press. The building will be finished by now.

Disposals Committee is running about gathering bits of gear for you—but it's hard to come by! Don't forget the forthcoming Convention and Dinner! Let's have some news. Hey, I almost forget (shame!) next month it is R.D. Contest time! Eight weeks from now—keep that week-end free to strike a blow for VK3!

EASTERN ZONE

During May, Graham 3QZ completed a trip through VK5, VK8, VK4, VK2 and kept regular skeys with 3DY, 3AIT and 3ZK. George 3ZCG now resides at Morwell, after a short stay in the big smoke; works 3ZDP and 3ZAB mobile on 2 mx. 80 mx hook-up is still in being, keep it up chaps. 2 mx hook-up is likewise. 3ZDP and 3DY persevering with QQE06/40s on 2 mx, but gradually achieving the desired results. 3AIT entertaining visitors and keeping them occupied with chores. Ron 3PR, a regular on the 60 mx morning hook-up, but t.v.i. keeps him off otherwise.—3DY.

WESTERN ZONE

Alan 3HL is most active on the DX bands these days. He is still using a.m. but is very interested in s.s.b. and expects that in the near future he will have this type of signal. You are not the only one thinking along these lines, Alan, as s.s.b. seems to be the "real thing" these days. Trev. 3ATR also one of the DX boys and works the world with ease. Merv. 3AFO is active on the lower frequencies as well as spots of DXing and is one of the regulars on our zone hook-ups.

Keith 3QG, of Murtoa, is now building gear for the 50 Mc. band. Keith's brother, Norm, is at present enjoying a spot of leave in Hope-town. Norm is a Missioner working in the Islands and will be sitting for his Broadcast Operator's ticket in the near future. He is also very interested in Ham Radio, and will also be doing Morse and Regulations, so we wish him all the best of luck. Expect to be contacting him from the Islands early in the New Year.—3AKW.

SOUTH WESTERN ZONE

The new co-ordinator for the Zone's W.I.C. E.N. is Pat 3ADN with Jim 3ADT and Don 3AKN as his deputies. These three form a committee to plan training and operation of

the net and to make liaison with outside bodies. The control station will be rotated amongst the net stations so as each one will get practice in control work.

Don JAKN has had a QSO with Bill 3ZFG and Peter 3FX on 50 Mc., but is not satisfied with the r.f. feedback in the tx. Don't worry Don, it will come good in time. Brian 3JKN is on 144 after getting bugs out of his converter. Here's a tip, chaps, check all bits and pieces if your receiver is giving trouble. Brian found the strife in faulty components in the converter.

John 3ARJ's 2 mx tx is going on 144.9; the converter is coming up soon. Noticed in last month's notes the mighty 2 mx sigs reported by 3AKN; at last I have convinced one chap about that band. I have been having trouble with t.v. lately, not t.v.i., just t.v. looking; will be back soon with t.v.i.-proofed new tx running a bit more watts I hope.—3ANQ.

QUEENSLAND

Greetings chaps! I am looking forward to keeping this column of interest to everyone, but, of course, I will need your assistance. What about letting me have news of that interesting event? Send direct or pass through Secretary Bill 4WX.

I guess you won't mind me repeating the Council set-up for 1961-62: President, J. Rafter, 4PR; Secretary, W. Wishart, 4WX; Treasurer, K. Grice, 4DG; Federal Councillor, A. Hinkler, 4AO; Inward QSL, J. Files, 4FJ; Outward QSL, R. Feenaghty, 4ZBZ; Librarian, K. Long, 4VM; Div. Sub-Editor, P. H. Brown, 4PJ; Disposals Officers: E. Fell, 4EF; R. Guttorfson, 4RL; C. Cogzell, 4SF; A. Walz, 4AW.

As you can see, some of the load has been taken off Jim 4PR's shoulders. We held a Council meeting at 4PR's QTH on Friday, 12th, when nine councillors were present. We started promptly at eight and we only stopped for breath, not even for supper, a little after eleven when it was time to go home, and leave the washing-up to Jim. We can guess the secret of Jim's beautiful smile and well rounded figure if the bountiful supper his XYL provided is any clue. Thanks Mrs. 4PR. However, we left a lot of business unfinished, so if some things seem to move slowly, chaps, it's time that is beating us and we are not complacent about it.

We held our monthly meeting at the State Service Union Rooms on Friday, 26th, with over thirty present, including three new members, and a few that haven't been seen for a long time, including Bob 4RE who taught Bill 4WX Morse, who can I believe take his licence back to the 1920s and who will be back on the air again. Pat 4KB, who also was one of Bill 4WX's class instructors, was present, as also were our Ipswich stalwarts, without whom our meetings would be incomplete.

The business of the meeting was over and Vince 4VJ was on with his s.s.b. lecture by 8.45 p.m. The time flew, with questions, until just after ten and Vince had only dealt with the receiving end of s.s.b. The "how" and "why" of s.s.b. reception and ways to improve your present receiver were the main points covered. Vince's s.s.b. transmitter was there with covers off and knobs on for all to examine and admire.

Thanks Vince. We are looking forward to your next talk in July. I suspect the disappointed ones who missed this first talk will want it again one day.

By the time you read this the Queen's Birthday Convention at Nambour will have taken place and we will be looking for ways and means to further improve the next Convention.

Bill 4WX has the suggestion that we hold the next Convention in the North again, but at Easter, and so far the idea is being received favourably. It is not anticipated that the Urunga Convention attendance will be affected but that both shows can work together on "scrambles," etc.

FURTHER LECTURES

Now about our monthly meeting lectures and talks for the rest of the year. In July, Vince 4VJ will continue on s.s.b. transmission. Probable talks to follow will be "Radio Astronomy" by Pat 4KB; "Doc Morrison, 4MD, on his overseas trip; Mr. Hinkley, of the Queensland University, is lining up some talks suitable for our meetings and we have arranged for a practical demonstration, in which all may, and should, take part of. "Mouth No Mouth," re-suscitation, using manikins. If you don't know what manikins are, I'll explain further next month. No, not mannequins!

Council will arrange these events so that everyone has plenty of notice. If you know of an expert in a field that is related to radio or the Institute, tell a Council member that

we may co-opt him, and don't be backward if you are capable yourself.

While we are on meetings, etc., don't forget that Secretary Bill is opening the rooms at 7 p.m., so that you may have a chin-wag if you have some spare time before the meeting.

PERSONALITIES

Our new Secretary, Bill Wishart, 4WX, who calls himself an "old timer" but has a pretty youthful approach to the job, held his present position many years ago. Other "old timers" would have known him as 4WT. Should the above bring back memories of the past, Bill would be pleased to receive a letter from any of the old gang. His address is 39th Ninth Avenue, St. Lucia, Brisbane (phone 7-2784).

Keith 4DG was heard working CR7GF on 15 mx and making sure his QTH was correctly received. You'll get your QSL card, Keith. Stan 4SA is back with us and we hope to see him at the July meeting. Doubtless we'll have a job to utilise his talents. Wide Bay and Burnett, also Central Division, will be pleased to hear of him as one who helped their formation. Even 4EF is to be congratulated on the efficient manner in which he is handling our disposals gear. Often the package is dispatched the day after receiving the letter ordering it. What do you think of the service, country members?

Ken 4VM, our Librarian, reports that the R.S.G.B. Bulletin should be on its way and we will let you know when it becomes available. We are missing a few 1959 "QSTs" and "CGs". What about looking around the shack chaps and returning those issues and subsequent issues. Ken is going to award the crossed dipoles to Hal 4DD and Bob 4RW for promptness in returning library issues, but they are being run pretty close. Any more contenders for June and July?

Eric 4XR conducts the Wide Bay and Burnett Group's Saturday afternoon hook-up on 7125 Mc. at 1400 hrs. He conducts these hook-ups in an excellent manner and keeps to a tight schedule.

Most of the credit for the Convention will probably go to Eric, Barry, Jim and others of W.B. and B.

Have you heard "How I rode out the typhoon" or "Anchors Aweigh" by "Doc" 4MO? Who are the persons using the 21 Mc. Amateur band for private s.s.b. phone patches?

Unfortunately I won't be able to deal here with certain items as you must realise that I have to have this news in Melbourne before the 8th, but if you hear of anyone in hospital or in ill health let one of the councillors know and we will pass the word around.

Also, country members, don't forget if you are in Brisbane for the Show, contact Bill, myself or someone here because we would like to hear from you, or meet you.

Finally, I've probably used up my news for the rest of the year, so what about sending some along and helping me make this column a success. My phone number is 95-2268.—4PJ.

TOWNSVILLE

It is to be hoped that very soon 4WI's tx will have a new home, so that there will be no grumbling from the boys. The stations calling in will be able to net on the proper frequency, 14342. Because these tx's are xtal controlled and after warm up do not drift whereas the chaps calling in leave it to the last minute to switch on and therefore their v.f.o.'s have not settled down. Hence they hear one chap, whose v.f.o. is thus slightly drifting and net him and soon all are spread around between 14338 and 14345 kc. This causes the s.s.b. chaps to moan as they have to continually re-tune. Bad luck to the two s.s.b. chaps who operate on 14342 all during the Sunday 4WI net. Hard enough with present conditions: without others using the frequency.

Can anyone inform me re propagation of the radio signals where do they wander before arriving at my antenna, because on checking 15 mx I have noticed at times that WWVH is up to 30 seconds ahead of WWV with JJJ in the middle. This has been noticed often around 5.45 p.m. E.A.S.T. Would like others to check this.

The boys in Townsville have a further breathing space as now the situation of the t.v. station will be Mount Stuart, about 2,000 ft. high and will take about 18 months before t.v.i. will make its appearance and naturally laid at the feet of local Amateurs.

The local boys want it known that they are running a net on 14 Mc. each night at 8 p.m. and ask for others to call in. With present conditions may make the others come on the air and not let the spiders build webs amongst the colls, etc.

Conditions are certainly bad for the Z boys as no break-throughs on 50 Mc. for over six

weeks. Their rigs are lying dormant, may spur them on to get full tickets.

Last Sunday, after 14 Mc. had dropped out, it was possible to hear the boys from further north ragchewing on 7 Mc., but they soon faded and even at night this band was no good for southern VK4s seem to skip then and veer away to ZL.

With the passing of 4CU a local s.w.l. was thrilled to hear the Requiem on the 7 a.m. net on 7 Mc. on Monday, 15th May. Made a special call upon me to give me the details, and hopes one of these days to become an Amateur. Hear there will be a new scribe in the capital city, hope his pen never runs dry.—4RW.

SOUTH AUSTRALIA

The usual good attendance of members, standing room only, was evident at the monthly general meeting of the VK5 Division for May, which, owing to the usual chairman (John 5JC) being absent on vacation, saw Phil 5NN acting in that capacity for the first time. The guest speaker was Mr. John Campbell, of the University Physics Department, and his subject was "Radio Astronomy". Mr. Campbell gave his talk with a rapid delivery and particularly clear diction, which meant that he covered a considerable amount of ground, and judging by the number and variety of questions from the members at the conclusion of the talk, it was evident that those present had absorbed the subject particularly well, and were anxious to learn more. Most lecturers who have entertained at our meetings have been masters of their subject, and naturally have tended to gloss over the imperfections in favour of the perfections. However, Mr. Campbell, certainly a master of his subject, did not attempt to sidestep any imperfections and was the first to point out that the resolving power of aerials were vastly inferior to optical means as yet, but stressed the point that radio astronomy had justified itself if only from the point of being able to detect the presence of hydrogen in the heavens (important from our point of view), whereas this would not be possible from optical means.

For one awful moment I thought that he was going to leave me holding the bag and ignore the blackboard, which would have left me with no alternative but than to write up the whole lecture in this magazine, but occasionally he wielded the chalk, and with Council still firm in its declaration to refuse to post the blackboard over to the magazine committee, I was saved on the bell, and have only just recovered from the fright. I usually grab the lecturers for the night and make an impassioned plea for a little work on the blackboard, but I missed out at this meeting, and nearly paid the price for my mistake. The vote of thanks was ably proposed by that genius of the spoken word, Keith (5WI to you) and was seconded by all present in no uncertain manner.

Practically no business (F.E. or otherwise) was transacted, although the recently mentioned letter from Pete 5FM on fringe area t.v.i. came up, and it was officially stated that this matter was now at F.E. level and for the moment there it will rest. The meeting closed around about 11 p.m. with the members leaving for their couches of virtue well satisfied with the fare provided, not their bus fare, the fare provided at the meeting.

Incidentally, talking about the fare provided at our meetings, there seems to be a growing wish among the members for a get-together night in the middle of the year, a sort of a night when there will be no business, no lecture, no nothing, but just a good chance to meet the other chap other than on the air and generally fraternise. Personally, I am not so sure how it would work out, but it is worth a trial, and I submit it to those responsible for what it is worth. The reason that I submit it here is because if I were to submit it to Council personally, they would knock it over at once, if only on suspicion of the motive! Give a dog a bad name, well you know the rest anyway. As a matter of fact, without labouring the point too much, it might not be a bad way of getting to know all the new members that have hobbled up over the months. One time we used to wear badges at the meeting as a means of achieving this, but for some reason or other this is now a thing of the past. Remind me to bring this up on some meeting some time!

Phil 5NN, at the moment of writing, is overseas on a trip to G and W land, business-wise, and there is no truth in the rumour that after one meeting night in the chair he decided to flee the country immediately.

Socialites were agog this week in VK5 by the announcement on the back page of the local

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paper that none other than Joe 5JO had been hit fair and square in a vital spot by a deftly fired arrow from that little man who trots around with no clothes on and a quiver full of such arrows. The lucky member of the fair sex is Nellie Harrison, and the happy pair will walk up the aisle at the end of the year. Good luck to you Joe, what a fox!

My tried and trusty friend (sounds of hollow laughter and gritting of teeth, Comps 5EF, the sultan of s.s.b., grabbed with both hands the opportunity of boosting the members of the Duck Talk Society in VK5 in his April notes, and to such good effect that he left me without any actual grounds of complaint. However, having searchingly read the paragraph several hundred times in an endeavour to get some effective comeback to his boasting, I noticed with a feeling akin to horror that no mention was made of what could be called a veteran of s.s.b., none other than George 5GD. If my memory serves me right, George and another VK5 who shall remain nameless were carrying out experiments in a solid way with this peculiar form of transmitting intelligence (that should increase my fan-mail from Interstate) back in 1957-58. George, being somewhat like myself, modest and retiring, something akin to a violet, would never have drawn Comps' attention to his exclusion from the list of the "Tuffy Woffies", but naturally I could not let the opportunity of doing my good deed for the month go by! Joking aside, he is a little inclined to hide his light under the proverbial bushel, as witness of the fact, several VK5s have been receiving publicity in the local paper with respect to their experiments with Amateur TV, whereas George is well advanced in the same experiments, almost ready for some closed circuit testing, but like Brer Rabbit, is saying nuffin.

Doc 5MD, absent from the State without my permission as usual, is reported as having been sighted in VK4, and whilst this report is only rumour, I know him as I do and his usual annual walkabouts, I quite believe it. Strangely enough, during his absence, a couple of his star boarders missed him so much that they left his boarding house without even giving notice, and tried to join him. It is his magnetic appeal I suppose.

Leith 5LG heard in QSO the other day describing his new invention for quick band hopping. Each band is marked in a different colour on all dials and at a snap of the fingers he can jump from indigo to chartreuse. I beg your pardon, from 7 to 14, whilst the average hopper is still working it out. All a little confusing to me, however, as he talks about conditions being extra good on red, or QRM being bad on blue, to say nothing of static being very annoying on heliotrope. I was a little perturbed to hear no reference as to how conditions were on fire hydrant red (Why not "Pansy Blue"—Ed.), because I always work on that band during the R.D. Contest. If he ever gets picked up for off-band working he can always plead colour colour blindness!

Things have been reasonably quiet up at Elizabeth this month, at least that's what my espionage agent reports, but as far as I am concerned it all sounds like feverish activity. Depends on one's outlook I expect, or could it be Anno Domini on my part? For the benefit of those who may not be able to speak the Hindustani language as fluently as myself, that means that possibly I could be letting the picture of the Man with the Scythe cloud my outlook, which means of course that I am perhaps getting a bit long in the tooth, which means of course—oh well, you get the point I think!

Bill Verral has obtained his limited ticket and great is the rejoicing thereof. His call sign is 5ZDV and he is not resting on his laurels but is keeping his c.w. practice going and hopes to get his full ticket this year. Nice work Bill, although Don 5TM may not second that, Bill's 6 mx four element points directly at Don, with only 100 yards between them. Don 5TM is still active on 8 mx but has been heard on the "square" bands at times, mainly on 80 mx.

Tubby 5NO has been fairly quiet of late, due no doubt to the fact that harmonic Jeff 5NQ is on university holidays. The latest communique from the Controller of 573 Main North Road (the XYL might possibly dispute that title) is that during the next sunspot maxima Amateur activity will be at a minima, what with 5NQ going to bed at 0200, 5NO getting up at 0200, and the reverse an hour later, the Vale kitchen resembles an airport cafeteria.

Ian 5QX has been heard on 21 Mc. at various times, but was heard to remark recently that this band is too active at the moment for him so he will give it a rest. Well I never did! He recently was the recipient of the E.A.R.S. Award, can't think of the full title (possibly one of the wise men from the East might help out), but the main thing is that he has received it.

Harry 5EU has been heard working on 80 mx lately, with a signal that has to be heard to be believed, which all adds up to the fact that if he is being heard on 80, then 21 Mc. must be sick and ailing. Possibly Ian is getting a db. report above Harry! Keith 5EJ has not been heard lately, and the suspicious minded of the brethren in the Elizabeth area are waiting for "it" to happen. Just what is "it" I am not in a position to say, but as they somewhat coarsely put it, "something is cooking!"

John 5EV was seen the other day with his ears just protruding from his automobile, and of course this means that his Amateur activities during the week-ends have been somewhat limited as a result. Ron 5FY, who, incidentally, claims Mata Hari as a member of his lineage (get it?), has his mobile set-up functioning well on 60 mx, much to Clive's 5PE relief. Ron has also been heard on 14 and 21 Mc. Versatile, isn't he? Cyril 5DY should soon have his mobile gear working, although he has been fairly busy with the new garage and its associated fittings, and there is a strong rumour that he will lack a possible shack on the end. Well, well!

Peter Field, L5039, has been absent from his QTH on holidays, but the QSLs still continue to arrive from here, there, and everywhere, with monotonous regularity. Pete 5HB has been conspicuous by his absence from the sylvan scenes of Elizabeth, pardon me becoming lyrical again, it's the metwurst in me, but the fist on 5WC at Woomeera lately sounds mighty familiar. Can I read code? Can I read code, haw-haw-haw—Can I?

Joe 5JO, that roaming Romeo from Brompton, was a guest visitor at the last meeting of the Elizabeth Club and together with those present enjoyed the screening of the films projected by John 5ZJM. Ken 5ZCH has now left for Kimba, and it is possible that a 6 mx signal could go into orbit from that direction one day. Hugo 5ZDA is re-building his rig at present and naturally is not very active. He hopes to take his c.w. exam. shortly with a consequent increase of the local QRM. Best of luck OM.

Ron 5FY is going to receive—how did he get in here again, sheer favouritism—anyway, he is going to receive the first "BV" award issued by the Taiwan gang. Some are great, some are born to greatness, and some have greatness thrust upon them! Incidentally, visitors from the city and any other places are cordially invited to attend the monthly meeting of the Elizabeth boys. Further information available from Ron 5FY. Blime, he has got in again!!

I managed to sneak one of my spies over to the VK3 South Western Zone Convention at Warnambool, at considerable expense and inconvenience, to the spy that is, and he returned to VK5 full of the splendid time had by all, the good-fellowship between all, and the good job for Amateur Radio that such conventions do from all angles. Three VK3 visitors were among those present, Luke 5L., Dave 5AW and Al 5ZCR, and Luke was presented with the award for the longest distance travelled to the Convention. My spy tells me that Tony 3WB caught the eye of all present with his mobile set-up, so much so that Heath Robinson has decided to sue for breach of patent, and he was the first away, with a squeal of tyres and a cloud of dust, on anything that resembled a "fox hunt," and was always the last back, having spent most of his time in tracking down the local b.c. station in mistake for the fox. Nobody enjoyed themselves more than he did, and if he had his way there would be conventions held every week-end. Attaboy, Tony! Don 3AKW lost his antenna loading coil on the road at one time and had everyone present hunting for it with feverish intensity, only to find that it was in the antenna all the time! I have plenty more information but I will have to stop because the VK3 zone correspondent will be after my blood for poaching on his preserves, and there are enough VK3s plus one or two VK2s persecuting me as it is! Incidentally, my espionage agent (I have to call him that now, as part of the Convention he was introduced to the Mayor of Warnambool) was full of praise for the organisation behind it all and is eagerly looking forward for the next one. Fat hope he has, I will go myself!

Latest information as to the deeds or misdeeds (I will leave it to the umpire) of the unofficial Mayor of Lucindale, Arch 5KK, tells of the fact that he is the possessor of a new cat, kindly donated by Luke 5LL. It was a bit of a wait for a suitable cat because Arch insisted that it must be a black and white cat as a sign of his allegiance to the Port Adelaide football team. Football try name is Arch!

Quite a spate of mobile stations on 7 Mc. over the past month in VK5, all from the East. Ian 2ASI was over on holidays and when heard was stationary mobile, whatever that

is, from Gawler. Peter 3FX was on a round trip and whilst in VK5 had a little trouble with his gear, and was heard to say that it took him five hours to get it out for repairs and that it would probably take 10 hours to put it back. Looks like he needs a miner's licence as well! John 3HW when heard was just returning from a trip around Victor Harbour, Goolwa, etc., and was discussing the availability or otherwise of the fish at those resorts. I thought I detected a trace of disappointment in his voice, could I have been right John? Sorry I did not meet you boys, but I usually run like mad when I hear a VK3 or a VK2. I can never sort out who are friends or foes!

Ern 5EN was heard in QSO with 3LU and apparently it was their first contact for six years. Quite a while but not in the race with the lapse of time between the contact between Arthur 5HY and Charlie 5ON reported in these notes by my friend from Gawler (hollow laughter and sneers) during my absence recently, 47 years was it not? How did I miss that scoop.

Ralph 5TR heard for the first time for many moons and when heard was in contact with Al 5MF on c.w. too. I have to give Ralph a plug, he is the VK5 inspector for public places of entertainment, and as such could refuse to endorse my annual application for my projectionist's licence. He once said that nobody approached my ability as a projectionist, but thinking that remark over, I am not sure whether he meant up or down!

Pete 5FM is the recipient this month of our sincere wishes and congratulations on his marriage, and if the news around the broadcast stations can be believed, he is leaving Crystal Brook and will be living at Bridgewater. It is understood that he will be working at the ADST tx. Ray 5FF heard on mobile several times, in fact he was definitely mobile on one occasion, 300 miles north of Port Augusta. Bill 5XB was heard on 7 Mc. with the news that he had completed his mobile tx and was well satisfied.

Nicknames are funny things, quite often they bear no relation to their owners. Take Pansy for instance, this one has been with me for years and has caused some lifting of eyebrows when I have been introduced! Take Doc 5MD, take Inky 5WF, take Pop 5LD. Heard him confess over the air recently that the reason he used that nickname was because it was easy to sign it on c.w., instance of Launce. Heard Rick 5GV telling Wally 5DF on 7 Mc. last Sunday that he was going to the zoo in the afternoon and was apprehensive as to whether he would be able to get out. Did Rick get out? Did Rick escape a fate worse than death? Read these interesting and entertaining Divisional notes next month and find out whether to take a bag of peanuts with you next time you visit him!

Had a short note from Alice Springs this week, from none other than Les 5UX, "Uncle Xray" to you, and he says that the bug has bitten again and that he is in the middle of a Geloso-8148, and it was all set off because he gave Bill 8EW a hand to operate his station at the second Alice Springs Show on 19th and 20th May. It was good public relations and was a huge success. He is sending a report on the show to "A.R." giving all details. He also mentions that Graham 3QZ arrived at Alice recently, complete with an 80 mx portable (Type 3) and as it was his XYL's birthday the next day, the 5UX's and the 3QZ's had a small celebration at the 5UX QTH. Nice work, Les, good to hear from you again, and knew the bug would get you in the end. I never nominated in which end!

John ex-5QL will be arriving in VK5 from G land for permanent residence in our fair State, having left the R.A.F. and become a civilian. He will live at Elizabeth and will take up his old call sign and add to the QRM. There must be something about the air in VK5, once you breathe it you can't live without it!! Eastern States please copy. Oh, I say the cutest things.

They say in VK5 that they have to shoot me to stop me, so I will beat the gun and say 73. 5PS (Pansy to you).

WESTERN AUSTRALIA

The last monthly meeting attracted quite a good attendance, and after some rather lengthy business, the members settled down to a most interesting lecture on "Mouth-to-Mouth Resuscitation," given by Mr. W. Williams, of the P.M.G. Technicians School. After a most interesting talk and a film showing the method, several members were noticed trying the procedure with the assistance of "Charlie" the mannequin.

With the lessening of activity on the higher bands, 80 mx and 40 mx have become quite

populated, many VK6s renewing QSOs with Eastern States and ZL. Conditions occasionally have been very peculiar, signals appearing and disappearing in very short times.

Some disturbance was caused on 80 mx one night by a signal which had speakers jumping out of enclosures and Amateurs rubbing their ears. After sundry antennas were switched out, it was found to be SM6BZQ/MM on the tanker "Hong Kong" somewhere in the Bight. He informed us he was using two 813s in the final modulated by a pair of 813s. Just as well there were no more of them about. Alan 6AB has acquired a secret weapon which he will probably use in self defence.

6XO is regularly heard on 80 as usual with Alan and some of his "gang". It appears that Katanning is a windy place to live in; what say Herb? VK6 Amateurs are appearing in out-of-the-way places. Almost DX in fact. A new call sign is 6DG in Port Hedland and of course Stan 6AH is still heard on Sunday morning from Wiluna, while Bill 6DX in Kalgoorlie, 6TK in Norseman and 6KJ in Albany are quite often heard on the lower bands. In fact we even hear that Jack 6BU is considering going underground to obtain a new angle of radiation. Better take that 4-watt job with you next time you go to the caves Jack.

Have not heard 6RX much on the lower bands lately, but you have no doubt been kept busy at night Bill. The doyen of VK6 Amateurs, 6AG, has been having a spell in hospital, probably in QSO with the nurses, but is back home again organising his new shack and looking very fit. At present Wally comes on the air with his 123 set. Skipper 6WS, the G.O.M. of VK6, is back on the air after some tx trouble and getting among the DX. We do not hear 6JM so often lately, but he puts in a good signal when he does appear, except when the power supply "bods" get mixed up with his aerial. Take care of that "marching girl" John.

Since t.v.i. has appeared in VK6 many of the fringe area chaps have had much trouble suppressing harmonics, perhaps 2ZL could give them a few hints. 6WL has not been heard so often from Bunbury although he has done more than most to t.v.i. proof his gear. We hope he overcomes it soon as he is missed on the bands. S.s.b. is the present topic of QSOs and some very good signals have been heard. I hope 6AB does not build his set too soon. When he does I will throw my rx away and open the window. Bob 6RG has been on s.s.b. lately with his super set and Ian 6CL is on his way with s.s.b. reduced carrier. Hope to hear you back soon Ian with your seeding, etc., finished.

The slow morse transmissions are still carried on by a few stalwarts but more operators are needed to make it easier for all. 6FH is the organiser but unfortunately is away from home every second week. 6GH does a stirring job with the news and manages to give a very interesting technical talk each Sunday morning. When this new shack (fy proof?) of Wally 6AG is finished, we hope to also hear Wal giving the news from his new QTH.

The Geraldton Amateurs have not been heard very often lately, but that may be due to conditions, local signals being hard to hear at times when VK2, 3, 5, and 7 are on the air. Which reminds me, Roy 6RY has been concentrating on the interstate mobile contacts; he works regularly into VK3 warts at about 5.30 in the evening, even one VK3 coming down the Mt. Lofty road in S.A.—90 watts s.s.b. mobile. Also 6NT on a No. 19 set with an 8 ft whip driving into a drive-in theatre at Victor Harbour. 6FF and 2ABB are two other active mobileers Roy has worked.

At the time of writing, it is with regret that we note another silent key—6HT. 73 for this month, 6ZCK per 6LS.

TASMANIA

At our May general meeting we were fortunate to have Paul 7ZAJ address us on transistor circuitry. He clearly demonstrated the transistor equivalent circuits for the better known valve circuits. Thank you, Paul, for such a down-to-earth lecture which could only be of help to us all. We will soon be welcoming Hugh 7DS as a metropolitan member.

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Hugh has been appointed to the staff of a very well known Government department with which Len 7LE has a working association. Merv 7CL has made his presence felt on the air on several occasions just recently and it could be that more QRM will occur in the Hobart area as a result. It is good to hear you Merv. Ken 7KA has been mobile marine again during the first week-end in June. Ted 7FJ has completed the erection of his quad antenna and hopes that conditions will improve enough soon to give it a thorough trial. Tom 7AL has at last received permission from the Clarence Commission to erect a workshop, which will in due course allow Tom to come back on the air, so we can only hope that construction is effected quickly. Charles 7CH has had his annual holidays about the end of May.

Band conditions generally have been particularly poor during May and in fact the 80 mx band at night time has been the only band to provide contacts. Generally, 80 mx has been very good indeed, with plenty of DX to be had, including KW6DF and KW6DG, CX1RY, COITK, JAIYL, VE6SZ and many more.

Our official Sunday morning broadcasts continue to be QRMed. We can only come to the conclusion that this interference is deliberate, because of its regular continuance. If it is not deliberate, then we seek the co-operation of Amateurs generally to keep 7146 kc. clear of interference from 1000 to 1030 hours, and 715 kc. clear from 1030 hours until the end of the intrastate round up.

Doug 7DW tells me he is making slow but some progress on his six-band mobile rig which we hope will be in service next summer. While talking about mobile work, the Fund-Raising Committee encourages you all to build up direction finding gear for either the 3.5 or 144 megacycle bands or both in readiness for next and ensuing summer activity, and while you are about it, why not build up a mobile rig as well? You will certainly have fun operating mobile.

At the June meeting of the Division, we were treated to three films on radio astronomy, all of which proved most interesting. In one film, we were delighted that our member, Dr. Grote Reber, was given a very honourable mention as a pioneer and present leader in this field. We were all the more delighted as the Doctor was in the audience.

The VK7 Division is seeking an Assistant Secretary to under-study Ken 7KA, who has definitely decided to relinquish the secretaryship at the end of this present financial year. Please volunteer, as Ken is only too happy to show you the ropes while still in office.

Merv 7CL has been heard on the bands again, we hope this is the beginning of considerable activity from you. Merv. The R.D. trophy was again handed to our President, Tom 7AL, by Jack 7JB, the Acting Chairman of the Federal Contest Committee. While on the subject, remember that the other Divisions are really making a determined effort this year to take the trophy away from us. It is up to you to ensure that we retain the trophy, get your gear ready for the Contest next month.

Jack 7JB is presently engrossed in the construction of a two-channel stereo unit, with 10 watts per channel. 73, Ian 7ZZ.

NORTH WESTERN ZONE

Time has slipped by, finding yours truly scratching to find something to write about once more. Firstly let me thank Max 7MX for helping me out in so ably compiling notes for the last couple of issues whilst I was attending to some local duties. You set me a hard task Max.

Our last meeting was held at the usual place and no less than 20 people put in an appearance. A welcome was extended to Athol Elliott who has recently obtained his A.O.C.P. and also to Ted 7EJ who was back on the coast on business and turned up at the meeting to get his "attendance" marks—keen what!

A nice letter was received from the Burnie Fire Brigade thanking the zone further for efforts put into their radio equipment.

It was announced that the meeting to be held on the 1st August would be the Annual Meeting and attendance of ALL members is requested. Put a circle round August 1 on your calendar.

The July meeting promises to be very interesting as Ken 7AI is going to lecture on the fundamentals of sideband reception and transmission; so don't forget that date, 4th July, you possible future sidebanders. The July meeting has also been earmarked as a night for a massive auction so let's hope some surplus gear is forthcoming.

Ken 7KH is now a regular inhabitant of 80 mx. I do believe he has access to a nice tape recorder of one at least of his emissions. Not often that you get back what you transmit! Ken! Charlie 7CF has been having troubles

with hot water circulation instead of r.f. for a change; I don't know whether link coupling would work there Charlie. S.w.l. Geoff Sharp is still receiving cards each meeting, so someone is listening chaps if we are not all on the air very regularly. I understand there is some activity in the zone with gear that might radiate signals on 2 mx, perhaps we'll break the inter-town barrier in that region of the spectrum before the year is out.

Did anyone come up with a satisfactory answer to Max's problem of the broken feeder? Perhaps link-coupling would work there Max.

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Advertisements under this heading will only be accepted from Institute Members who desire to dispose of equipment which is their own personal property. Copy must be received at P.O. Box 96, East Melbourne, C.2, Vic., by 28th of the month, and remittance must accompany the advertisement. Call signs are now permitted in Hamads. Dealers' advertisements not accepted in this column.

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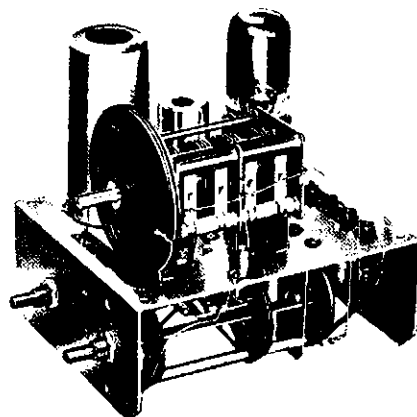
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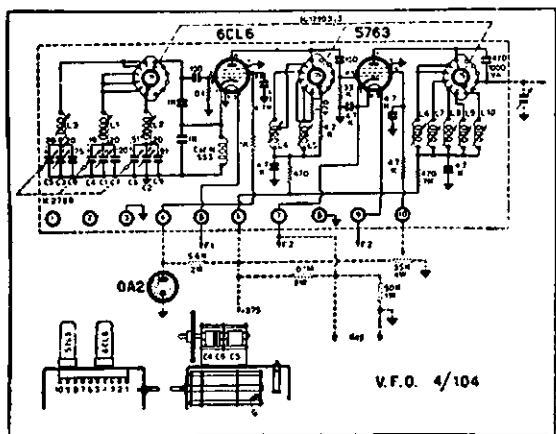
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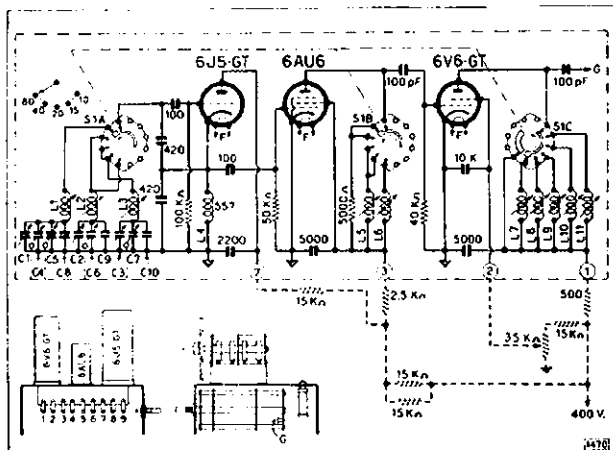


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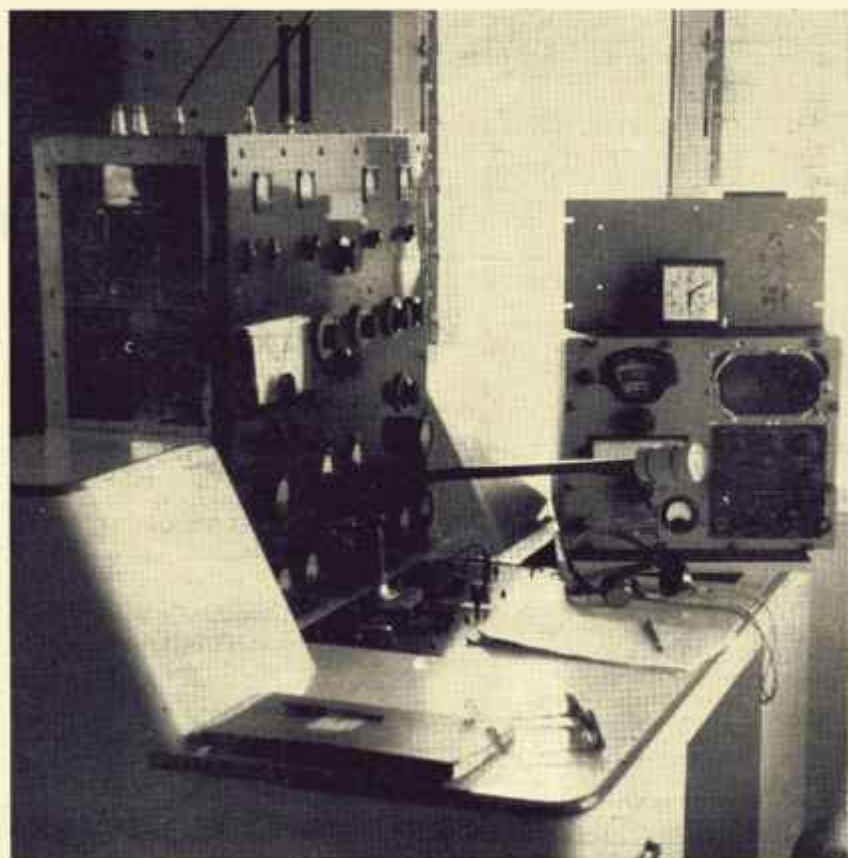
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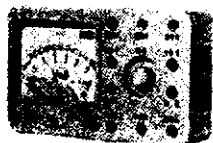
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VK6WI: Sundays at 0930 hours WAST, on 7146 Kc. Intrastate hook-ups taken on 7085 Kc.

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EDITORIAL

★

REMEMBRANCE DAY CONTEST

AUSTRALIANS don't have to be reminded that there was a World War II in which a great number of the men of our fair land lost their lives in defence of their country.

But some of us forget, as the years go by, that the freedom we enjoy today was because of the sacrifice of those men, some of whom were Amateurs. Although we respect the memory of all who paid the supreme sacrifice, it is during August every year that we particularly pay tribute to those of our Australian Amateur ranks who "died that we may live". It is in memory of them that the Wireless Institute of Australia organises its Remembrance Day Contest.

Each year brings to this Contest a larger and larger number of Amateurs, keen to participate in support of their State total and eager to accrue as many points as possible in the hope of being top scorer.

This popularity for the Remembrance Day Contest is well merited but do not let us be so carried away with the operating zeal that we forget why we have this Contest and are privileged to participate in it. Let us all—at least in the opening few minutes—have the courtesy of maintaining the two minutes silence after the conclusion of the opening speech, which, each year, has been spoken for us by notable members of the community in each State.

This year we are privileged to have our Contest opened by the Governor of New South Wales, His Excellency, Lieut.-General Sir Eric Woodward, K.C.M.G., C.B.E., D.S.O., and the Wireless Institute asks all Amateurs to listen for the fifteen minutes preceeding the opening of the Contest at 1800 hours E.A.S.T. on 12th August so that the words of Sir Eric Woodward will be heard and the two minutes silence observed.

In past years some Amateurs have commenced operation prematurely due, no doubt, to the fact that their watches and clocks were ahead of true time. This year we ask all those who read these words to check the time accurately so that the W.I.A. broadcasts in each State broadcasting the opening address of the Governor of N.S.W. will not have their transmissions spoiled.

This is a worthy Contest. If you haven't been in it before make sure of participating this year. If you haven't the time to operate for long—and many are in this position—then at least come on long enough to make those minimum contacts in order to submit a log.

They shall grow not old as we
that are left grow old,
Age shall not weary them nor the
years condemn,
At the going down of the sun and
in the morning
We will remember them.

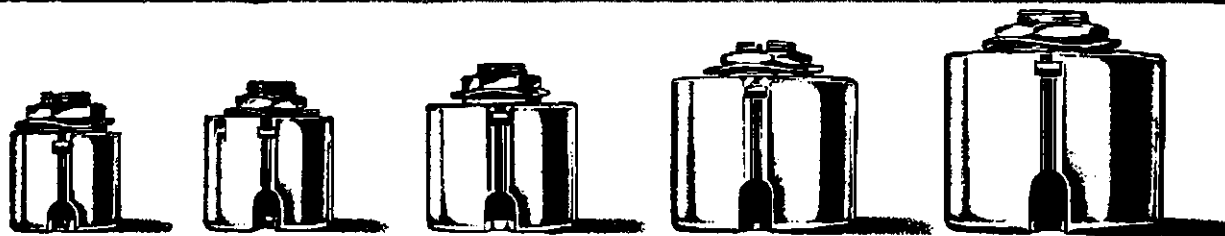
FEDERAL EXECUTIVE

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"SEE YOU, UP TWO"

C. G. HARVEY,* VK2AQU

TO an a.m. addict, such a request for QSY would generally achieve nothing. Whilst the heterodyne from adjacent channel stations would change in pitch, QRM would be reduced but little. A minimum QSL of 6 and probably 8 kc. would be necessary to provide a satisfactory channel.

Sidebanders, however, soon find how easy it is to slip out of a VOX roundtable for a few words on the side. Even in "kilowatt alley" a move of 3 kc. is generally sufficient to allow most W sidebanders to go their separate ways without intentional QRM.

The clue to success lies largely in the receiver, particularly in the slope factor of the i.f. passband.

Those of us who now frequent those parts of the Amateur spectrum where most stations have restricted their transmitter response to an upper limit of $3\frac{1}{2}$ kc., and rejected the carrier and one sideband, see little sense in allowing the receiver passband to exceed the same figure.

The bonus in improved signal-to-noise ratio, reduced QRM plus the improved channel availability, justify the small effort involved. In the debit side, most a.m. stations now sound poor unless they have ample audio in the lower 3 kc., and are free of f.m. C.w. of course is unaffected, once the technique of dropping interference off the edge of the passband is learned.

The graphs and comment which follow, summarise work with an old Hammerlund model RBG Super Pro. At the end of the experiment, VK2AQU was the happy owner of a more selective receiver than the current heart throb, the Drake 2A. As all the accompanying curves are drawn to the same scale, comparison with the Drake's response is easy. I wanted to equal or surpass 2.4 kc. 6 db. down, and 7 kc. wide 55 db. down. Fig. 6a shows that this succeeded, and the next few paragraphs will show that it was a relatively simple project.

The original passband of the Super Pro is shown in Fig. 1, and is recognised as being better than most. In fact the hardest part of this project was making up my mind to tear a perfectly good commercial filter to pieces!

PLOTTING A CURVE

To run curves like this, proceed as follows. Disable the local oscillator. Couple a stable sig. gen., such as the Bendix frequency meter, to the mixer grid through an attenuator, such as a 5K potentiometer, and if necessary, an isolating capacitor. The receiver S meter provides a handy means of observing the i.f. response, particularly where the initial calibration approximates 6 db. per S unit.

Now, with a.v.c. off and r.f.-i.f. gain about normal, swing the sig. gen. across the i.f. passband, adjusting the attenuator for S9 at the frequency which gives greatest gain and hence the highest S meter reading.

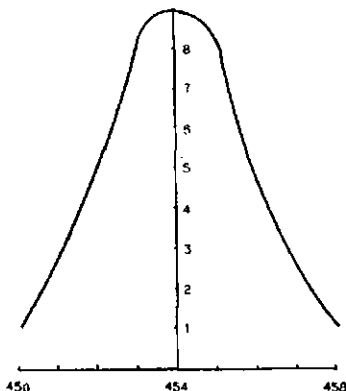


Fig. 1.

Now start with the sig. gen. above (or below) the passband, and record the frequencies which correspond to S meter readings of S1 to S9 progressively on both sides of the passband. Make sure you can repeat readings with reasonable accuracy before wasting time making plots!

After any adjustment in the i.f. stages likely to affect response, simply relocate the frequency which gives maximum response, set the S meter to S9 with the sig. gen. attenuator, and rerun the curve. This series took $1\frac{1}{2}$ inches of ball point pen!

CRYSTAL FILTER

The curve of Fig. 2a is typical of a simple crystal filter represented by the circuit of Fig. 2b. It was ideal in the pre-sideband era, particularly for c.w. reception. The curve (Fig. 2a) represents the second last selectivity position of the Super Pro. The last

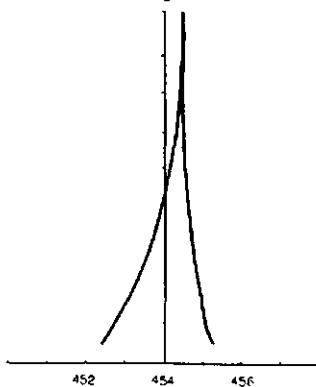


Fig. 2a.

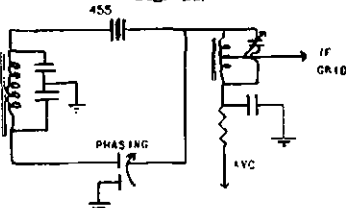


Fig. 2b.

position produces a curve which is just twice as sharp as this one! Coupled with an adjustable "notch" which can be used to "phase-out" heterodyne or c.w. QRM, it still finds favour, but not with sidebanders.

You can see that reception of upper sideband will be impeded and that although adjacent channel interference will be minimised, the response curve does nothing to help resolve intelligence from random signals in a 300 c.p.s. to 3 kc. spectrum.

Once the truth of this sinks in, it is not quite so hard to get to work with the side-cutters!

An enormous improvement in selectivity and slope factor results from adding an extra crystal, and using the simple lattice-type filter circuit shown in Fig. 3b.

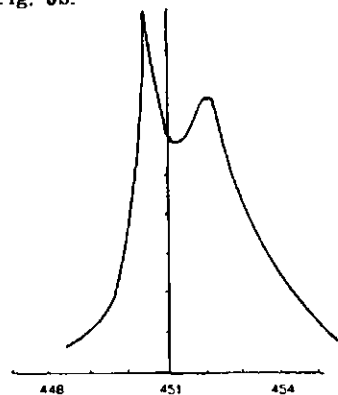


Fig. 3a.

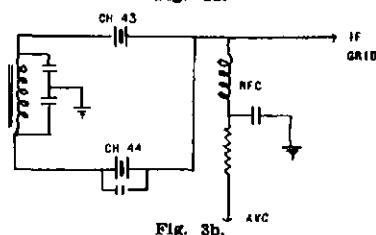


Fig. 3b.

SIMPLE LATTICE FILTER

Any xtal spacing can be used, but the commercial channel spacing of 1.8 kc. is ideal and suitable crystals are available for a song. Even importing them from U.K. at 4/6 each won't break the bank, who will supply the appropriate draft on request. No licence is required for such an import, and the address of several suppliers can be found in "Wireless World".

You can estimate the frequencies and channel numbers from the graphs. For those with 455 kc. i.f.'s the nearest channel is 46, which can be coupled with 45 or 47 as desired. If you are keen enough, a few rubs with carborundum will shift any l.f. crystal high by 1.8 kc., and you are in business without having to wait for the FT241A series. The i.f.'s. would be aligned

* R.A.A.F., Glenbrook, N.S.W.

carefully to the mid-frequency between the crystals.

Our first response curve was a disappointment, looking nothing much like the nice theoretical curves in the handbooks. However, as this was an experimental project, trial and error methods soon showed that the loss of amplitude on the high frequency crystal peak was due to too much capacitance across the h.f. crystal. This was the result of including the original filter phasing capacitor with which we had hoped to alter the shape of the skirt, less drastically than Fig. 1 however!

Too much C across the i.f. crystal will also widen the skirt, but it also has the undesirable effect of increasing the dip in response between crystal peaks.

The excessive rise in response outside the crystal frequencies was thought to be due to the non resonant, and hence low Q, nature of the r.f. choke used as a load. A tuned load (Fig. 4b) was substituted, from the original filter, which had the grid tapped down the coil for better matching. This is not necessary, and results with the grid connected to the top of the load were substantially similar.

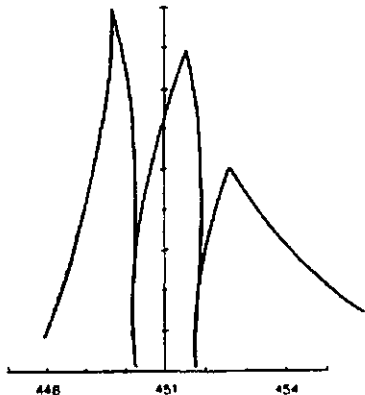


Fig. 4a.

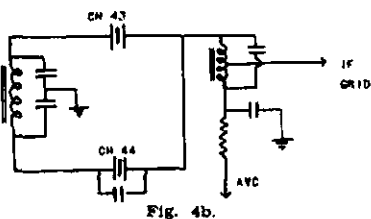


Fig. 4b.

The graph of Fig. 4a is intended to show the dual effects of improper alignment and frequency drift. You can see that the filter load is peaked 3 kc. off the desired frequency, and that the effect of too much stray C is still present.

The sag in the top of the response curve is, according to the book, best overcome by attention to the LC ratio of the secondary of the input transformer. But this was almost an impossibility with the Pro. In fact, at this stage I nearly abandoned the project to revert to the tried and trusted Q5-er arrangement. Fortunately, my inquisitiveness prevailed and a read through the appropriate sections of the A.R.R.L. and "CQ" Sideband Handbooks restored confidence by providing some clues as to possible courses of action.

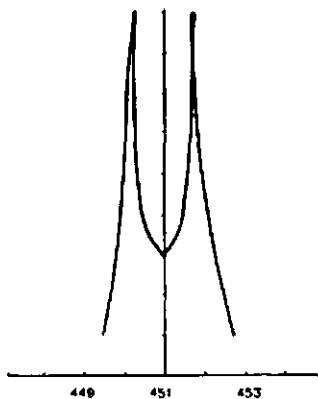


Fig. 5a.

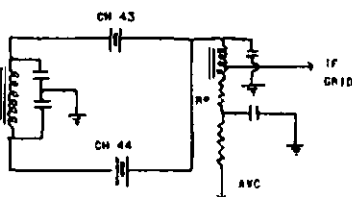


Fig. 5b.

A determined effort was made to reduce capacitance loading of the crystals. Unfortunately, this involved deletion of the old phasing capacitor and hence loss of variable selectivity. However, the sides of the passband steepened significantly and raised morale considerably.

A further brain wave suggested that the Q of the load might be significant in shaping the response in the centre of the curve, which should be nearly flat with not more than about 5 db. of sag.

Resistor R (a 100 ohm carbon) was added, as shown in Fig. 5b, to test the hunch.

Only 10 minutes work was needed after taking the first curve, to establish the resistance value which best filled the dip at 451 kc. There was no need to run a new curve for each change of value, it being sufficient to set the Bendix to 451 kc. and vary R until the S meter approached S9. After the nearest 20% tolerance value was found to achieve this, the i.f. was carefully aligned to the mid frequency, with the happy result shown in Fig. 5a.

This approach seemed preferable to wrecking a commercial i.f. to provide the right LC ratio using a capacitive centre tap which could still resonate the transformer.

FINAL SET-UP

The final passband is shown in Fig. 6a, and clearly justifies the small effort and expense involved. The band now seems half as crowded and even when conditions are wide open, adjacent channel s.s.b. QRM is of little significance. A move of 2 kc. away from a "round-table" has been found sufficient to allow 100% copy without arousing comment from the original group, at least from those with receivers in the modern classification.

The curves here do not show the inevitable side lobes, which are well below the -55 db. baseline, but which become significant where conditions

permit very strong signals, or if one lives close to another Amateur who uses the same band.

Theoretically these lobes are reduced by trimming the i.f. crystal with $\frac{1}{2}$ -2 pF., but after my experience with the effects of stray C, I decided to use the brute force method offered by notches from crystals paralleled across the filter 1.8 and 3.6 kc. on each side of the passband (Fig. 6b). These should take care of the strong locals, or those 50 db. over S9 stations that one hears about when the "pipeline" is open. No significant difference will be seen in the response curve above -50 db. if these crystals are omitted.

The books recommend two stages of lattice filters rather than one, but personally, after experience with this simple arrangement, I feel that this is not yet necessary in VK.

Incidentally, this filter does not reduce the available stage gain, and in fact care may have to be taken that the i.f. strip does not regenerate! If it does, apply the normal cures, bypassing to cathode rather than ground, and adding grid stoppers to the touchy stages.

Naturally, with such a passband, you won't want to be bothered with drift, so while the receiver is out of its case, some attention to stabilisation of the local and beat oscillator h.t. at the lowest possible voltage would be desirable. Increased bandwidth is often easy to obtain and well worth the trouble. My old Super Pro, with its converter, now has three dial divisions per kc. on 20 metres, and if one is so inclined, s.s.b. DX can be tuned-in with the big toe (Summer only).

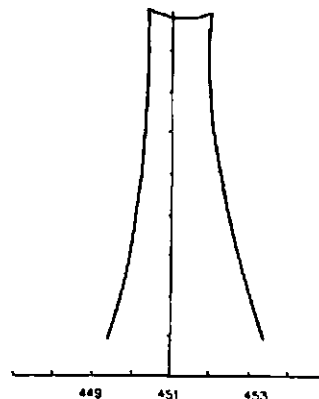


Fig. 6a.

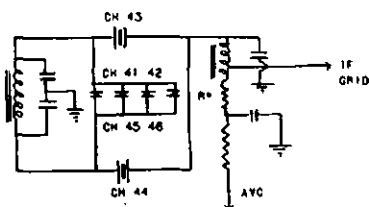


Fig. 6b.

Crystal filters only seem complicated and mysterious. A few experiments such as this series, soon cuts them down to size. A week-end's work on a project like this will do wonders for morale and quickly remove one cause of unnecessary frustration to yourself and others. Why not have a go? ●

HOW IMPORTANT IS THE S.W.R.?

BY "WUN GEE KEW"

It is, I suppose, a good thing that Amateurs tend to be perfectionists. It is because they are, that the best Amateur stations contain Ham-designed and built equipment which can compare with the best and most expensive professional equipment.

There are, however, many things in which this expertise can be taken too far, and one of them is to my mind in the constant striving after feeder line standing wave ratios as near unity as possible.

One well-known VK, for instance, spent many hours of hard work during which he sustained a bad fall from the top of his lattice tower, in an attempt to improve upon a standing wave ratio of 1.15!

As we shall see from the following mathematics (quite elementary ones, by the way), he might have saved himself the effort, as the gain he achieved by getting the s.w.r. down to unity from his already excellent figure was infinitesimal!

As most Hams know, the s.w.r. of a transmission line terminated by a pure resistance (which most antennae are at their resonant frequency) is calculated from the following formula:

$$\text{S.W.R.} = Z_r \div Z_o$$

or its reciprocal

$Z_o \div Z_r$
where Z_r is the load impedance of the aerial and Z_o the characteristic impedance of the feeder line.

If this ratio is anything else than unity, it means that all the energy sent down the line is not being absorbed by the antenna, and that some of it is being reflected back to the transmitter.

Having found out the s.w.r. on the feeder, it is easy to obtain the coefficient of reflection and from that the percentage of the total current that is being wastefully reflected back to the transmitter.

To obtain the coefficient of reflection of an antenna/feeder combination, we use the following formula:

$$\text{Coefficient of reflection (K)} = (\text{S.W.R.} - 1) \div (\text{S.W.R.} + 1)$$

and to turn this into a percentage of the current that is being reflected, we need only multiply K by 100.

Let's take a fairly common example—that of a 75 ohm antenna being fed with 52 ohm co-axial. The s.w.r. will be $75 \div 52$, or 1.44 approximately. Putting this figure into the second equation we obtain a K of 0.184. 18.4% of the current delivered to the antenna will be reflected unused by it.

At this point the purists say, "What did we tell you? Nearly 20% loss, and you are trying to tell us it doesn't matter!"

What they are forgetting is that nearly 20% of the current is being reflected, which is not at all the same thing as 20% of the power. The relationship $W = I^2R$ tells us that power is proportional not to the current, but to the square of the current; and this puts a very different complexion on the matter.

In the case we have taken as an example, let's assume that 1 ampere of r.f. was being delivered to the 52 ohm line by the transmitter. 18.4% of it, or 0.184 ampere, is being reflected. By using the $W = I^2R$ formula we find this represents $(0.184)^2 \times 52$, or 1.76 watts lost out of a total of 12×52 , or 52 watts actually "going up the spout". This is less than 3.5% of the power in the circuit.

In decibel notation, therefore, the loss with this arrangement is $10 \log 52 \div 50.24$, or 0.15 db.

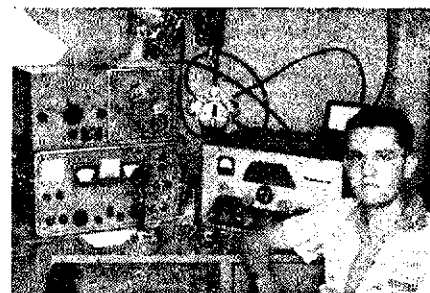
While I would like to see a bit better s.w.r. than 1.44, the fact remains that it results in an insignificant power loss. Taking it back into terms of percentage, no engineer would seriously suggest that a machine of 96.6% efficiency was exactly a failure!

Working through the same calculations for our VK friend and his s.w.r. of 1.15, we find that his antenna and feeder had a power transfer efficiency of 99.5%, from which it is immediately apparent that his praiseworthy attempt to reduce it to unity, while being a fine effort from a perfectionist point of view, was certainly not worth risking a broken neck for!

For ease of reference when you have found the s.w.r. on your feeder, the following table will give you the power loss in percentage and also in terms of dbs.:

S.W.R.	Percentage Power Loss	Decibel Power Loss
1 : 1	0	0
1.25 : 1	1.2	0.02
1.5 : 1	4	0.18
1.75 : 1	7.5	0.3
2 : 1	11	0.5
2.5 : 1	18.5	0.9
3 : 1	25	1.3
4 : 1	36	1.9

From this it appears that if your s.w.r. is better than 2 : 1 you have little to worry about! Naturally, the actual losses will be a little higher than those listed, as ohmic losses additional to those purely due to loss by reflection must be taken into account; but with feeders of average quality it is unlikely that the figures realised will be inferior to those shown in the table by more than 5% or so.



Many Australian Amateurs have QSO'd Mickey YV5AIP, who is seen here at the operating desk with his equipment.

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TRANSISTOR RADIOS*

AN INTRODUCTORY SERIES—PART ONE

PRELIMINARY SURVEY

In order to set the scene for this series of articles, it will be useful to recall first of all, that the transistor radio now covers a wide range of types, from highly miniaturised portables, some with short wave bands, battery operated cordless mantel receivers for home use, car radio receivers, and soon, transistorised television sets.

VARIETIES OF DESIGN

One of the most obvious trends in the design of transistor radios has been towards the production of smaller and smaller receivers, thus increasing the difficulty of access to components. Fault finding becomes more difficult and improved servicing techniques must be employed.

Fortunately many receivers (e.g. cordless home receivers) are considerably larger and the technician may obtain experience on this type of receiver prior to dealing with the problems of miniaturisation. The larger receiver may be expected to provide an output of 1w. or so and calls for the use of a battery of greater capacity.

The quality of reproduction is improved by a larger loudspeaker (e.g. 8" x 5") and cabinet. Such receivers have all the advantages of the transistorable and, due to the absence of mains leads, are cordless. They have a particular advantage, of course, for areas having no mains supply, because of the low battery consumption.

Some currently available models may have a socket which allows a car-radio aerial to be used instead of the internal ferrite aerial. In this way the performance of the receiver when used in the family car can be improved, thus increasing the general-purpose appeal of the set. A further development of the same idea has led to models which, when in normal use, appear to be a car-radio operating from the car battery; when withdrawn from the fittings this receiver becomes fully portable, and operates from its own internal battery.

THE TRANSISTOR

In the most general terms, it can be said that the radio receiver requires amplifying and detecting devices which will operate at various frequencies. The circuit designer nowadays thinks in terms of two completely different types of device for providing amplification. Some general considerations remain the same, or almost the same, whether he intends to use thermionic valves or transistors. But in many respects the two approaches are completely different, and it is instructive to notice how often, if one can consider the valves in one way, it may be necessary to adopt an opposite viewpoint for the transistor.

One combination of characteristics—that of the valve—are thus being exchanged for a different combination—that of the transistor. The approach

● The present article is the first of a series on transistor portable receivers and cordless radios and particular attention will be given to the problems of servicing these devices. The treatment will be as simple and straightforward as possible in order that maximum benefit may be derived by those who are required to maintain transistorised radio equipment.

required for the transistor will be described in future articles as will its advantages and the way in which it should be handled. The ultimate aim is that those new to transistor techniques shall feel equally at home with transistors or valves.

PRINTED WIRING

Future articles will be devoted entirely to the question of printed wiring with particular reference to transistor receivers. The introduction of printed wiring at roughly the same time as the transistor has led to the production of highly compact personal portables. As many technicians will have had neither the time nor the opportunity to find out for themselves the best ways of repairing faults in this kind of wiring, the aim will be to pass on some of the techniques of those who have worked extensively on printed panels.

One point in favour of printed wiring is that, as all the connections are made in one plane, it is moderately easy to represent these connections diagrammatically in the service manual or service sheet. The maximum use should be made of this information when it is available.

THE CIRCUIT DIAGRAM

Fault finding will be less difficult for technicians having a good general knowledge of basic transistor circuitry and in the articles to follow this will be emphasised.

FAULT FINDING

Fault-finding procedures will be described in later articles in the series.

The majority of set failures will result in complete break-down. These are the easiest to service because the fault can be traced to an open circuit or a short circuit. Intermittent faults present more difficulty, as do sets subject to low output or excessive distortion.

BATTERY REPLACEMENT

Of the transistor receivers brought in for service, the great majority will only need a battery replacement. This does not, strictly speaking, count as servicing, though checking the state of the batteries is an essential preliminary to starting any job which has been brought in for repair.

Whilst locally produced transistor receivers are designed specifically to use local standard type dry batteries and the dry battery manufacturers are producing the more common type used in imported receivers, some imported receivers will still not accommodate local batteries and the serviceman is confronted with a physical problem of endeavouring to accommodate the largest capacity battery as is practicable.

A rundown battery may be the cause of a variety of complaints of poor performance. To safeguard against this occurrence, the set should be allowed to operate for some time before checking the battery voltage. This simple precaution will soon weed out those cells which have been able to recover sufficiently to give a respectable reading when first switching on.

Although usually the rate of deterioration of each cell is consistent where individual dry cells are used and it is sensible to replace all cells.

Set design policies on types of dry battery, measurement and anticipated battery life relative to receiver performance will be discussed in Part Two.

(To be continued)



F.C.C. Announces Amended Results— VK3ARZ WINS THE ROSS HULL V.H.F. CONTEST

The F.C.C. advises that it has reviewed the results of the Ross Hull V.h.f. Contest announced in the June issue of "Amateur Radio" following a re-interpretation of the Rule dealing with the claiming of bonus points in Section B.

The revised results place VK3ARZ as winner of the Ross Hull Trophy in place of VK5GG, who, however, retains the award for the VK5 Division in Section B with 465 points.

A gremlin in the tabulation of the results caused VK5ZDI to be placed in Section A instead of Section B, where he would not gain an award.

The revised score shows that VK4ZBZ is the winner for Section B with 657 points.

F.C.C. regrets the need for revision and hopes no one will be embarrassed by the amendment.



VK-ZL CONTEST

PHONE: 30th SEPT. and 1st OCT.
C.W.: 7th OCT. and 8th OCT.
1000 hrs. GMT to 1000 hrs. GMT

* Reprinted from "Mullard Outlook" (Aust. edition), Vol. 4, No. 1, 1961.

TWO-WAY RADIO OFFICIALLY HANDED OVER TO BURNIE FIRE BRIGADE

The Burnie Fire Brigade was officially presented with a two-way radio installation by the President (Mr. Max Ives, VK7MX) of the North Western Zone of the Tasmanian Division of the W.I.A. recently. The presentation took place at the Brigade's headquarters.

Mr. Harold Tattersall, Acting Chairman of the Brigade Board, introduced the speakers.

Cr. L. R. Rigney, who deputised for the Warden, spoke of the interest the Council had in the Brigade. He apologised for the absence of the Warden (Cr. W. T. Young).

Mr. Tattersall then introduced Mr. Ives, who outlined the composition and activities of the Wireless Institute of Australia. He said it consisted of Radio Amateurs and Associate members interested in radio.

The Amateurs built and equipped their own stations to experiment in the fields of radio and electronics.

"Many valuable discoveries have been made by Radio Amateurs from time to time, and they do valuable work in the provision of communications in times of emergency, such as bush fires and floods," he said.

In officially handing over the radio apparatus to the Brigade, Mr. Ives said he hoped it would give long and faithful service.



A demonstration was then given of two-way communication between the Brigade vehicles and headquarters.

The Chief Officer of the Brigade (Mr. R. W. Beach) thanked the Institute, the public and local organisations who contributed money or gave their services in helping to obtain the radio.

Other speakers included Mr. H. McElwee, a member of the Fire Brigades Commission; Mr. J. Cornelius, General Superintendent of A.P.P.M. Ltd.; and Mr. L. Maxfield, Chief Officer of the Devonport Fire Brigade.

Mr. Maxfield congratulated the Brigade on installing the unit and said it would be of great benefit.

The official handing over recently of a two-way radio installation to the Burnie Fire Brigade. From left: Mr. Max Ives, VK7MX (President of the North West Zone of the Tasmanian Division of the W.I.A., who handed the installation over), Mr. Reg Beach (Chief Officer of the Brigade), and Mr. H. Tattersall (Acting Chairman of the Burnie Fire Brigade Board).

(Photograph by courtesy of "The Advocate.")

REMEMBRANCE DAY CONTEST

12th and 13th AUGUST, 1961

1800 hours to 1759 hours E.A.S.T.

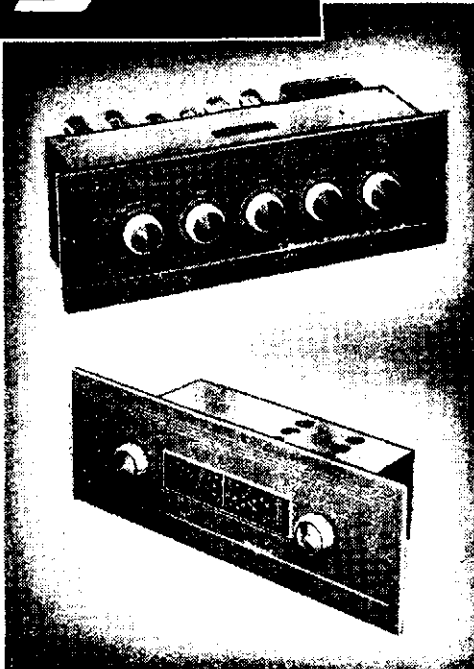


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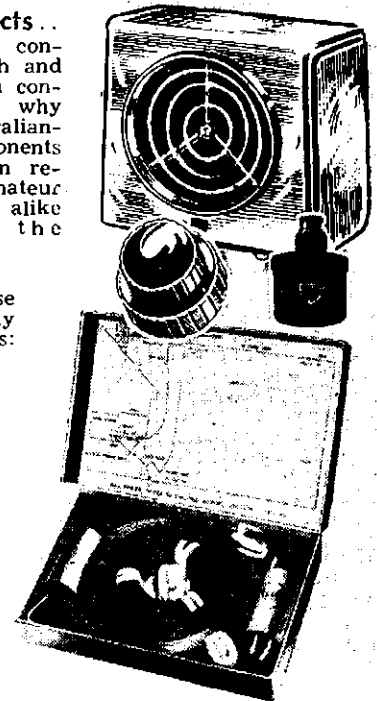
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VK-ZL DX CONTEST, 1961

N.Z.A.R.T. and W.I.A., the National Amateur Associations in New Zealand and Australia, invite world-wide participation in this year's VK-ZL DX Contest.

Objects: For the world to contact VK and ZL stations and vice versa.

When: Phone—24 hours from 1000 G.M.T., Saturday, 30th September, to 1000 hours G.M.T., Sunday, 1st October.

C.w.: 24 hours from 1000 G.M.T., Saturday, 7th October, to 1000 hours G.M.T., Sunday, 8th October.

Duration: For all contestants is 24 hours.

RULES

1. There shall be three main sections to the Contest—

- Transmitting phone.
- Transmitting c.w.
- Receiving—phone and c.w.

2. The Contest is open to all licensed Amateur transmitting stations in any part of the world. No prior entry need be made. Mobile marine or other non land-based stations are not permitted to enter the Contest.

3. All Amateur frequency bands may be used, but no cross band operating is permitted.

4. C.w. will be used for the second week-end, and phone during the first week-end. Stations entering for both sections must submit separate logs.

5. Only one contact per band is permitted with any one station for contest purposes.

6. Only one licensed Amateur is permitted to operate any one station under the owner's call sign. Should two or more operate any particular station, each will be considered a competitor, and must submit a separate log under his own call sign.

7. Entrants must operate within the terms of their licences.

8. **Cyphers:** Before points can be claimed for a contact, serial numbers must be exchanged and acknowledged. The serial number of five or six figures will be made up of the RS (telephony) or RST (c.w.) report plus three figures which may begin with any number between 001 and 100 for the first contact, and which will increase in value by one for each successive contact, e.g. if the number chosen for the first contact is 053, then the second must be 054, followed by 055, 056, etc. If any contestant reaches 999, he will start again from 001.

9. Scoring:

(a) **Overseas Stations:** One point will be scored for each contact on a specified band with any VK or ZL district. The final score will be derived by multiplying the total contacts on all bands

by the total number of VK and ZL districts worked on all bands. These are ZL1, 2, 3, 4, 5; VK1, 2, 3, 4, 5, 6, 7, 8, 9, 0.

(b) **VK and ZL Stations:** Five points for each contact on a specific band and in addition, for each new country worked on that band, bonus points on the following scale with be added—

1st contact—	50 points
2nd	" 40 "
3rd	" 30 "
4th	" 20 "
5th	" 10 "

For this purpose the A.R.R.L. countries list will be used with the exception that each call area in the U.S.A. will count as a scoring area.

10. Logs:

(A) Overseas Stations—

(a) Must show date, time in G.M.T., call sign contacted, band used, serial number sent, serial number received. **Underline** each new VK and ZL district when contacted and use **separate log for each band used.**

(b) Summary sheet to show: Call sign, name and address (please use **BLOCK LETTERS**), details of transmitter, etc., **total score** by showing total of districts worked on all bands and total contacts on all bands. (Districts multiplied by contacts equals total score.) Sign a declaration that all rules were observed.

(B) VK and ZL Stations—

(a) Must show date, time in G.M.T., call sign of station contacted, band used, serial number sent, serial number received, contact points, bonus points. Use a **separate log for each band.**

(b) Summary sheet to show call sign, name and address in **BLOCK LETTERS** and **score for each band** by adding contact and bonus points for that band and **total score** by adding scores together. Details of equipment used—transmitter, receiver, etc., and power.

11. Declaration to be attached to all logs: "I hereby certify that I have operated in accordance with the rules and spirit of the Contest."

12. The right is reserved to disqualify any entrant who, during the Contest, has not observed regulations or who has consistently departed from the accepted code of operating ethics.

13. The ruling of the Federal Contest Committee, W.I.A., will be final.

14. **Awards:** (a) **VK-ZL Stations:** The W.I.A. will award certificates to the top scorer on each band and the top scorer in each VK and ZL district. Additional certificates may be awarded depending on the number of logs received.

(b) **Overseas Stations:** Certificate to the top scorer in each scoring area. Additional certificates may be awarded depending on the number of logs received, e.g. to high scorers on different bands and place winners.

15. Entries must be postmarked not later than one month after the close of the Contest, and addressed to **W.I.A., Federal Contest Committee, G.P.O. Box 851J, Hobart, Tasmania.**

RECEIVING SECTION

1. The rules are the same as for the transmitting section but it is open to all members of any S.w.I. Society in the world. No transmitting station is permitted to enter this section.

2. The Contest times and logging of stations on each band per week-end are as for the transmitting section.

3. To count for points, logs will take the same form as for the transmitting section but will omit the serial number received. Logs must show the call sign of the station heard (instead of worked), the number sent by it, and the call sign of the station being called. Scoring will be on the same basis as for transmitting stations. It is not sufficient to log a CQ.

4. VK receiving stations may log overseas stations and ZL stations, while ZL receiving stations may log overseas stations and VK stations.

5. Certificates will be awarded to the highest scorers on the same basis as for transmitting stations.

REMEMBRANCE DAY CONTEST

12th and 13th AUGUST, 1961

1800 hours to 1759 hours E.A.S.T.

FOURTH JAMBOREE-ON-THE-AIR

21st and 22nd OCT. '61

All Radio Amateurs with a past or present association with the Boy Scout Movement are invited to take part in this event. Hams in over 60 countries will be co-operating with Scout Groups and endeavouring to work as many other stations as possible.

Last year was the first time that Victoria made an organised effort, and the results were very satisfactory. A total of 35 stations represented 46 Scout Groups, and 354 members of the Movement visited these stations. Well over 300 Group to Group contacts were made in all States of Australia and many overseas countries, by the Victorian stations. It is hoped that the interest shown will mean a greater participation this year.

The Victorian Branch of the Boy Scouts Association has again appointed VK3AGD, John Woodburn, of Dunkeld, as State Co-ordinator, and all Scout Groups are being circulated with all details and copy of log sheet to be used.

All interested Amateurs are asked to get in touch with the nearest Scout Group and offer their services.

Assistant Co-ordinators are to be appointed soon for the various Zones to help Amateurs who are willing to take part. So far VK3AUL (North Eastern Zone) and VK3ARL (Eastern Melbourne Suburbs) have accepted appointment. It is hoped to have a full list in Sept. "A.R."

Here is a golden opportunity for Amateurs to introduce our hobby to a great number of young people who are of a very impressionable age.

WANTED!

ARTICLES

Can you write an article for "Amateur Radio"? How about one for Hints and Kinks?

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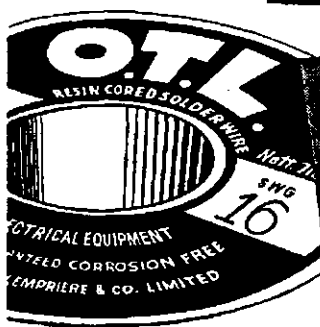
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PREDICTION CHART, AUG. '61

Mc.	E. AUSTRALIA — W. EUROPE S.R.	Mc.
45	0 2 4 6 8 10 12 14 16 18 20 22 24	45
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0	E. AUSTRALIA — W. EUROPE L.R.	0
45	2 4 6 8 10 12 14 16 18 20 22 24	45
28		28
21		21
14		14
7		7
0	E. AUSTRALIA — MEDITERRANEAN	0
45	2 4 6 8 10 12 14 16 18 20 22 24	45
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7		7
0	E. AUSTRALIA — N.W. U.S.A.	0
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0	E. AUSTRALIA — N.E. U.S.A. S.R.	0
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0	E. AUSTRALIA — N.E. U.S.A. L.R.	0
45	2 4 6 8 10 12 14 16 18 20 22 24	45
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14		14
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0	E. AUSTRALIA — CENTRAL AMERICA	0
45	2 4 6 8 10 12 14 16 18 20 22 24	45
28		28
21		21
14		14
7		7
0	E. AUSTRALIA — S. AFRICA	0
45	2 4 6 8 10 12 14 16 18 20 22 24	45
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0	E. AUSTRALIA — FAR EAST	0
45	2 4 6 8 10 12 14 16 18 20 22 24	45
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0	W. AUSTRALIA — W. EUROPE	0
45	2 4 6 8 10 12 14 16 18 20 22 24	45
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14		14
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45	2 4 6 8 10 12 14 16 18 20 22 24	45
28		28
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14		14
7		7
0	W. AUSTRALIA — FAR EAST	0
45	2 4 6 8 10 12 14 16 18 20 22 24	45
28		28
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14		14
7		7

SIDEBAND

Bud Pounsett, VK2AQJ
6 Alice Street,
Queanbeyan, N.S.W.

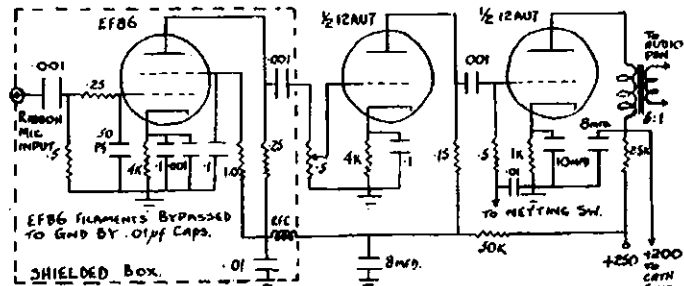
VK2ON TRANSMITTER (Part 3)

Again this month we have some further information on Lindsay's interesting design.

The Balanced Modulator

This part of the s.s.b. exciter enables generation of a single sideband by the combination of two r.f. phases separated 90 degrees with two audio phases 90 degrees apart.

Simplicity is the keynote. The r.f. phase-shift network designed by Lester ZL2AAX is used—it cannot be improved. It consists of a 175 pF. silvered mica condenser and half-watt 98 ohm resistor, that is for a 9 meg. frequency. These should be accurate to 1 per cent. for best results. However, if the r.f. voltages at the moving arms of each balance pot are not equal, a slight adjustment in value of one of these two items is in order. An R-C bridge and a half dozen resistors enable one to select the correct value.



The VK2ON Speech Amplifier (above) and Balanced Modulator (right).

The twin-coil system does give good results but is a bit tricky in adjustment. The germanium diodes are matched GD12s and give a very good performance.

The carrier insertion pot. is used to facilitate tuning-up and to produce a.m. Normally this control is at maximum (10,000 ohms). Carrier insertion by small unbalancing voltage applied to point X is used for netting purposes, but this system does not work well with applied modulation, tending to be unstable. The 2 µF. cathode coupling condensers are tiny transistor-type 12 volt working types. It is desirable to select four matched 1,000 ohm resistors here, but an unbalance will not greatly affect the sideband suppression.

Audio Amplifier

This three-stage design gives sufficient gain from a ribbon microphone to deliver about one volt at each cathode follower. Remember there is a loss of 5-10 times in the audio p.s.n. About 10-15 volts output from the step-down transformer means 50-70 volts at the primary and plus 200 volts to the half 12AU7 is necessary. The pre-amp. has the input decoupled for r.f., and disc ceramic 0.01 µF. condensers are used at each heater pin and the cathode. A shielded-box around the valve socket and sub-chassis components is desirable here.

The low-frequency attenuation may seem severe to some folks but this circuit goes well with the ribbon microphone. This type of microphone exaggerates the low frequencies when used with close talking. The grid-coupling and cathode by-pass condensers are 0.001 and 0.1 µF. respectively, except for the third stage cathode. The voice quality with this type microphone, audio amp., and his voice (!!) is reputed to be very natural. It is possible that the present arrangement would not suit all voices. The audio response from the microphone input to the input of audio p.s.n. gives the following figures. With equal inputs at the various frequencies, outputs are as follows:

100 cycles 0	800 cycles 0.8v.
200 " 0.05v.	1100 " 1.0v.
300 " 0.2v.	2000 " 1.4v.
400 " 0.3v.	3000 " 1.6v.
500 " 0.5v.	

A perfectionist would include a 3,000 cycle cut-off filter, but as very few young ladies use the microphone here, I have not bothered about this item.

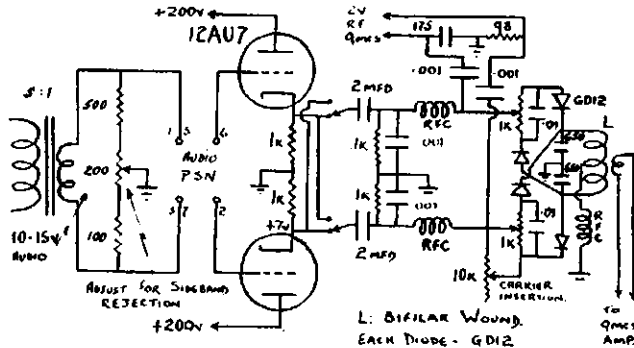
Next month it is hoped to describe the 9 meg. oscillator, amplifier, and first linear stages.

WILKES, ANTARCTICA

If you are worried about your antenna staying up this winter, imagine how the chaps down there on the Great White Continent fair. The fellows at Wilkes Base have the problem solved, however, and use steel poles, very well guyed, with copper-clad steel wire dipoles strung between them. The Americans, who jointly operate Wilkes with the Australians, were, until recently, using a commercial beam of very high repute. In May along came a 136 m.p.h. wind—the manufacturer would not even recognise the array!

The Australian shack has quite a few operators and the station changes its call sign according to the operator. Here are the call signs and the operators: VK0VK—Steve, VK0TC—Tom; VK0RT—Ray; VK0WE—Bill; VK0EB—Bill; VK0EH—Eddie; VK0JB—John.

The last two operators are United States citizens and only use the station occasionally. The equipment in use is a 75A4 receiver and a KWS1, modified to operate at 150 watts input.



ERRATA

In the circuit diagram of the VK2ON control circuit appearing in July "A.R." please note that the netting switch has been incorrectly drawn. The ground connection should be made when the switch is "OFF" so that the cut-off bias to the speech amplifier is removed. My apologies to anyone who may have been misled.

CANADIAN-AUSTRALIAN

If you come across VE6VK in the "new" part of the twenty metre band you will no doubt discover that the call sign has quite some significance. Russ spent the earlier part of his life in New South Wales where his father was Post Master at several centres. He served with the Royal Australian Air Force during World War 2. He lives in Edmonton now, a city known to many Australians who trained under the Empire Air Training Scheme.

14,100-14,140 Kc.

This portion of the favourite DX band is becoming increasingly populated with many stations from all parts of the world and the W/K gang are beginning to listen there for calls. Some of that exotic DX that seemed to vanish with the American "invasion" of 14,300-14,350 kc. territory has appeared on the lower frequency band and much better contacts have resulted. To work U.S. stations, a successful procedure to adopt is to call CQ in the 14,100-14,140 kc. band and indicate the frequency on which the U.S. station should reply.

R.D. CONTEST

August is R.D. Contest month, so I hope you are going to participate. Here is our opportunity to demonstrate the use of VOX to minimise calling and make for faster break-in operation. I would suggest that a.m. stations zero-beat precisely to the s.b. station and take advantage of the VOX facilities that most s.s.b. stations have. All that you need do, is transmit over the s.b. station's "CQ RD" call, and 9 times out of 10, the sidebander will hear your carrier come on before you even start calling him. Keep that break-in call very short, please.



"Come now Inspector, what gives you the idea I was exceeding the legal power limit?"

W.I.A. FEDERAL PRESIDENT'S ANNUAL REPORT, 1960-61

It is again my pleasure to present the President's annual report on the activities of the Amateur Service and the work of the Wireless Institute of Australia over the past year.

About the time of my last annual report the Geneva Conference had concluded and Australian Amateurs had voiced their protests concerning sections of the Geneva Frequency Table which, if implemented, would have further restricted some of the bands allocated to the Amateur Service; bands which it was considered had already been reduced to an impracticable minimum in some parts of the spectrum, and were dangerously close to being obliterated in other parts.

By the valuable assistance rendered to the Institute by the Hon. Alan Fairhall, M.H.R. (VK2KB), Senator G. Hannan, Senator for Victoria, and the support of many other Ministers and Senators, it was made possible for our problem concerning the frequencies allocated for the use of the Amateur Service to be discussed and understood by the Government.

It is history now, that the entire allocation of frequencies for the use of all Australian frequency users was looked at again, but this time by a special Ad Hoc Committee set up by the Postmaster-General, Hon. C. W. Davidson, O.B.E., and called the Radio Frequency Allocation Review Committee. The composition of this Committee has been referred to at other times and in the pages of "Amateur Radio" magazine so I shall not reiterate the names again at this stage nor the bodies and organisations they represented, but suffice it to say that a wide representation of Australian frequency users was represented, including a representative from the Wireless Institute of Australia, Mr. Arthur Tinkler, VK3ZV, representing the Amateur Service.

This Committee met twelve times or so from October 1960 to May 1961, during which time it carried out the Government's requirements to review the frequency allocations to Australian frequency users in the light of the Geneva Frequency Table, 1959, which was due for implementation during May 1961.

Under direction from the Postmaster-General, the discussions and findings of the Committee were not for general circulation until such time as he (Mr. Davidson) released the information. I was therefore unable (although I would very much like to have been able) to report to W.I.A. Councils and members generally matters dealt with by the Committee of direct concern to the Amateur Service. However, your representative was able to report to the Federal Executive so that the Institute was kept abreast of proceedings at the meetings of the Committee progressed.

Even as I write these words I am unable to detail the final work of the Committee, but I can say that its final meeting has now concluded, and its final report is in the process of being completed for submission to the Postmaster-General who will present it to the Government for its decision.

On the information I and my colleagues within the Federal Executive have had presented to them, I can assure all Australian Amateurs that some real work has been achieved by the formation of this review committee and further, that I am satisfied the Amateur Service has had a just hearing of its problems along with those of other frequency users. The Postmaster-General's Department will ultimately advise the Executive concerning the release of that part of the Committee's findings (if agreed by the Government) dealing with the Amateur Service frequency allocations. From my intimate knowledge of the work of the Committee in this regard, and having regard also for the immense problems currently encountered in engineering the use of the frequency spectrum so that all users can be satisfied, I have no hesitation at all in saying, at this stage, that the Amateur Service has received a fair deal.

Of course it has been said before, and it will be said again, that the problems of the justifiable use of every part of the frequency spectrum is something that must periodically come up for review. Whilst the proposed Amateur Service allocations (and others) may be "law" today, tomorrow some other service may, with every justification, claim more Kc/s., Mc/s., or Gc/s. somewhere in the spectrum which necessitates a change to other Services in other parts. If the Amateur Service is to maintain its allocations, then it must justify its use of them. I cannot be too vehement in saying to all Australian Amateurs that the preservation of their domain has obtained because a handful of Amateurs saw fit to do something in defence of the bands. If you expect to keep them . . .

then use them! I can assure you that in the years ahead any part of the spectrum not being used by the Service allocated to it will be in dire peril.

In conclusion of this part of my report, I would like to pay tribute to Mr. Arthur Tinkler who gave so much of his valuable business and private time in order to carry out the duties of representing the Amateur Service through the Wireless Institute of Australia on the Radio Frequency Allocation Review Committee. I have had it reported to me by other members of the Committee that he was held in high regard, not only for the work for which he was detailed, but also for his valuable assistance to the discussions relating to non-Amateur sections of the spectrum.

I know that all Amateurs will join me in a hearty vote of thanks for the work Mr. Tinkler has done for the Amateur Service. Mr. Tinkler has also been appointed to the Federal Executive of the Wireless Institute of Australia where his services will be most welcome.

The Federal Executive met fourteen times officially during the past year, and copies of the minutes of each meeting went forward in due course to the Federal Council in addition to the normal routine correspondence. Because of necessity, not all the business transacted by Federal Council reaches the ears of members, I would like to convey in the following paragraphs an overall resume of the work the W.I.A. does in keeping an organisation like ours functioning.

For those new and young members in our Institute I would like to just briefly outline our business structure. In your Division you have a Council which is duly elected by members each year and is empowered to carry out the duties of your Division in the manner you want them done. If you don't like what is being done or you can improve on the method, then you have the machinery in your Divisional Constitution to do something about the matter. On the other hand, if your particular problem is national in its nature, then your Council will table it before your Federal Executive for attention. The Federal Executive is the ex officio office of the Federal Council and carries out its directions in the same way as your Divisional Council carries out your directions. The Federal Council is composed of a representative from each Division of the Institute and he is known as your Federal Councillor. He is the liaison officer between your Divisional Council and the Federal Executive. Your problem, channelled the right way, reaches the Executive via your Federal Councillor. And so the work of the Federal Council proceeds throughout the year.

Because the Federal Executive must be in the one State to work efficiently, the policy of the Federal Council has been that it will be located in the Division in which the Central Administration of the Postmaster-General's Department is located. Hence the Victorian Division (known as the Headquarters Division) is responsible to appoint members for office on the Federal Executive, all such appointments to be approved by the Federal Council. So that continuity of the working of the Executive is not hindered, it is also Federal Council policy that at least two-thirds of the previous Executive is appointed to the next year's Executive.

This is a brief outline, the more detailed information of which can be obtained from perusing a copy of your Divisional Constitution or asking your Federal Councillor for access to a copy of the Federal Constitution.

And so for the past twelve months seven members of the Federal Executive, and several co-opted members, have been at work to provide the organisation behind Amateur Radio as you enjoy it. Many dozens more on Divisional Councils have given freely of their time to keep the W.I.A. in your State flourishing. These men I hold in the highest esteem, because without them many of the enjoyments of Amateur Radio would not be possible.

Getting back to the work of the Executive and its co-opted members, I would like to pay tribute to those who worked so hard over the past twelve months to enable my year as your Federal President to be a successful one. I say it has been successful because a lot of work has been achieved although this might not always necessarily be observed by the general member. In a growing Institute there is a tremendous amount of routine work which just has to be done if the Institute is to function properly at Federal level. Without the co-operation and individual attention to the allotted tasks by the members of my Executive this would not be possible.

Although all the officers appointed with me last year have done an excellent job, time does not permit of detailing each member's work. However, I would like to briefly mention the outstanding contribution by the Federal Business Manager, Major W. T. S. (Bill) Mitchell, VK3JUM. During the year he prepared the final draft of "The Geneva Story," a 90-odd page history of our defence of the Amateur Service frequency allocations from 1958 to 1961. Its documentary value will be immense to those who take office and carry on in the decades ahead. Major Mitchell has also maintained a supply of statistical information to the International Amateur Radio Union (the I.A.R.U.); he has recorded information on investigations regarding the ratio of Amateur licensees who are members of the W.I.A. to those who are not; he has re-written the Federal Constitution in draft form including the incorporation of the Federal Policy Book as proposed by-laws of the new Constitution; he has prepared a Divisional membership return form by which it is intended that accurate data concerning membership is maintained; he has sorted and filed in correct order and in order of committees, all the documents of the International Telecommunications Union Conference held in Geneva in 1959—did a time consuming task; and he has prepared the draft rules for the Australian D.X.C. and V.H.F. C.C. Awards including the incorporation of Divisional comments. In addition, Major Mitchell is also Federal Minute Secretary.

Whilst all this has been going on, the Federal Secretary has been dealing with the one-hundred-and-one letters, memos, notices, etc., which are part and parcel of the day to day work of the Executive.

This year the Executive was re-organised so that less work fell to the lot of the Secretary and more was shared amongst the Executive members. This has proved to be long overdue and is resulting in a gradual increase in the amount of work done and a drop-off in the delays encountered in the past in dealing with the directives of the Federal Council. I cannot advise that the Executive has caught up with all the outstanding problems which accrued during a period of time when the Executive was short of staff and the Federal Secretary was indisposed, but I can say that with the re-organisation of the work, the ensuing year should bring a great increase in the completion of Federal Council directives.

Already the Federal Project Manager has completed the design and printing of a new D.X.C.C. Certificate, and is working on a new membership certificate, Remembrance Day Contest Certificate, National Field Day Certificate, and V.h.f. Century Award Certificate. These will not all be done at the one time, but in order of priority.

In accordance with Federal Council's direction, Federal Project Manager, Tom Straughair, VK3ABV, has had a die struck for smaller W.I.A. membership badges and these are now available to members through their Divisional Councils. Due to the fineness of the die, the rendition of color in the badge was rather disappointing, but, nevertheless, it has received acclaim as being more dignified than our former rather large badge.

During the year I received an invitation to attend the Annual Dinner and Convention of the Hunter Branch of the New South Wales Division of the Institute and was happily able to accept the invitation. I was most honoured to be present and meet the President, Mr. Lionel Swain, VK2CS, and his great team of officers; the President of the New South Wales Division, Mr. Bill Lewis, VK2YB; the then Federal Councillor of the N.S.W. Division, Mr. Dave Duff, VK2EO; the Hon. Alan Fairhall, M.H.R., VK2KB, who is a member of the Hunter Branch; the Hon. Secretary of the Hunter Branch, Gordon Sutherland, with the assistance of a hard working team, was responsible for the organisation of the very happy week-end I was able to spend with them.

An invitation was also extended to me to be present at the Annual Dinner of the Geelong Amateur Radio Club and the VK3 State Convention held at Maldon, but due to other matters claiming my attention at the time, I regrettably was unable to attend.

Matters relating to the v.h.f. bands have at various intervals reached the Executive and have been dealt with by the V.h.f. Representative, Dave Rankin, VK3QV, who also looks after mailing and distribution of the overseas international and W and K call sign books. These are distributed to Divisions four times

yearly and should be available to members who desire to check calls and addresses for DX purposes.

The Federal Treasurer was made responsible during the year for all property belonging to the Federal Executive and in this regard awards, certificates, stationery, etc., were transferred to his premises. This eases the task of costing and stocktaking at regular intervals and is a more workable system than previously where Federal property was spread out between the homes of several members of the Executive. Access to the copy of minutes from Executive meetings in the hands of the Federal Councillor will indicate that the Federal Treasurer has kept excellent records and balance sheets of the Federal funds of the Institute. For those interested, an audited balance sheet is appended to this report.

The Federal Contest Committee completed another fine year's work in circularising rules throughout Australia and overseas for respective contests held by the Wireless Institute of Australia. In particular the goodwill created overseas by the VK-ZL Contest is something always worth fostering and the liaison between the W.I.A. and the N.Z.A.R.T., who biennially are responsible for the running of the VK-ZL Contest, was of the highest order. Mr. L. R. Jensen, VK7LJ, Chairman of the Federal Contest Committee, did an excellent job, maintaining regular copies of the minutes of the Committee's meetings to the Federal Secretary. Mr. Jensen has now found it necessary to retire from the post due to pressure of work and this position has been taken over by Mr. K. Spiegall, VK7KS. The Committee, until this change of office, was composed of VKs 7LJ, 7DW, 7KS, 7RY and 7JB. From experience I am well aware of the time consuming work which goes into the checking of contest logs and my thanks are extended to this Committee for a year's work well done.

During the year, also, there has been marked increase in single sideband transmissions (s.s.b.) by Australian Amateurs. S.s.b. has been firmly established overseas for some years and has also been popular in VK amongst a relatively small group of earnest experimenters. Now as proven popularity as a means of communication, especially in these times of crowded frequency allocations and interference from commercial transmitters, I forecast a great future for this mode of transmission in our country. The Amateur has consistently pushed ahead into new fields as the science has progressed and it is quite paramount to me that the pattern is set for yet another era of interesting and valuable progress.

Coupled with this interest in the current application of s.s.b. is frequency shift keying (f.s.k.). Although only very few are desiring to experiment with this form of transmission (probably due to lack of equipment) at the present time, the matter has come before the Executive during the year. Divisions were asked to comment on the pros and cons of f.s.k., but the results were not really conclusive. In order that every opportunity be allowed for those interested to experiment without restriction, it was decided to agree with a test period on all Amateur bands during which time any problems arising could be analysed. In this regard the Postmaster-General's Department has agreed to the introduction of f.s.k. on all licensed Amateur bands for a trial period until July next year when the matter will be reviewed in the light of the experience gained.

There seemed to be some doubt in the minds of a few members of the Federal Council as to the desirability of this type of transmission in our already crowded bands, but since the frequency shift is limited to 820 cycles there appears no reason why greater interference should be occasioned than experienced by a.m., n.b.f.m., s.s.b. transmissions and so on. In all cases, irrespective of the type of transmission, it is required that the equipment be operated satisfactorily, and this being so, then f.s.k. only 820 cycles wide takes up less room than an a.m. phone station. Anyway, it will be interesting to follow developments in this field in the future months.

Official W.I.A. broadcasts continued transmissions throughout the year in each State of the Commonwealth, disseminating news to the country and city members, and it is obvious that this is a service widely proclaimed, particularly by those who are unable to attend the regular monthly meetings of the Divisions. However, I would like to comment at this stage that a number of complaints have been heard about W.I.A. broadcasts not adhering to the times set down for transmission, thereby causing interference, not only to other W.I.A. transmissions, but also to other Amateurs. In this regard I would like to see the frequency

and time schedule, as agreed to by the Federal Council and contained in the Federal Policy Book, carried out in its entirety.

For the past year the Federal QSL Bureau continued to function in its usual efficient manner. Federal QSL Officer, Mr. Ray Jones, VK3RJ, spent long service leave abroad with his wife, the Bureau being carried on by Mr. Eric Trebilcock, BERS-195, during Mr. Jones' absence.

43,524 cards were handled by the Bureau with 42,755 for the previous year, showing a small increase over the 1960 period and a substantial increase over the 1959 (41,662) period. The costs of handling QSL cards rose rather sharply for the reasons, (a) cost of postage to enable quick delivery from the Federal Bureau to the Headquarters Division which were previously delivered to a central pick-up point for re-delivery with an attendant delay; (b) the first full year of increased postal rates was met; and (c) the increase in cards handled.

During his trip abroad, Mr. Jones visited the R.S.O.B. (U.K.), the U.S.K.A. (Switzerland), and the R.E.F. (France) where he was able to study QSL Bureau methods used by those societies. Mr. Jones reports that the system used by the Federal Bureau in Australia compares more than favourably with systems used overseas. He was cordially greeted wherever he met Amateurs on his travels and the warmest of hospitality was extended to him and Mrs. Jones.

One matter on which I am happy to report is the activity by Divisional Councils during the year in respect to encouraging young people to take an interest in Amateur Radio as a hobby. Quite a number of exhibitions and field days were arranged at which we can always anticipate the presence of young interested people. The encouragement of interest in Amateur Radio is just as important as using the Amateur frequency allocations, because it is only by such encouragement that we shall

(Continued on Page 15)

WIRELESS INSTITUTE OF AUSTRALIA—FEDERAL EXECUTIVE

BALANCE SHEET AS AT 28th FEBRUARY, 1961

Current Liabilities:—		Current Assets:—	
Creditors	£49 9 1	Commonwealth Savings	
Convention Fund	11 11 10	Bank	£956 10 10
Trust Fund	102 1 7	Debtors	4 10 0
I.T.U. Fund	434 10 8	Stock on hand	49 0 0
	£597 18 2		£1009 10 10
Accumulated Funds:—		Fixed Assets	
Balance 1/3/60	£634 9 10	(at cost less depreciation):—	
Add Excess of Income		Furniture and Fittings	£18 9 10
over Expenditure for		Typewriter (No. 1)	15 5 0
year ended 28/2/61	54 13 8	Typewriter (No. 2)	24 5 0
	689 3 6	Duplicator	145 0 0
		Trophies	20 18 0
		Equipment—VK3WIA	53 10 0
			277 5 10
			£1286 15 6

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 28th FEBRUARY, 1961

EXPENDITURE		INCOME	
Depreciation	£14 16 0	Per Capita Payments	£288 10 0
Federal Contest Committee Expenses	40 13 6	Profit on Sale of Log Sheets and Badges	3 19 5
QSL Bureau Expenses	22 0 0	Insurance Claim	135 0 0
D.K.C.C. Expenses	33 8 0	Bank Interest	33 5 10
Postage and Telephone	30 11 4		
Printing and Stationery	74 3 7		
Insurance	7 17 6		
Licence—VK3WIA	1 0 0		
Cartage and Storage	15 3 11		
Wreath (late J. Moyle)	5 5 0		
Certificate Blanks	26 10 3		
Letter to All Hams	129 13 6		
Administration Chart	4 0 0		
Excess of Income over Expenditure	54 13 8		
	£459 15 3		£459 15 3

STATEMENT SHOWING MOVEMENTS OF FUNDS FOR YEAR ENDED 28th FEBRUARY, 1961

CONVENTION FUND—			
Balance in hand as at 28th February, 1961 (unchanged)			£11 11 10
TRUST FUND—			
Balance in hand as at 1st March, 1960		£25 5 0	
Add Transferred from Food for Britain Fund	£70 5 3		
Sales of "Call Book Magazine"	26 11 4		
		96 16 7	
Balance in hand as at 28th February, 1961			£102 1 7
INTERNATIONAL TELECOMMUNICATIONS UNION FUND—			
Balance in hand as at 1st March, 1960	£531 15 0		
Add Further Contributions from New South Wales	£17 12 7		
Further Contributions from South Aus.	1 0 0		
Refund of Unspent Geneva Expenses	83 5 0		
		111 17 7	
Less Lunch for Delegates to Easter 1960 Emergency Meeting of Federal Council	£6 10 0		
Expenses of Divisional Delegates to that Meeting	165 4 0		
Printing, etc., in connection with that Meeting and the Geneva Conference	27 7 11		
		199 1 11	
Balance in hand as at 28th February, 1961			£434 10 8

We have examined the books and vouchers of the Wireless Institute of Australia (Federal Executive) for the year ended 28th February, 1961. In our opinion the above Balance Sheet is properly drawn up so as to show a true and fair view of the state of the affairs of the Federal Executive as at 28th February, 1961, and that the attached Income and Expenditure Account is properly drawn up so as to show a true and fair view of the results for the year ended on that date. Stock on hand at 28th February, 1961, has been accepted on the Certificate of the Treasurer. Melbourne, 10th May, 1961. DAVID FELL & CO., Chartered Accountants.

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DB. (up to 6,000 cycles) to 22 DB.
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Superior Soldering Irons—240v.

S4, 25 watts	89/7	
A1, 40 watts	28/-	Pack and
S1, 55 watts	36/-	Post 2/6.
A2, 60 watts	34/-	
A4, 80 watts	42/-	

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36" lengths, Resin Cored Erskin, 1/- each. Pack and post free.
1 lb. Reels 40/60 12/3 each Pack and
1 lb. Reels 60/40 14/8 each Post 1/3.

Diamond Stylis Standard 78

No. 7, 8, 14, 16, 17 and 24, 15/- each plus 25% Sales Tax. Pack and post free.

Meters—4 ins. Square

0-1 mA. Plain Scale	75/- each	Pack and
0-1 mA. Multimeter Scale	75/- each	Post
0-500 μ A. Plain Scale	79/6 each	Post
0-50 μ A. Plain Scale	87/6 each	2/6 ea.

Power Diodes

Similar to OA210, 1N1763, etc. Type HR25, 12/3 each. Pack and post free.

1H6G 2 Volt Diode-Triodes

2/11 each. Pack and post 7d.

Frame Output Transformers

Suit 6BM8 valves, 29/11. Pack and post 2/1.

CLEARANCE—ENGLISH STEREO FOUR-SPEED RECORD CHANGERS—£12'15'- + 25% S.T. Freight forward

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Chimney Bracket Sets, comprising galv. steel bracket, 12 ft. stainless steel strap, U bolts and J bolts, 18/- plus 10% S.T. Pack and post 2/6.
6 ft. x 1 in. Galv. Steel Masts, 10/- Pack and post 2/6.

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12 inch Metal Thread or Wood Screw, 8/- dozen plus 25% Sales Tax.

Turnbuckles 4 inch extending to 8 inch, 3/6 each plus 12 1/2% Sales Tax.

Maststraps 5/3 dozen plus 25% Sales Tax.

Plugs and Sockets Surface type for 300 ohm Ribbon. Walnut only, 2/8 pair plus 25% Sales Tax.

300 ohm Ribbon 100 yard Reels, 45/- plus 12 1/2% Sales Tax.

Open Line Feeder Cable—300 ohms

Will improve reception in fringe areas where ordinary Ribbon is now being used, 45/- per 100 ft. plus 12 1/2% Sales Tax. Pack and post 2/6.

Open Line Insulators

to suit Metal Thread or Wood Thread, 1/- each plus 25% Sales Tax.

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£3/15/- plus 25% Sales Tax. Freight forward.

Tenna Ties—Hi-Lo Band Connectors

2/- each plus 25% Sales Tax. May also be used as attenuators. Post free.

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New Grey Plastic Hand-Sets with built-in Buzzers. Ideal for house to garage, shop to kitchen or inter-departmental communication, etc. Only extra required is Twin Flex for connection. Price per pair, £9/18/6 plus 12 1/2% S.T. Pack and post 3/6.

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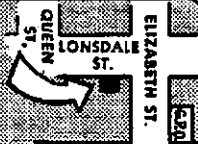
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QUEENSLAND (THE SUNSHINE STATE) DIVISION'S ANNUAL CONVENTION AT NAMBOUR

On Saturday, 10th June, the peaceful surroundings of the C.W.A. Hostel on the heights of Nambour were disturbed by an influx of men and motor cars which proceeded to mystify the locals by the actions of men scaling trees and stringing wires, and other men talking into their dashboards. However, the curiosity of the locals was quickly dispelled by the magic words "Amateurs" and "Hams".

Yes, the Queensland Division Annual Convention was under way. And what a wonderful place—the Hostel overlooks Nambour and right down the valley to Mapleton. Upstairs were dormitories which, in the words of those I asked, were "beautiful", "wonderful", etc. I didn't get upstairs myself, while downstairs off large verandahs were the large v.h.f. and h.f. operating rooms adjacent to the kitchens and dining rooms. There was plenty of room for all, although many more cars would have entailed some parking in the adjacent street.

Another feature was the 110 kv. sub-station, ensuring ample power for members, but should the noise level get too high next time we may have to ask Barry 4LN to move the sub-station.

The Convention really started before Saturday, with the arrival of Bill 4WS and KYL Hazel, who knew all the ropes by the time the other important people began to arrive and get the show going.

President Jim 4PR and Vince 4VJ must have gone up well laden with gear judging by discussions at Friday's Council meeting, while the W.B. & B. boys were also there laden with their ideas and enthusiasm.

Jim 4PR, Bill 4WS and Hazel looked after registrations as people arrived, and it was not until after dinner that things began to move.

The Wide Bay and Burnett Branch held their usual Saturday afternoon hook-up portable from the site and commiserated with those absent. Then, of course, the inevitable "cuppa". There were plenty of "cuppas". Next item was for the v.h.f. boys—a hidden tx located on a ridge outside Nambour. They (the v.h.f. boys) departed in a crunch of gravel with the 144 Mc. "rush boxes" and Eric 4XR scored in about 20 minutes, which wasn't bad going.

After the tx hunt, Vince 4VJ set up his s.s.b. tx and John 4RZ his new rx for those interested in sideband. Both of these units, new and modern, had interested spectators over the whole week-end.

A "rag chew" and tea was followed by a "know your Amateur" competition. Over the last few weeks Eric 4XR had "taped" sixteen Amateurs well known on the air and competitors had to name the voices. Bob 4ER led the field with eight voices recognised.

At 8.30 p.m. away to the barbecue which, in the afternoon, had been sited by Jim 4PR and Kev Chiverton. Most got there on time, but who do you think missed the way? Ask Jim! Vince 4VJ, our barbecue king, lost none of his reputation and a first class time was enjoyed by all up on a ridge overlooking the lights of Nambour.

Some of the v.h.f. brigade worked two metres from the barbecue site with Max 4HD of Buderim, whose rx I'm told cost more than his new car. Home to bed and by courtesy of 4VJ some of the "not so old" were allowed to talk themselves to sleep.

On Sunday more Amateurs, XYLS and harmonics registered and after a "light" morning tea of toasted sandwiches, biscuits, cake and tea an auction was held to dispose of some gear Evan 4EF had donated.

Several interesting pieces of equipment were offered. Barry 4LN had to pay 12/- to look at a polarised relay but he got his money's worth. Leigh 4RH invested in a copper mine and I'm interested to know what you propose to do with it, Leigh? The auction raised £4/7/6. Evan.

Next on the programme was a W.I.C.E.N. exercise set out by Vince 4VJ in which Eric 4XR located himself 2½ miles out of Nambour on a range overlooking the whole district and transmitted as from, for example, a crashed aircraft. Salient points only were given and d.f. was not permitted. Ten operators took part on 7 and 144 Mc. 4ZAX and 4ZBZ took the honours, while 4ZBL and 4ZDK came in with two minutes to spare.

After lunch Wide Bay and Burnett Branch held their monthly meeting and four councillors—President Jim 4PR, Secretary Bill 4WX, Bert 4AO and myself—joined in to answer any queries, etc.

During afternoon tea a modulation transformer, donated by Evan 4EF, was raffled and Jack 4EF was the lucky one. Get that modulator going now Jack—no excuses left.

The Bob Campbell contest took place now with four portables, 4KR, 4HZ, 4RH and 4ER. Eric 4XR, he has got a pretty good press, hasn't he—was the winner with 15 contacts. Congratulations Eric, and also to Leigh who collected the prize for the greatest distance worked, ZL1PV. While this contest was being held, the v.h.f. gang held a 2 mx tx hunt which was won by Laurie 4ZBL. During Sunday afternoon the h.f. and v.h.f. boys carried on random QSOs.

After tea the prizes were presented in the Assembly Hall and a pretty good film show, "The Inquisitive Giant," in which Professor Lovell described the preparations for and the building of Jodrell Bank radio telescope in a most interesting way, was shown. Another film showed Australia's Mt. Stromlo and the radio telescope at Parkes.

Vince 4VJ helped out with films which were projected so capably by Barry 4LN. That about finished the Convention, as on Monday morning most were ready to go home.

The most important event on Monday was the arrival of Ross 4ZAT, of Brisbane, his XYL and harmonics to the fifth, who couldn't get along sooner. We were glad you came, Ross.

W.I.A. FEDERAL PRESIDENT'S ANNUAL REPORT, 1960-61

(Continued from Page 13)

have a growing membership as the older of us pass beyond the vale. To do our part in directing this policy, the Executive imported during the year a quantity of the R.S.G.B. publication "A Guide to Amateur Radio," an excellent introduction for newcomers. Copies have been made available to Divisions for sale at a modest price to interested people and I am most hopeful that this will assist our membership figures. There is no reason why it should not do so, correctly presented, because it encompasses the major requirements of technical knowledge for the A.O.C.P. and L.A.O.C.P.

It has been the hope of the W.I.A. for some years past that a publication of this nature be forthcoming from the Institute, but due to economic conditions prevailing it is impossible at this stage. Every so often we have another look at the possibility and I am hopeful that one of these days we will have the finance and the market to produce a similar publication.

Last year I promised that every effort would be made to get the Federal Station, VK3WIA, on the air as soon as possible. This has not eventuated yet but plans are well advanced and the first test transmissions should take place in the near future.

The Federal Awards Manager, Mr. Alfred Kissick, VK3KB, has completed another year's excellent work since taking over this duty from Gordon Weynton, VK3XU. Our national award—the "Worked All VK Call Areas"—has again shown an increase in popularity overseas, thirty-six (36) certificates having been issued over the past 12 months; 24 to the U.S.A., 3 to New Zealand, 2 to Porto Rico, and one each to Hawaii, India, Canada, U.S.S.R., Mozambique, Burma and Belgium.

This may not sound to be a great achievement, but when you take into consideration that this Award is a difficult award to obtain—it was made so on purpose so that it would be sought after—you realise that it is a good effort on the part of the 36 applicants who made the grade.

Eleven new members applied and qualified for the Australian D.X.C.C. Award—a reasonable result during this period of downward conditions in the sunspot cycle. Forty holders of the D.X.C.C. submitted cards for additional credit to their listing. A new D.X.C.C. Certificate has been completed and will be forwarded shortly to all holders of the award.

An increase was shown in the "Worked All States (Australia) V.h.f." Award, six certifi-

And so Namobur is behind us and we, you too, I hope, are thinking of and looking forward to the next Convention, for I doubt if anyone failed to have a really good time at the 1961 Convention—one of the best yet. If you weren't at this Convention come to the next for "everyone improves on acquaintance" and I can't say how pleased I was to meet so many "good blokes" that I had perhaps only heard on the air.

Now, who was there? 4PR, 4WS and Hazel, 4PG, 4ER, 4ZOV, 4ZP and Hazel, H. Gwillim, 4KR, W. Donovan, K. Chiverton, 4ZDJ, D. Gemmel, A. Waits, 4LN, G. Franks, 4ZEL, 4RH, R. Campbell, W. Tomlinson, 4RZ and Joan, 4VJ and Nick, 4HZ and Neil, 4PJ, 4WO, F. Cox, Eunice and Raymond, 4WX, 4ZBS, 4RL, Dot, Bevan, Robert and Lang, 4HD, 4ZBZ and Val, 4ZAX, 4ZBL, 4ZDK and Dawn, 4AO, 4ZAT, Jess and five future operators.

Wasn't the weather wonderful! If more of our southern colleagues could sample it, we would have them holding their Conventions in Queensland every year.

I won't thank anyone of the W.I.A. for fear I might miss someone, but I guess a lot of chaps who had their "shoulders to the wheel" will have received their thanks in seeing a job well done.

We must not forget Mr. "Arthur" and Mrs. Adams, the Superintendents who put in so much effort to make their side so successful. Mrs. Adams even came good with cats for the barbecue and a special supper was put on for Sunday night. Mr. and Mrs. Adams really were part of the Convention.

Also heartening that Jim 4PR and Bill thought that a couple of lasses at Buderim were going to ask them for a lift to Brisbane on their way home from the Convention.

Next year we'll have that big sign up, Jim 4HZ (who has it?), and plenty of arrows. I'm looking forward to writing up next year's Convention.—4PJ.

ates being issued during the year. This award—implemented in 1949—requires one confirmation from each Australian State (including the Northern Territory) of contacts made on the 50 Mc. band. Not an easy award to achieve, and credit goes to those who made the necessary contacts.

Mr. R. Jepson, VK3JI, continued his dedicated duty as Federal Traffic Manager, handling c.w. message traffic between the Divisional Federal Councillors and the Executive. There were 65 outgoing and 46 incoming messages handled which I consider inadequate use of the channel for the time spent by the operators in maintaining schedules and I would like to see Federal Council take more advantage of this facility operated for its convenience.

Due to spasmodic conditions, Mr. Jepson reports that some difficulty was had in making contact with the more distant Divisions, but every message was passed to addresses. The same band of operators have maintained the traffic schedules and attendance at the schedule time has been excellent.

In conclusion I would like to make a few comments looking forward. In 1962 the British Empire Games will be held in Perth and the Federal Council has agreed to the holding of the next Federal Convention in our far Western State during Easter. This will be the first time that a Convention has been held in VK6 and because of the distance away, it will be an expensive event. Also because of the expense I would like to see it be, in every way, worth while. To ensure that it will be, members will be asked to submit all their grouches to their Divisional Councils from which matters of a national nature will be extracted as agenda for discussion by the Federal Council. As it is—or will be by 1962—three years since the Federal Council met, I think it will be safe to prophesy that the 1962 Convention will be the biggest Convention ever held and that the problems to be resolved will be a great national asset to the W.I.A. and Amateur Radio generally.

Looking broadly over the field of activities of the Amateur Service in the Commonwealth of Australia and its Mandated Territories, I echo the sentiment of my colleagues on the Federal Executive of the Institute, that it has been a successful year in many ways; that there has been an increase in interest in almost every facet of our hobby, and that we have confidence in the future expansion of the Amateur Service to play its part in the communications activity of our great country.

—G. Maxwell Huil, Federal President.

DX

Alan Shawsmith, VK4SS
35 Whynot Street, West End,
Brisbane, Qld.
Phone 4-6526 (7 a.m.-4 p.m.)

June conditions overall have been better than expected, particularly 14 Mc., on which the long paths to East and West have been open on most days. In the first half of the month, Europe was workable on the East path almost daily from around 0430 hrs. GMT. It was also possible to reach the East Coast U.S.A. L.P. on some mornings. All this is in contrast from May when the long way round route was mostly out.

7 Mc. has been fair, but not as good as this winter band can be. From 0700 hrs. GMT, it opens up to W1 to W5 particularly, and later to JA and UA0, etc. However, the 1800-2000 hrs. GMT Short Path to Europe is now out; some can be heard but they are not workable.

The bands at most times were active enough to entice one to keep the ear tuned expectantly, but little of anything really rare was heard during June.

Working 7 Mc. takes patience and a bit of searching to dig out the better ones which show up now and then on this band.

NEWS AND NOTES

Keep your ears cocked for YAIKFF on 14 Mc. c.w. around 1100 hrs. GMT.

JY3NZK is active (or was) on 14 Mc. 5U7AC is still pounding in here. Try listening L.P. around 0700 hrs. GMT on about 14,025 kc. But don't stick too close to this freq.

W4VPD/Gus reports that he intends visiting many countries and will provide some rarer prefix activity. More of this later.

KC4USA is working 7 Mc. c.w. around 0700 hrs. GMT and VF3YG has done the same around 1000 hrs. GMT.

Europeans have been heard calling TT8AG at 2100 hrs. GMT.

JT1KAA can be heard and worked here around 2100 hrs. GMT. But activity seems erratic.

PK1SK, PK2ST. Both heard, but illegal so far as I know. PK2ST was on 21 Mc. a.m.

OB0A, Aaland Is., will be active on s.s.b.

Another one for W.P.X. is DU9JO/Joe. His QTH is OK in book.

ZL5AL, Scott Base, Ross Is., Ross Sea. Is a good one for those wanting Antarctica or W.A.Z.L. Heard and worked by VK between 2200-2400 hrs. GMT.

Also in Antarctica is UA1KAE. This is not news really as the station has been operating for a long time, but there may be some who are looking for Antarctica and would unknowingly pass him over. He is a regular and QSLs.

I heard PK1XX under the greatest pile up ever, on 27/6/61 at 1630 hrs. GMT on 14 Mc. c.w. I gathered you QSL via DL1XX.

5N2LZK still comes through occasionally when conditions allow it. Keep the ear on 14 Mc. c.w. around 0730 hrs. GMT.

For those who might have been lucky enough to bust through the QRM and adverse conditions and work the Expedition to Luxembourg during July, namely LX3QX and LX3DX, please send the QSL to ON4QX.

In VK land we have news that George VK5RK finally gained the Gold printed award of the Certificate Hunters' Club. (Our congrats., OM.) He is the second Australian to attain this, the qualifications being that one must already hold 25 Awards won in International or National Contests. It is regarded by many as the Oscar of Amateur Radio operators. (We enjoyed our look at you on t.v. via ABQ2. Keep up the good work, OM.)

Look for VK6AM, Nauru Is., on 14 Mc. c.w. and s.s.b. QSL via VK3AMR.

JT1AF, Inner Mongolia, is also on s.s.b.

It is reported that there will be activity from Swan Is., namely KS4BC.

In response to requests, times will be given within the rare DX prefixes, when they can, but do not rely too much on these, as conditions change radically in the period between the compilation of these notes, and "A.R.'s" arrival in your post box.

STOP PRESS NEWS

St. Helena—ZD7SA and ZD7SE active 14040 kc. frequently, time 2300-0200Z. QSL to W9FJY.

UA1KED is on s.s.b. with 60 watts and dipole antenna. 14,300 kc. Franz Josef Land. Malpeolo Island now D.X.C.C. Country Credit after 1st August, 1961. HK0TU is active. Phonies: VP7NE and KC3EE.

Muscat and Oman: MP4MAH is permanent station and on s.s.b.

Jim EP2BB is American Consul General, and is on c.w. and s.s.b. He will be there for over two years.

Crete: SV0WT probably returning home to U.S.A. in Sept. '61. QSL to Box 388, San Marcos, Texas.

Galapagos Is.: Ted HC1KA is planning a trip to this island about September.

Colin VR4CB is very active on a.m. phone from Solomon Is. QSL via W7PHO. He operates on 14,190 kc.

VR8AC, Pitcairn Is., is on 14 Mc. s.s.b. on Mon., Tues. and Wed. from 0500 to 0700z making few contacts.

St. Paul Is. refused separate D.X.C.C., so KL7DNE is in part of Alaska.

Damão and Diu, Portuguese territories off West Coast of India, now two separate D.X.C.C. countries. Credit after 1st October '61. My thanks of VK2ZR for the above stop press.

ACTIVITIES

George VK2QU reports a fair month for conditions. He says 14 Mc. behaved in an unusual manner in that it was open to Europe at noon on some days. The band to the Continent was OK in the mornings and generally the East Coast of America has been easier to work than the West side.

His best were ZL5AL, UA1KAE (Antarctica), XE2AY, YN1OC, VK0FZ and W. K. VE, KL7, KH6, Gs. D. F. HB0, SP, Hal SM7, DJ, OK, OE, YOY, YU, U, J, 3, 6, 0, DM, EA, VS8, VS1, BM2, J, etc. Cards received were 9M2FS, 601MT, 8U5MC direct.

Bud VK2AQJ forwards a list of two-way s.s.b. contacts made on 14 Mc. during June: 10th, 0650z, VE8UV; 12th, 0528z VE3HI and XE1CV in round table, 0552z ZS6AOW, 0650z VEs (in round table) 7ALR, 6VK, 7BCM and 8TF; 18th, 0640z ZS6AOW, 0723z ZS8NE, 0747z VE7ALE, 1043z W2COB; 24th, 0625z VE7ALE; 25th, 0525z ZS6AOW, 0613z VK0VK, 0643z VE8AFA, 0703z VE7AAD. All of these QSOs were solid with the exception of ZS6AOW on 25th when conditions to ZS were rather marginal.

Ken VK3TL found 20 metres quiet in the evenings on the very few occasions he ventured into the shack. This band seems to be opening up earlier in the afternoons than even a few months ago. Worked on 14 Mc. c.w.: DJ4VK, DL1XZ, G3GFF/MM, 11WLF, LU0AC, SP6AAT, UA1KAE, UB5KCL, U8KAA, VE6ZS, XE2AY (phone). QSLs for the month were: CR9AH, DJ1FN, DJ4TF, DL3BA, DL6ZB, G3HKA, HK3LX, KZ5TD, VSSGS, W8OLJ/PK, UA2AB, UA4KAB, YV5AFM.

The W8OLJ/PK QSL took the form of a certificate with a photograph of the ship "Hope" on it. Unfortunately the location is not specifically stated on it, so there is little chance of counting the certificate for DX tally. Project "Hope" however are to be congratulated for making known their good work in this attractive way.

Ray VK5RK lists the following with times in GMT: 0810 VK0VK, 0920 KL7PI, 0805 KH6-ECES, 0810 VE9RI, 0540 VE2BR, 0900 KL7SFN, 0630 G8GM, 1015 VK0DA. Cards received were: G6CJ, F8WD, VS1JW, VU2BO, UA0KJA, UA-4KAB, ZS6DE.

George VK6RX has the following to nominate. His times are also in GMT: 2250 EA6AF (Balearic Is.), UA0OM, 1610 UP2KNN, 1445 LA5VH and LA42C, 1560 PAORL, 1560 PAOLU, 0900 OK3KAB. QSLs received were: ZL3VB, PX1FF, CR8BX (Angola), YS1O, UTC5C, 9U3-ME (Ruanda-Urundi), VF5BL, ETE3CE.

Eric BERS195 gives us the following stations heard: 7 Mc. c.w.: VK0DA, JA. W. 14 Mc. a.m.: VK9GP (Norfolk Is.), VK0FZ, 14 Mc. c.w.: BV1USG, HMIAE, JAIYL, JZ0PH, KC4USN, KJ6BV, LA2NG/P, VK9GP, VK0DA, VK0VK, UC2BL, V86KAA, UP2NM, YV3EJ, ZK1AR, 487EC, W2MAK/MM, SM3CAE/MM, JA0WW/MM. His acknowledgments for the month were: C07AL, FA8AN, FQ8HP, MP4QAR, OK4RW, UA2AC, VS8AJ, YV2BJ, ZS5KU, SP1HL/MM.

Hal VK4DO has been on very little this month and reports conditions in the tropics as poor. He lists, 14 Mc. c.w. wk'd.: VP7NQ, XE1RY, UA0KJA, W. K. KL7, KH8, JA. 14 Mc. c.w. heard: JZ0PH, UA0EQ, UA0KOD, UA-KYA, UA0MK. 14 Mc. a.m. heard and worked: W. K. KH8. 21 Mc. heard: W. KH8; but mostly dead band.

Don L2022 sends in a list that shows he has spent a fair amount of time on the job. 80 mx: ZL5 only. 40 mx c.w.: UW0IA, KL7BJW, W7JJI, JASMG, POPAM, W4VCA/KH6, UA0EH, VE7AQI, UB5HS, K3EKO, K4DKY, LU0AC,

K2HS, 20 mx c.w.: KG4AH, T12CMF, EA3NR, LZ1KBN, KM6CB, UB5KED, ZK1AK, VK0TC, HC1FS, LAILG/P, HP1IE, VP5BZ, G2DC, DJ-3FN, CT1JY, LA7RE/MM, I1ADW, OKIKUL, HC1JU, KZ5TD, UA1KAE, FK8AW, KC4USV, KV4CI, KR6DO, Y06KI, VP9G/P, HB1VB, UD-6GF, HA5BG, HLIAT, UC2CS, EA1GZ, 9K3TL, H18DGC, VQ8BC, F3NB, 0E5LX, UO5AA, SUTWR, 5U7AC, FB8XX, ZS6AR, YV1AD, OY8RJ, ZK1AR, 20 mx a.m.: H21AB, VR4CB, XE2AX, W7WVE on f.m. 20 mx s.s.b.: XE1DT, KW6BP, KL7DNC, KC8CJ, VE6TF, KL7FBC, KG6AHN, K76NF. 15 mx a.m.: PK2ST, KH-6DJV, ZE1JR, VR2BC, ZY6AXI, 10 mx nil. QSLs received were: W2AYN/EP, SP3QD, LU-6MAR, VE7ID, VR3L, FA0ATY, JA4ZA, JA-1AB, G3MBN, G8KS, DJ5BVA.

ADDRESSES

ON4AD (ex OQ5IE)—Jane Heirnaux, 78 Ave Centrale, Raversyde, Middelkerke, Belgium.

VR4CB—Colin Blair, P.O. Box 53, Honiara B.S.I. Pacific.

QSLs for VK9GP (Norfolk Is.) are via VK-3AOM.

CO7HQ—Dr. Miguel E. Sola, P.O. Box 28, Camaguey, Cuba.

9M2FS—W. T. Soon, 92 Banda Hilir Rd., Malacca, Malaya.

8A2TT—Fred Ritter, P.O. Box 372, Tripoli, Libya.

5A5TZ—219 Signal Sydn. Tripolitania, B.F.P.O. 57, or via R.S.G.B.

5N2GUP—Ted Howell, via R.S.G.B.

HC4HM—Apartado 4881, Mania, Equador.

LA8QG—Finn Hald, Festningsgt 7, Trondheim, Norway.

MP4BDD—L. M. Rundlett, P.O. Box 5048, Beirut, Lebanon.

OA4FM—Rene Schmalz M., P.O. Box 3919, Lima, Peru.

SUMMARY

I think that towards the end of August, the bands may live up a little, for spring not only takes a young man's fancy, it stirs even the Ionosphere to new life. We can look forward to comparatively better DX conditions, but they most probably will not be as good as last or previous years. However, the night path to Europe both on 7 and 14 Mc. should improve, and South Africa will begin to make its presence felt. The bands of great winter silence, viz. 21 and 28 Mc., will begin to speak a little as far as the longer distances are concerned. It is difficult to say, of course, but I would seem that world activity is down somewhat. Many Hams will only come on when they can "lick the icing off the cake." This is unfortunate, as it gives poor conditions, the appearance of being worse than they really are.

Maybe it is only a winter lull, but at odd times there are vacant spaces now on the 7 Mc. band at night. Where once, the band was filled with commercials and QRM, all this has now, like the tents of the Arabs, been quietly taken away. Don't neglect this band, and if you have sufficient patience, DX can be worked.

W.P.X. AWARD

Judging by the number of requests one receives these days for a QSL for W.P.X., this must be regarded as the up-and-coming award. The D.X.C.C. is slowly coming to the end of its tether as far as new countries are concerned. W.P.X. score is made up by adding the number of areas worked in each country, such as HA1-8, to the total number of countries worked. This gives new life to DX and puts everyone in the running, as contacts are only valid from 1st Jan. '57. Overseas mags. in Britain and America run their own W.P.X. list, so I see no reason why we cannot do the same. If you will pass on your score to me, I'll ask Ed's permission to insert them.

Eric BERS195 has asked me to inform you of the following: VK3AWX (ex-9AD) is not interested in receiving or sending QSLs, and that VK3KF will not accept cards sent via the Bureau.

I'm sure everybody's good wishes go to "Sput" Graham Jenkins, 15, of Alice Springs. He has passed all his tests and on his sixteenth birthday I'm quite certain his call will hit the air. (Congrats. young fellow from an Ole Timer.)

It is encouraging each month to receive letters from those who endeavour with me to make the column a success. It is their help that makes the job even more enjoyable than I thought it would be. Already I have learnt a lot about the conditions in VK and how they vary considerably in different parts. My thanks to VKs 2QU, 3FL, 4DO, 5RK, 5RX, BERS195, L2022.

VHF

David Tanner, VK3AAU
17 Wolseley Street,
Mont Albert, Vic.

Apparently from the comments about the notes last month we have quite a few readers. I was beginning to wonder whether we did or not and it is gratifying to note that there are some chaps at least who liked the change. I must apologise for omitting a few pieces here and there and I would also like to comment on the complaint that some news is a little old. If something happens early in the month I may not get it until the beginning of the next month from the particular scribe involved, so it then appears in the following "A.R." That is as good as we can do as the mag. is run by volunteer helpers who have only limited time at their disposal.

I have at last discovered where the v.h.f. operators go to during the winter. Dare I mention it? 80 metres is the band to look on. I have had quite a few contacts there recently and it seems that all the stations contacted have been v.h.f. types.

SIX METRES

Once again the DX on 8 metres seems to be very scarce although a couple of openings have been reported. June 4 saw a good opening to VK5 from VK4 at 1200 hrs. with signals at good strength. Nothing else until July 4 when just after midday 4ZAX was contacted by 3ZHF and heard and worked by several of the Melbourne gang. The band was open for about five hours altogether. Another opening occurred on Saturday, July 8, when VK4 worked into VK5 and VK3, and VK3 and VK5 were also able to contact. This short skip opening was unusual for this time of the year and just goes to show what can happen. David 3QV reports that he was hearing Ws on 10 metres that afternoon.

Other news of 6 mx activity is the result of a rather eventful fox hunt held around Adelaide on June 18. The honours were taken by Graham 5ZAP with three "firsts" out of four hunts, with Garry 5ZFM (now 5ZK) winning the remaining one. The afternoon ended in a Chop Picnic at the last fox hunt site, and was quite a success. Several non-entrants drove to Teatree Gully for the Picnic, making quite a meeting. Unfortunately, on the way home, the fox (5BQ) became bogged in a creek bed and immediately called 5ZAP mobile for assistance. Whilst trying to locate the car, Graham fell into a similar trap until Barry's car was hauled out by Alf 5LA. Then both cars dragged Graham out. Nevertheless a good time was had by all.

The results of the last VK5 Scramble were 5BQ first in the No. 1 event, 5ZFM and 5KK first in the No. 2 event, and 5TN and 5BQ in No. 3. With all the new chaps coming on 6 mx it would be good to see more entrants in these events as experience gained in operating practice is very useful for more serious contests such as the Ross Hull Contest.

An extract from "QST" reads that VK0VK at Wilkes Base, has an automatic keyer which will run a 100w. rig to a beam on the States on six metres. It will operate at ten minute intervals, six times during each 24 hours. Ron 5MK is keen to try c.w. in an attempt to make the contact when conditions permit. I would suggest that he contact K2QXG for further details.

More news from Adelaide comes from Col 5RO who reports that during the week starting on 3rd July, signals from VK4 were heard during the mid-day period on most days. Sat., 8th July, produced contacts with VKs 2, 3, 6 and 7 from Adelaide.

June was also a quiet month in VK6, although local activity has been a bit better than in previous years. It is pleasing to hear the new call signs which have appeared on 50 Mc. of late and we wish every one of these all the best on this band. Some of the new ones are Peter 6ZDR, Col 6ZCI, Ken 6ZBT and David 6DI. The gang in VK6 are having a bit of trouble with QRM caused by two stations being crystal controlled on the same frequency. (They are not the only ones.) Roy 6RY suggests that a v.f.o. is a must even if you don't work on the same frequency as the chap you are in contact with. It is generally impossible to break in and make yourself

heard when you are confined to a crystal. Roy has also been doing a good job encouraging the boys to have a go at the c.w. and will send some m.c.w. on 50 Mc. when requested. Noel 6ZBG sat for the last exam, and we wish success to him and any others who may have had a try. Bob 6ZBY was successful at a previous try and now sports the call 6RG and has been heard on the high frequency bands with a nice signal in the Eastern States.

TWO METRES

Now we go on to the two metre notes. New horizons seem about to be opened all over the place here. Jim 2ZBP at Illabo has been hearing Sydney stations; we hope that a two-way contact will be made soon. 2IN at Long Jetty has been working into Sydney with a good signal. Conditions were very good on June 14 when Horrie 2HL was heard by 2ZGM and 2ZBP, R4-S4. Horrie was working Dick 2ZCF who was R2-S2 at 2ZGM's QTH. A pity they hadn't looked west and south-west, they might have made a contact; still better luck next time. It might be a good idea if some consistent skeds were kept as this has usually resulted in contacts being made an unusually large number of times when tried elsewhere. 2ZGM at Ungarie has a 4X150G final going now and is running 150w. to a 32 el. phased array. Geoff will be looking south each night at 2000 hrs. for contacts in VK3. Tom SJW at Bendigo and some of the other northern gang should be very interested in this.

Geoff reckons that conditions have generally been poor. On Sunday, 10th June, he, 2ZBP and 2ME journeyed to Tumut for the day to be the guests of Keith 2ZAA and his XYL Jean. Whilst there, Keith, ably assisted by Ross 2PN, carried out some very interesting tests on some u.h.f. gear in the way of some 10,000 meg. tx's and some 4,000 meg. tele-metering equipment. David ez-2ZES, now has a full ticket and can be heard working on the d.c. bands (another one). He is still active on 2 mx though. Congratulations to David! He's been very ill for several months but is on the mend again.

VK2 field events for June were a night hidden tx hunt and a day long distance tx hunt. The night hunt was organised by Bob 2OA who hid in the scrub near Hornsby. Dick 2ZCF was first in, followed by Jim 2PM, tailed by Dave 2AWZ. The day event was organised by Bob 2ASZ who was hidden on Ridge Road near the Burrargorang Valley. The rest of the day was taken up with a progressive fox hunt. Scores were 2OA first, 2AWZ second, and Tim 2ZTM and 2PM tied for third.

Activity on 2 mx in Victoria seems to be centred in the western part of the State. Herb 3NN at Yanac is still working the Adelaide gang with monotonous regularity, 5ZDR being the most consistent. Herb runs 100w. to a pair of stacked 30 ft. extended long yagis to span the 200-mile path. On good nights sigs run up to S9. 5RO and Bob 5ZFG have also made the grade with Herb as well as 3ZEA. More contacts could be made if the Lofly Ranges were not there, but this obstacle seems to be only a challenge to the keen ones.

Further east in VK3 there is another pocket of activity. Tom 3JW at Bendigo runs 85w. to a QQE08/40 with a 10 el. yagi at 48 ft. His converter is an E8CC front end to a 6BL8 mixer into a Gelosox rx. Tom runs a nightly sked with Alyn 3ZGA with good results. They start at about a quarter to six each night and Tom looks for Melbourne stations at seven. Others active in the area, especially during Thursday evenings are 3FO and 3ZLJ at Maldon with 3ZIK and 3SV at Castlemaine also participating.

Activity in Gippsland seems to be on the up again with Jim 3ZBV at Morwell back on the band on 144.8 Mc. looking for Melbourne contacts. Gordon 3TH at Yinnar and Graeme 3QZ at Traralgon are both stoking up again. George 3ZCG is particularly interested in Project Oscar and has equipment ready for use, particularly antennae that can be rotated in both vertical and horizontal directions. George is in contact with the organisers and is receiving information from them. If anyone is interested he asks that they contact him at 49 Savage St., Morwell. George will be pleased to help with any queries on the project.

The first of the new series of Scrambles commenced in June with over 40 stations participating on 2 mx and 22 on 6 mx. The respective leaders are Ted 3AAD city, Gordon 3AGV country (on 2 mx), and Kevin 3ZKJ (on 6 mx).

Things have been very quiet from the VK4 direction this month, even on 80 mx, so I hope they are all frantically building v.h.f. gear.

The last VK3 2 mx fox hunt was held on July 5 with Alan 3ZHN as the fox. Only three hounds turned up but a terrific night was had

by all and those who didn't come missed out on a lot of fun. Maurice 3MS ran out the winner with Tom 3AOG and Russ 3ZEZ second and third. They adjourned to the rooms for coffee and biscuits while a post-mortem was held.

Another new station on 2 mx is Zeno 3ZKH at Dandenong. Zeno is using a modified 522 tx and has a very nice signal. There also appears to be a large amount of activity in the Geelong area at the moment so there is plenty of opportunity for the Melbourne chaps to try out their gear on some slightly further than local contacts. There is about a dozen active stations in Geelong so it should not be hard to scrape up a few contacts there.

Local activity in Adelaide has been quite good as mentioned previously, with Hughie 5BC being worked as well as the VK3s. Graham 5ZAP is building a new 2 mx tx and hopes to join the workers of DX soon. A visitor to Adelaide last month was Tony 5ZAI, a keen 2 mx man from Bordertown. He made a flying visit to the W.I.A. meeting and unfortunately missed out on a 6/40 at the "Buy and Sell". Bad luck Tony—we were sorry to see you miss out on it. We can only hope it winds up as a final on 2 or 1 mx and not as a final on 60.

Bryan 7ZBE has been operating portable from Kelso near the mouth of the Tamar River and working Launceston at 5 x 9. He also heard 7RL in Stanley, 90 miles away, and may have contacted him later. Bryan heard a VK3 calling him around 27th June at 2030 hrs. He couldn't distinguish the call sign but is keen to find out who the station concerned was. On 7th July, 7ZAO worked 7PF portable at Western Junction and was heard at good strength by 7LZ in Launceston, but no contact with Launceston yet. Col is getting tired of hearing the Hobart stations at good strength and not being able to contact them. He suggests that he might wait until the rx's are improved. (Perhaps some new catswhiskers?). The distance is about 100 miles over some rather mountainous terrain, but opinion on the mainland is that it should be quite easy with satisfactory gear.

Recent gales in Tasmania have caused a few anxious nights; 7ZAI even tumbled out at 0400 hrs. to view his new "bird-perch". 7ZAV chickened (get the connection) and pulled his beam down just in case. 7ZAK found his slightly disoriented and 7ZAO had a feedline removed and hopes it is secured rather stronger now.

Two metres in VK6 seems to have quite a few regular operators with an influx of others at times. The V.h.f. Group have made application to the P.M.G. Department for permission to operate a beacon on 144 Mc. along the lines of the present 6 mx one. They will keep us informed of results with this project. 6BO and 6WG still carry out checks between Bassen-dean and Albany with quite a number of phone contacts and a few c.w. ones when signals are down.

The last fox hunt was held on Sunday 18th in the afternoon with Lance 6ZBK and Gill 6ZBW being the foxes. This proved to be very interesting with two old rivals, 6BO and 6RY, arriving in the area at approximately the same time. It was a pity that Roy's four cylinders were not quite sufficient to race away from Rolo's six cylinders. However, the result was that 6RY gained victory by a narrow margin.

Cedric 6ZBC has shifted into his new home now and since getting his beam up puts out a nice signal. Another piece of information is that both Cedric and Kevin 6ZCB have joined the gang up at the t.v. station, which now includes 6VK, 6ZAW, 6ZBC and 6ZCB. There is quite a strong rumour that a combined effort of Amateur T.V. will come from this combine. We are also given to understand that Vic is twisting some arms for some c.w. practice. (Good for you, Vic.) Bob 6BE has not shifted into his new home as yet, but won't be long so we are told. We can then expect to hear him around again, if the XYL will let him out of the garden.

288 MEGS AND ABOVE

There is much interest in 1296 Mc. in Sydney with Barry 2ZAH being the only one with a complete station. Dick 2ZCF and Dave 2AWZ have converters working and tx's nearing completion. Roy 2HO and Barry 2ZAG, also Eric 2ZDP are building gear. A shortage of suitable tubes for the final stages is holding up progress on tx's. The 2C39 makes a very nice job but they are scarce. Anyone having any of these tubes and not intending to use them could perhaps help out some of the u.h.f. enthusiasts.

Geoff 3AUX and Frank 3ZDU have skeds on 1 mx on Monday and Friday evenings at 8 p.m., anyone is welcome to join in. If you want a 1 mx contact, Frank can be heard on

(Continued on Page 19)

1961 EDITION

RADIO AMATEUR'S HANDBOOK

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VK6VF-A 50 Mc. BEACON TRANSMITTER

VHF NOTES

(Continued from Page 17)

Many 50 Mc. operators in Australasia and elsewhere have heard on 50.002 Mc. under favourable conditions, the automatic m.c.w. signal from the VK6VF transmitter located near Perth in Western Australia.

It is hoped that this description of the station may be of interest to these and others, and may encourage similar projects to be put into operation by interested parties.

The station is, of course, a team effort, constructed and operated by members of the V.h.f. Group of W.A. Inc.

AIMS

1. To ensure the presence of a signal on the 50-54 Mc. band as consistently as possible to partially compensate for the variable level of activity on that band and hence to reveal any propagation effects which might be missed due to the low activity level.

2. To provide a consistent signal to encourage local activity by aiding beam and receiver tests, etc.

EQUIPMENT

The transmitter consists of a 6AC7 modified Pierce oscillator/tripler from an 8.333 Mc. xtal, driving a 7C5 doubler, which in turn drives a single 807 with some 25 watts input. The modulator is very simple—it contains a neon tube and a single 6V6! Screen modulation is employed, and this seems quite adequate for the purpose. As a point of interest, the centre tapped output transformer from a Command receiver has been pressed into service as a modulation transformer with good results. 807 screen h.t. is applied to the tap; the 807 screen connected to one "end" and the 6V6 anode to the other. Nothing original of course, as a similar scheme has often been used to provide a cheap modulation transformer with p.p. speaker transformers in low power plate/screen modulators. Probably a step-up ratio would be superior for the screen only application, but needs must!

Tone modulation (A2) only is available; no provision has been made for A3 operation.

The neon tone oscillator is keyed direct at the earthy end of the neon tube by a code wheel driven, via a gearbox (ex a recording voltmeter), from a gramophone type induction motor (ex a discarded 78 r.p.m. turntable). The code wheel itself is a phosphor bronze disc 4 inches in diameter with the call letters cut around the circumference. Keying is effected by a wiping tungsten contact culled from an old pair of motor vehicle ignition points. These details are mentioned particularly because of early difficulties with excessive wear of less robust materials for the wheel and contact.

The antenna in use at present is a four element wide-spaced yagi, rotatable. The direction of transmission is variable, but mainly in a direction N.E. from Perth or other directions as circumstances dictate.

HOURS OF OPERATION

Naturally in a "beacon" project such as this, the greater number of hours "on air" the better. To this end an initial application was to the P.M.G.'s Dept. for a 24-hour continuous permit. Unfortunately, due to the implication of unattended operation, this could not be granted. Therefore the station is run only when the operator is in attendance. This generally means the transmitter is on the air approximately 65 per cent. of possible time. This is an average taken over an eight-month period recently completed.

Typical operating hours (E.S.T.) are 0100-1600 four days a week; 0100-0800, 1800-2400 (one day a week); 0000-2400 (two days a week).

Unfortunately, due to the proviso aforementioned, these hours do vary, but may serve as a guide. They should not be taken as actual hours. The beacon could be operating at any time as the present operator is a shift worker. Total hours run since September 1960 exceed 4,000 hours.

By the way, this transmitter has not heard of "winter slumps" in 50 Mc. activity!

RESULTS

Since the introduction of "The Beacon" (as it is referred to in VK6) in January 1959, DX reports have been received from JA, VK6, KR6, a Mobile Marine in the Pacific, and mainland VK districts.

In many cases these DX reports have been forwarded subsequently to the event as there has been no regular activity on the band at the time. Apart from Interstate and International results, intrastate reports have been most gratifying. Reports have been received, particularly, from Geraldton (260 miles), Moora (90) and Waroona (70 miles). In addition, the signal has often been employed for receiver alignment, antenna tests, etc., on purely a local plane.

REPORTS

It is proposed to continue running the transmitter on 50.002 Mc. while we continue to retain use of the band. To help justify this plan, ALL reports of reception will be most welcome and, if required, will be replied to by QSL card.

CONCLUSION

An interesting complementary project to this would, of course, be a remote continuously run recording receiver! Any takers?

Any correspondence on the subject would be welcomed and should be addressed to: The Secretary, V.h.f. Group of W.A. Inc., c/o VK6VF, 42 Purdom Road, Wembley Downs, Western Australia.

REMEMBRANCE DAY CONTEST

12th and 13th AUGUST, 1961
1800 hours to 1759 hours E.A.S.T.

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1 mx most nights. He has low of stabilised gear on 288.6 Mc. and also has a mod. osc. The rx is a grounded grid converter with an 11 el. beam. Syd 3CI at Nagambie is also running skeds with Frank and Peter 3APF at Shepparton is also on. 3ZAG has also been heard. Ron 3ZER in Ballarat has 20w. to a 3/20 and a 7 el. yagi about 90 ft. high.

Over the border in VK5, David 5AW is now running about 80w. to a 6/40 and is looking for skeds. From a recent copy of "Splatter", the University of Adelaide Radio Club's mag, we learn that 5UAT will soon be in a position to transmit t.v. signals. The various pieces of equipment are currently being constructed by members and no doubt enquiries from enthusiasts who would like to co-operate would be welcomed. Bill 5ZAX would possibly be a starter.

GENERAL

A large gathering at the June meeting in Sydney heard an instructive lecture by Arthur 2JM on "Safety in the Shack". Arthur pointed out the hazards with 240v. a.c. in the Ham shack and gave useful information on how to organise the shack for safety and convenience, pointing out the necessity of correct fusing and to comply with the S.A.A. wiring rules. He made the point that the rules are intended to promote safety. We hope that he got his message across and that the haywire hook-ups will be banished.

The June meeting in Melbourne was held on Wednesday 21st. Despite the miserable evening a packed house gathered to hear the 522 experts give various discourses on their gear. Ted 3AAD described his audio modifications. John 3ZCB spoke on his 6 mx conversion, with Jock 3CS on 6 mx and 1 mx conversions. Alyn spoke about why an 829B will not work in a 522, but had hardly finished when he was presented by one of the same by 3AAU. Alyn was last seen heading toward his shack muttering. A new arrangement was tried for general business to overcome the time factor and this was a newsletter outlining proposals for field days and possible amendments to the Ross Hull rules. These were distributed with appropriate comments so that these will come up at the next meeting and all those present should have an idea of what is going on. The meeting concluded with supper and a rag-chew.

Two outstanding qualifiers are still awaiting their certificates for the VK3 V.h.f. 100 Award. New certificates are being printed as soon as possible and further details will be posted as they are available.

In connection with the above, as well as any other award, does your card confirm that a two-way contact took place, the band of operation, date, time, signal report (RST), your usual signature? If it doesn't it might not count for any certificate or award. It is surprising how many cards omit the essential information. It should also show mode of transmission—phone, c.w., s.s.b., etc.

The last meeting of the West Australian V.h.f. Group took place at Maylands and they had a very good roll up despite the inclement weather.

At the June meeting in VK7, a lecture committee—7EJ, 7ZAK and 7ZAO—was formed to help build interest in their meetings. They intend to concentrate on demonstrations, exhibitions and so forth, rather than formal lectures. One of these will be on rx alignment using test equipment not of ready access to all.

It now seems likely that the next Ross Hull Contest will be run on a mileage basis of some form, so we're hoping for many more participants. Although VK7s don't seem to be vocal in the matter of rule changes, they have their say as their Group acts as unofficial advisers to the F.C.C. on matters of v.h.f. interest.

COMING EVENTS

The lecture for the Sept. meeting in VK2 will be on u.h.f. equipment. Melbourne v.h.f. will have more transmissions on Friday evenings at 8.30 p.m. Please remember that these notes are printed during the middle of the month and that coming events at the beginning of the month have passed by the time you receive them.

The list of DX accomplishments is growing very slowly so it may be a while before we print them. Thanks to 2ZDP, 3ZGP, 3ARZ, 3JW, 2ZGM, 5RO, 5BQ, 6RY, 6LS, 7ZAO, 3AU and others for their notes and comments.—3AAU.

S W L

Maurice Cox, WIA-L3055
Flat 1, 37 Boyd Crescent,
Olympic Village, Heidelberg,
N.23, Victoria.

How are all my VK s.w.l. friends this month? Still hearing plenty of DX? If so, why not drop me a letter or two on what you have heard. Not much mail this month, but it's enough to write this page up with all your doings, etc.

Awards.—I have been informed that they have to be re-written, so back they come to me this time and I'll write them up. Then we will see what happens. So be a little more patient chaps.

The VK3 Group intends to run a newsletter. It will comprise DX heard over the past month. Those who are interested in contributing to this letter can, when I advise you, send me a copy of your past month's log sheet, giving date, time in E.A.S.T., band and naturally call signs (DX only). If you want a copy when it becomes available, send me your name and address, plus 6/- for one year's supply—this 6/- covers postage. But wait until I advise you all, once again in this column.

Don't forget the R.D. Contest this month. Let us have the biggest number yet, of receiving section logs. The VK3 Group hope to go away again this year, somewhere, and have a jolly good time.

I have received a copy of the 1961 "World Radio T.V. Handbook" which is published by O. Lund Johansen, of Denmark, and my copy is from the Technical Book & Magazine Co. Pty. Ltd., Swanston St., Melbourne. I know it's six months old, but even after a couple of years this book is still quite usable. I have perused same and to the s.w.b.c. fan it is ideal.

It is, in my opinion, a necessity to the s.w.l.; some of the features are: Short wave conditions in 1961, reception of v.h.f. and t.v. transmissions, sun spot activity 1961, DX programmes, table of the most suitable metre bands, short wave stations of the world, and co-operating DX clubs. Now what more does one want? It's a jolly fine book, priced in VK at 27/3, post and packing 1/9. So I would advise all you keen s.w.l. to procure one.

VK NEWSREEL

VK3: Well, things are certainly improving down here for sure, an average of 20 members have been present at the last three meetings, which in my book, is very good indeed. On Friday night 30/6/61, 21 attended. Some correspondence was read, then band reports—the boys have been listening because quite a lot was reported. The election of office-bearers will be held this month so come along.

We hope to start c.w. classes soon, we have the members wishing to learn, but no one to teach us. Can some kind Amateur offer his services twice a month on the second and last Friday of each month from 7.30 until 8.15 p.m.?

Rob Young and yours truly went to Bert Stebbing's (L3050/VK3ZGD) QTH just recently to help put up shelves in his shack and more or less help tidy up his shack so as he can get back on the air. Bert hasn't been too well of late and has to take things quiet. Bert, all the VK3 boys wish you back to a speedy recovery.

VK5: Seven of the local s.w.l. in Mt. Gambier had started A.O.C.P. lessons under Al 5ZCR, but unfortunately he has to move to Adelaide and will be in the Mount area only until the end of July. They have been having lessons every Wednesday night for the last month at one of the s.w.l. QTH, so they are kept busy. What a shame they are getting a start in A.O.C.P. lessons and it has to stop. I certainly hope someone can take his place.

That's all for the VK newsreel. Hope to hear from more of the other VK call areas next month.

CORRESPONDENCE

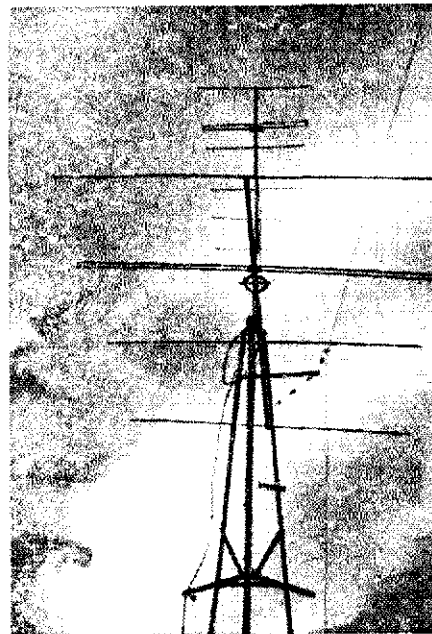
Thanks very much for your mail fellow s.w.l.s. Letters have been received from the following: BERS195/L3042 Eric Trebilcock, L2211 Chas. Abernethy, L5031 Colin Hutchesson, L6021 Peter Drew, L5039 Peter Field, VK2 Richard McKell, L3074 Mac. Hilliard, L2136/VK4 Afton Westcott.

First of all the "scores" to the end of May 1961, from—guess who—the s.w.l. of them all,

his Eric. He has 6,948 cards received for 269 countries confirmed, 40 zones confirmed. Eric has heard 277 countries altogether. This year has heard 112 countries, 37 zones, has sent out 537 reports so far this year, and to the end of May this year collected 293 cards from 95 countries in 33 zones. He collected PJ2ME and VQ8BBB to give him Nos. 268 and 269 respectively.

So far in June his rarest QSLs received were from MP4QAR, V56AJ, YV2BJ, YV4AY and ZS5KU. As a matter of interest, to the end of May, he has received 759 QSL cards from G land, 642 from DL, 323 W, 278 SM, 207 UAL, 206 OK, 190 ZS, 182 VE, 166 F, and 162 from HB. They are the leading 10 countries. He says you can see the value in keeping up to date records. I agree, Eric.

His DX on 80, 40 and 20 mx is still producing log entries, up to date he has logged 243,688. That's a lot of stations, don't you think? He heard VK0DA on 7 Mc. c.w. on 13/6/61 and on 12/6/61, 80 was very good, sigs from ZLs on c.w. On one Sunday, from 2.30 to 11 p.m., he made 200 log entries, and the best heard during that time was LA2NG/P, Jan. Maysen Island, who was on 14 Mc. c.w. Eric loves hearing cars and ships and planes mobile. Yes Eric, the KYL and I are most certainly convinced you are a real one-eyed "Magpie" supporter.



The antennae of Chas Abernethy (L2211) and son, Robert (VK2ZDA).

L2211, Chas Abernethy. From time to time Chas has told me about the take off from his QTH. He sent me a snap taken at 20 ft. from their tower, it shows due or magnetic north, south is just the same. It really is a wonderful take-off. He's a very keen s.w.l'er and builds his own gear. He's just completed a 4 inch S metre (good gosh man, are you short-sighted?). The circuit uses one side of a 12AU7. The metre is in the cathode circuit. Also nearing completion is a 3-tube 6 mx converter. He has two 144 Mc. converters, which belong to his son, and what are his son's, belong to Chas.—kiddier!!

If you remember I wrote about Chas' experiments with double conversion recently. Now here's some more dope and I quote his own words: "Believe it or not, there was an outlet already on the Eddystone for same which I discovered after taking the set out of the cabinet, so one can be lucky. The improvement to date is a little better selectivity and noticeable gain. CN81Q (Morocco) a beautiful signal and full copy. A reduction in noise level is evident; will let you know more as results are to hand. I think it was worth the effort, although the superhet, which I have is of the old 1947 vintage, so a more modern type should give better results."

He hopes to sit 24 hours in the R.D. Contest. (We will see, Chas, by your scores.)

Colin Hutchesson is still having strife with his rx, the b.f.o. being the trouble.

Gary Smythe is building a front-end for his 7-tube rx. Trevor and Colin are coming along in building the 4-tube converter and it should be completed by R.D. time. His next project is a xtal locked converter. All the best in the R.D. to the VK5 gang.

Peter Drew, L6021. This boy is keen. He comments that conditions have been very queer on 14 Mc. lately and mostly poor. Usually it is like this, he says: 0200-0500 (GMT) FB8XX, FB8ZZ, 0500-0900 Europe, U.S.A. and Canada, 1000 onwards, nil. However a few days ago at 0300 he heard VQ3HS, PZ1AX, 5PS2P, VU2CQ, HH9GS, FB8ZZ, FB8XX, FB8AA. On 14/6/61 around 0630 GMT he heard several Europeans at good strength, but they were gone in about five minutes. Then from 0630-0830 he heard WS, VES, KL7, KX6, KC4, KH6, FB8 at excellent strength with a great deal of activity on s.s.b. From 1130-1230 same day, the Ws came in with a burst and the QRM was so bad that he only logged 10 of them.

He recently took an old condenser and viciously ripped out all the plates except 1 and connected it in parallel and it gave him about 160 degrees of bandwidth on 80 mx, however in the process 40 and 20 got bandwidth spread right off the dial, so he disconnects it for them. Peter's rx for 20 mx is a National 10 portable. There is no bandwidth, but it has an r.f. stage which gives the signals a good boost. His ant. is a 180 ft. length of wire and its height varies from 7 to 20 ft. His b.f.o. is a 3-tube regen. rx, not good, but works. Peter received his Elizabeth Award, the first VK6 s.w.l. to do so. To date Peter has heard 2,500 Hams in 160 countries in two years. Very good Peter.

Peter Field, L5039. He has just come back from holidays in VK3 and VK2 where he visited Murial 2A1A and had words with W6AL. He tried to locate L2189, but could not find his QTH. He took a Type 3 rx with him and threw a long wire up a 30 ft. tree, heard Ws on 20 mx and in 40 mx ZLs, VKs and CE3XL on phone. Peter has still put up a two el. beam for 21 Mc., 30 ft. on an A frame, works like a bomb on 10 and 6 mx as well as 15. Has heard a lot of DX on it.

Richard McKell sends a short note; he wants to know more about whip ant. as he has just procured a Type 18 Mk. III. transceiver and Bill ZAQ1 is going to look into it for him. Dick wants to put it in the boat, but is still undecided—we wish you luck, Dick.

My mate, Mac, Hilliard is still going strong, has lots of plans. He's the instigator of the newsletter, he's even picked up a stapling machine for it. So he hopes a lot of you guys will be interested in it. So don't forget to let me know if you would all be interested in the newsletter.

Afton Westcott, L2136/VK4. He states "There is not a great lot to send you this time, as conditions have fallen away very steeply on 14 and 21 Mc. On the other hand, conditions are getting better on 7 Mc. and the W s.s.b. stations are breaking through with very good sigs at their peak around 7.2 Mc."

For the next two months, Afton will be away so we won't hear of much from him; so he's going to miss listening on s.s.b. which he is chiefly interested in. He had a note from DL7HA who is being pirated in "as near Melbourne" but DL7HA was never out of Berlin.

QSL CARDS RECEIVED

Seeing that only two s.w.l.s. sent in their DX heard, I won't include that, but in its place cards received. L3055: XWAL, W3HUG, W0CPM, WASKO. BERS195/L3042: MP4QAR, V56AJ, YV2BJ and ZS5KV, PJ2ME, VQ8BBB. L5039: VSGAE, G3GGG, ZL3MF, G3NVA and many VKs. L6021: DL3DC, VQ8AFP, VU3SR, VQ8ABP (Cargados, Carajos Shoals), a rarey. L2211: W2WZ, VR4CB, K6RTC, KL1BNL, EA-2FE W5RNL, W8PBL, WNTNTN, DU7GE, W3HUG, I1ANY.

DX LADDER

	Countries		Zns. S.s.b.		S.s.b. No.	No. Cds.
	Conf.	Hrd.	Conf.	Hrd.		
E. Trebilcock	269	277	40			6948
A. Westcott	65	157	30	92	31	
M. Hilliard	59	185	25			154
M. Cox	31	198	19	64	2	92
C. Abernethy	24	52	19			67
T. Heywood	16	90	11			21
P. Drew	15	158	13			29
F. Field	13	118	9			
R. Wood	3	3	3			3
R. Thompson	2	7	2			2
D. Allen	2	18	2			5
T. Mills	2	14	2			2
J. Walker	1	8				1

Well, there are quite a few alterations this month. How do you like the two new columns? Send in your scores and remember my warning. So lads, all the very best DX. 73, Maurice, L3055.

NOTES

FEDERAL

R.D. CONTEST, 1961

This year the Remembrance Day Contest will commence at 1800 hours E.A.S.T. on 12th August and conclude at 1759 hours E.A.S.T. on 13th August.

The Contest will be opened by a tape recorded address by the Governor of New South Wales, His Excellency Lieut.-General Sir Eric Woodward, K.C.M.G., C.B.E., D.S.O.

All Australian Amateurs are asked to particularly keep off the air for a period of fifteen minutes before 1800 hours E.A.S.T. on 12th August whilst the official W.I.A. stations are transmitting the Governor's opening address.

At the conclusion of His Excellency's opening address there will be two minutes silence in memory of those who paid the supreme sacrifice.

GENTLEMEN'S AGREEMENT

On the bands allocated to the Amateur Service there has always been a "gentleman's agreement" that portion of the frequency assignment would be set aside for c.w. operation and portion for phone operation. In this regard the lower end of each band has been agreed to for c.w. operation.

With the "low" in sunspot minima approaching over the next few years, the conditions on the 3.5 and 7 Mc. bands are improving at a great rate. In the past the first 50 kc. has always been set aside by a "gentleman's agreement" for the use of c.w. operators, a fact which seems to have been forgotten during more recent times. The W.I.A. would like to draw the attention of Amateurs to the fact that it is imperative that some form of dissection be agreed to in respect of c.w. and phone operation, otherwise nothing but intolerable interference can ensue.

50 kc., as agreed to in the past, has been a reasonable portion for c.w. This may have to be looked at again in view of the relatively new and popular s.s.b. transmissions, but at least let us realise that it is better to have a c.w./phone dissection than to have more QRM than already provided by international broadcasting and irrational c.w./phone Amateur transmissions.

Sunspot cycles DO change the operating habits of Amateur stations and in view of the conditions attracting operating in the 3.5 and 7 Mc. bands it is all the more worthy that Amateurs themselves arrange their own operating habits. We suggest leaving the first 50 kc. to the c.w. gang. With phone using the remaining 50 kc. of the exclusive 7.0 to 7.1 Mc. assignment. If any further shared assignment is agreed to then phone can occupy this along with s.a.b.

POSTMASTER-GENERAL'S ADDRESS

The 1961 Convention of the Institution of Radio Engineers was opened by the Postmaster-General, the Honourable C. W. Davidson, O.B.E. In his opening address, the Postmaster-General made reference to the Amateur Service in Australia, saying, "In addition, some 4,000 Amateurs make radio their hobby. These enthusiasts are not only improving their knowledge of the radio art in their own time, but are promoting goodwill through their contact with other Amateur operators in various parts of the world, in addition, of course, to transmissions in times of emergency."

FEDERAL QSL BUREAU

Divisional QSL Managers please note the following changes in the A.R.R.L. QSL Bureaux:

- KL7—Box 6228, Airport Annex Anchorage, Alaska
 - KP4—Joseph Gonzalez, KP4YT, Box 1061, San Juan, Puerto Rico.
 - W2-K2—North Jersey DX Assn., Box 303, Bradley Beach, N.J., U.S.A.
- A reminder is also issued that s.w.l. cards for U.S.A. should be sent to Mr. Le Roy White, 39 Gannum St., Ballston Spa, N.Y., U.S.A.
- The N.R.R.L. seeks publicity for the Scandinavian Activity Contest which is to be held

as follows: C.w. 1500 GMT, Sept. 16, to 1800 GMT, Sept. 17, and Phone 1500 GMT, Sept. 23, to 1800 GMT, Sept. 24. Full details may be had from this Bureau.

Enclosed with a bundle of back-dated QSLs from the Israel Amateur Radio Club is an apology for the delay in forwarding. Several untoward happenings contributed to the hold up.

Cards through the Federal Bureau during June totalled almost 5,000. This was the heaviest month since May 1958.

The most ambitious DX-pedition ever dreamed of is being organised by W4ECI and W4BPD. The former will be the man back home, and Gus the man doing the operating from overseas. He plans to get moving some time in January 1962. According to present intentions the trip will include such places as EA6, ZA, SV, YK, 4X5, EA9, CR5, EA0, VQ1, Tromelin, St. Marie, Glouriuses, Comores, Isle Europa, VQ8, VQ7, FL, MP4, 9K4, CR8, 9M1, AC4, AC3, ACS, CR10, etc., etc.—76 countries in all. Just what form of transport is to be used is not stated. (A flying carpet maybe.) S.s.b. and c.w. operation is proposed from every location on the list if the necessary permission can be obtained. Good luck Gus and it is hoped your fantastic plan achieves reality.

—Ray Jones, VK3RJ, Federal QSL Manager.

FEDERAL AWARDS

Kuwait-Saudi Arabia Neutral Zone will be given new and separate listing in the Australian D.X.C.C. Countries List. This neutral zone is located between Kuwait and Saudi Arabia and is territory over which sovereignty has not been established and from which Amateur Radio activities have recently been conducted. Add to list published in "A.R." in January '61.

—A. Kissick, VK3KB, Awards Manager.

NEW SOUTH WALES

GENERAL MEETING

The June general meeting of the N.S.W. Division was held at the customary meeting place, Science House, Gloucester St., Sydney, with the President, Bill Lewis, VK2YB, presiding. On this occasion the attendance was somewhat disappointing as only some 37 brave souls defied the elements.

However, those present heard a very good lecture on Transistors, and the lecturer for the evening, Eric Warren, of the Dept. of Civil Aviation, gave details of many of the types of transistors which are in daily use already, or which are being developed for future use. Eric traced the methods of construction of such types as PNP, NPN, drift transistors and Meser types, dealt with their electronic structure and further explained the typical operation of the various types.

Developments at present in hand are in a most interesting stage and it would appear that in a year or so come that transistors will completely supersede valves in any application.

The vote of thanks to the lecturer was proposed by Norm Beard, 2ALJ, and passed by acclamation.

The Federal Councillor, Pierce Healey, 2APQ, made a lengthy report and also dealt with agenda items which will be dealt with at the next Federal Convention to be held in Perth at Easter 1962, and for which any agenda items which members may have are urgently required for inclusion.

COUNCIL MEETINGS

The Council of the Division is meeting bi-monthly at Headquarters, 14 Atchison Street, Crows Nest, and again on 29/8/61 all Councillors were present in addition to some visitors. A letter of resignation was tendered by Norm Beard, 2ALJ, who finds his work with the Division incompatible with his daily duties in another sphere. Council accepted his resignation with regret and placed on record the thanks of Council and members for the untiring work Norm has done on our behalf over many years.

SILENT KEY

It is with deep regret that we record the passing of:—

VK4EG—E. ("Ted") Gold.

VK4PN—Russell F. Roberts.

The vacancy thus occurring on the Disposals Committee was filled by the election of Keith Jeffcoats, 2BK, to that body, and a further change is that Vol Molesworth, 2VO, was elected as Disposals Secretary.

By the time that this column appears in print the 1961 Call Book will be available and also log sheets are available to all who require them in the many contests which will be held in the coming months. Further details will be included in your Bulletin and on the weekly broadcasts.

A sub-committee was formed to allocate the Adams Trophy, which is given annually for the best VK2 article appearing in "Amateur Radio" in the past year. The committee consists of Harold Burtoft, 2AAH; Vol Molesworth, 2VO, and Ted Whiting, 2ACD.

The Southern Tablelands Zone Club of Goulburn has received its call sign, VK2ATR.

JUNIOR RADIO CLUBS

Following a proposal by Reg Black, a committee has met to discuss the formation of Junior Radio Clubs in schools, colleges and other youth organisations.

It has been felt for some time that there is a need for such a means of encouraging the study of radio theory, thus laying the foundations for a future career in the electronic field. Council has discussed the report with the two councillors who attended this initial meeting, 2AAH and 2MP, and has accepted the scheme in principle.

Following further meetings of the committee, undoubtedly steps may be taken to implement the proposal.

TAPE SERVICE

Again a reminder to the country clubs and groups that there are several excellent lectures on tape which will allow of the lecturers we have here in Sydney to be heard in the country. We have had several letters of thanks regarding these tapes during the past few months and can commend them to you.

The tapes available are as follows:—

- T.V.I., by Horrie Oakes, VK2FA.
- Master Oscillators, by Joe Reed, VK2JR.
- S.S.B., by Leo McMahon, VK2AC.
- Transistors, by Harold Burtoft, VK2AAH.
- V.H.F. Omni-Range, by Peter Griffin, of D.C.A.

Further tapes are being organised and all are readily available on application to the Education Officer, who will immediately arrange transit.

AUGUST LECTURE

The lecture arranged for the August general meeting will be given by Harry Edwards, of the University of N.S.W., and his subject will be H.F. and V.H.F. Antennae.

The following month (September) the lecture will be on "Transistors in Communication Receivers" and will be given by Bob Zuker, of Commonwealth Electronics Ltd.

General meetings are held at Science House, Gloucester St., Sydney, on the fourth Friday of the month, commencing at 8 p.m. Follow the crowd and join in an interesting and instructive evening.

SHORT WAVE LISTENERS' GROUP

Cheery greetings to s.w.l.'s in all States, this being the first opportunity I have had to subscribe to the Divisional Notes since the present committee of the S.w.l. Group took office.

Activity in VK2 has been on the increase of late, many letters of inquiry having been received regarding our activities.

At the May meeting at headquarters, 14 Atchison Street, Crows Nest, some 20 members enjoyed an interesting talk by Ted Whiting, 2ACD, on S.w.l'ing, Antennae and Receivers. The June meeting was devoted, as is our programme, to general business which many matters concerning the Group were discussed. Many orders have been received for our manual on the AR7 receiver to date and enquiries will be welcomed. This is the first of a series of re-prints of manuals on Australian disposals equipment and these will all be available at the cost of 10/- plus postage to ALL W.I.A. members. Orders should be addressed to the Secretary, S.w.l. Group, at the above address. The first batch of 50 have already been sold out and a second batch will be ready immediately. The contents of the 27 pages cover data on each stage of the receiver complete with circuits, complete parts list and alignment procedure. Next in the series will possibly be the SCR522.

The July meeting was given over to a talk and demonstration by Vol. 2VO on Modifications of Disposals Equipment which was only one of the many lectures arranged by your committee.



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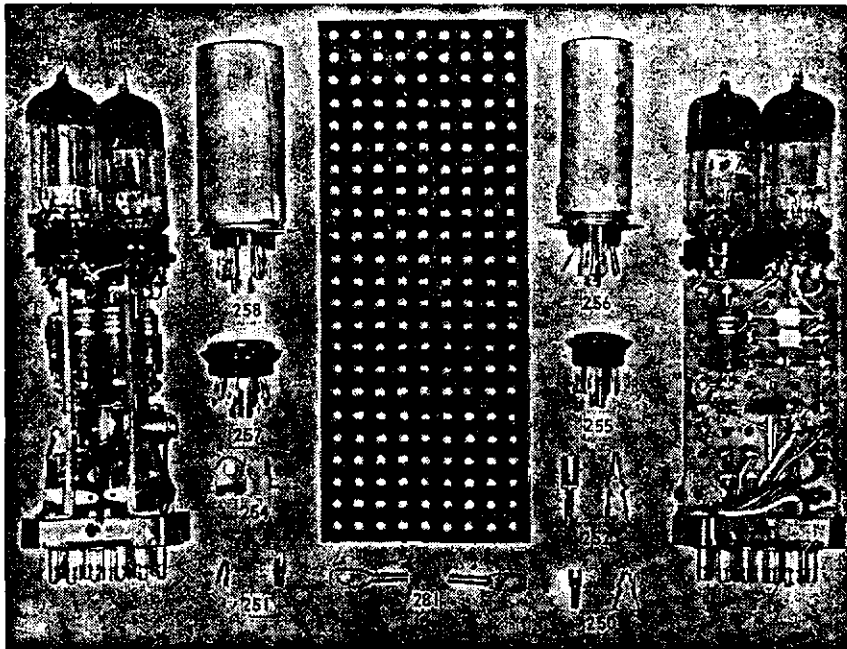
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HUNTER BRANCH

Big success news this month chaps, but first of all some news of the June meeting. Those present were, our distinguished visitor and lecturer for the evening, Maurie Myers, ZVN, and the other welcome visitors Jim 2ZKT and Messrs. L. T. Warden and R. Jackson. Members and associates there were VKs 2ZNF, 2SF, 2XQ, 2AYL, 2AFA, 2XT, 2ZJG, 2ZSN, 2AEE, 2ZJR, 2ZL, 2AQR, 2AIY, 2PZ, 2ZCU, 2AYF and 2AKK with Messrs. Sutherland, Blyth, Stobbs, Finlayson, Munn, Mullen, McLachlan, Harker, and Forrest.

As you can see from this list the roll-up was the best the Branch has had for some time and the reason, no doubt, was that Maurie was to give his lecture on Radio Aids to Navigation. It is always a pleasure to hear someone who is so thoroughly familiar with his subject as our lecturer and with the able assistance of Stewart 2AYF, the evening was an unqualified success. Stewart, I might mention was the man behind the slide projector and we saw everything from the first Australian airline radio installation to the proposed craft to be used on the Kangaroo route one day. We all know now that AGACS (pronounced AJAX) is something pretty complicated to do with navigation as well as being swell for cleaning the kitchen sink. Seriously though, you chaps reading this who did not come missed something really worthwhile. John 2XQ responded on behalf of the Branch and he was supported by the acclamation of the members.

Did I say big success or did I say—well here it is. No less than three of our associates are well on the way to becoming full members following their success in the recent A.O.C.P. exam. They are Gordon Sutherland and Tony Mullen—limited licence qualifications, and Ian "Sherwood" Forrest—full licence qualifications. Our congratulations go to you chaps and hopes that we'll soon hear you on the bands. Gordon is well under way I believe and has already procured a piece of aluminium and has bent it in the shape of a chassis. I know he has the crystals for his converter, so it seems that all that is needed now is a little bit of application and an application form before we hear his dulcet tones gracing the ether.

As for Tony, rumour has it that he does not intend to take out his limited ticket and that he is studying hard for the Morse. This probably is the reason why a poor featherless bugger has been seen sitting on the front fence of a certain Toronto residence, whistling what sounds like an ancient Egyptian hieroglyphic Morse character. Poor little bird.

And Ian, our youngest examinee, already has scrounged a disposals tx and rx from your scribe because, he says, time will be short between now and the Leaving Certificate and he intends building his own rig then. I suppose we must forgive "Sherwood" for this. After all, he did get the quiz at seventeen!

Another resident of our district, or should I say part-time resident, who was notified of his Limited ticket pass, has asked that his name remain anonymous so that he may have a lash at the Morse and pass, next time. Big Secret! I do know that he'll be almost a cert for the next exam.

And what about the OMs who have had their tickets for years. What are they doing? Well, there's one I know that should not be doing what he did the other morning. This gentleman, who reckons he's in the city of Newcastle, when everybody else knows that he has a view of the Phenyle swans from his front verandah, has really taken the biscuit this time. The other Sunday he was heard to say that it was fine and warm with hardly any breeze while not 500 yards distant it was 80 degrees minus with seven-eighths cloud and blowing a gale. Now we know he has remote control from his bedside! Same gentleman, different story, the other day was heard by his XYL while putting out the milk bottles. But, and here's the pay-off, his well modulated voice came from the speaker of a broadcast transistor portable held in the hand of a grinning, callow youth promenading nearby. Enter Shannon, singing and dancing!

And while on the calls beginning with Z, the v.h.f. boys are beginning a worthy enterprise in the form of activity mornings or evenings, whichever applies. Those present, on the air, at the latest of these were 2AYF, Stewart, with Nell 2ZCU, Stan 2AYL, Merv 2AAM, Ron 2ZJR, Mac 2ZMO, Fred 2ZAP and Ian 2ZIF. If you absent Z boys want some details of how you can get in on all this, contact any of those mentioned above and they will help you all they can. After all, that's what it's all for, helping and the exchange of ideas.

One day soon, Norm 2ZNF looks like joining the happy throng as my spies tell me he is almost ready to fire. And as for mobile

operation, Bill 2XT has forsaken his thunderbird and is progressing with some 144 gear in the XT Chev. Any resemblance between this vehicle and a tram is purely coincidental. I suppose that Bill is preparing for Blackalls and if any of you other chaps are preparing also, remember that it is on the Saturday of the Six-Hour Day week-end that we expect to see you at the Annual Dinner. This should be bigger and better than ever before as we are changing the venue to the Esplanade Hotel. I am not able to say who the speaker will be, but you will be notified in the Bulletin as the time draws near. As for the field day, follow all cars carrying weird beams and things and let's have a good roll-up. After all, it is a great satisfaction to the organisers when many members come along to such a worthwhile activity as the field day.

Another member who has had a field day lately is Lionel 2CS. From work upon his Donald Duck he was called to an emergency the other day when one of his junior admirers asked him to help with some 27 Mc. activity, to wit radio control of a model. Lionel now knows a great deal more about this form of Amateur Radio than he did before. And, by the way, did you know that Bill 2XT has a model which he whistles from the end of the billiard table, and it responds. I'm beginning to think that Bob 2AQR does the same thing with the balls themselves, the way he defeated me the other night.

Bob, by the way, has been seen lately carrying an ATS under his arm and perhaps this is the forerunner of further activity on the h.f. bands. Louder signal from Westy please! I know what it is.

When the local t.v. station is established on the top of Sugarloaf, those in the shadow will worry not about t.v.i. Then we'll hear some modulation. Another man with modulation a plenty is Jim 2AHT. What this man does to my speaker come is nobody's business. I must arrange some form of early warning. I've not worked Varley 2SF recently, but it is said that he now has a room in the house where it's warm. This may help to promote a healthier signal and a more frequent one. How about it, Varley?

And I should talk. However long it is since a signal was heard from Bolton is anybody's guess. That Mullen man came and cut down all the trees and took the aerial with them.

It is reported that our hard working Morse practice man from Kotara, Fred 2AEE, had a strange experience. A junior acquaintance of his sat in front of the t.v. set and seeing no picture, asked why it was that Mr. Eade got green worms on his t.v. and they got none. This seems to suggest that there may be a c.c.o. somewhere about. Of course I cannot vouch for the authenticity of this story.

Another member from the same vicinity, one Raspberry Jim and his Juliet have returned safely from a journey to far away VK4, in robust health and sporting a well filled log book. You were putting in a f.b. signal Les. Someone else who is getting a f.b. signal now is Belmont Bob. He decided to put an aerial on his 1155. It goes much better now thank you. He's thrown the string away but he does have a problem. How to get a half wave on 80 in 108 feet? I do know one active member who reckons that a folded dipole would do the trick. After all, it is only half as long as a dipole—or is it? Was his face red?

And speaking of red faces, reminds me of the colour Stewart displayed before his eyes when the man from the contractor told him how much it would be to run wires to his new shack. Another 8 db. would have bought him a nice new thunderbird. The shack is progressing though at a great speed and power or no power, it should be finished soon.

Ron 2ASJ has been doing well lately and is putting in a mighty signal on 40. I think it must be a good place for Amateur Radio from the sands of Stockton, but not so good for t.v. says Jack and that is why you'll not hear these two larrikins after 1800.

Activity from Cessnock on 288 may be forthcoming shortly according to what Chris 2FZ and Peter 2AIY have said. There is talk of running a test with a lakeside Amateur. I noticed the other day that the big mast at Chris' was resplendent with a new coat of aluminium paint, so things are looking good anyway. Harry 2AFA is still putting in a mighty signal from Teraba and it's real f.b. to hear him on regularly. I think Harry is another oppressed Amateur who waits patiently for the local t.v. to begin. I do hope that when the joyous day arrives many of us will have less worries than at the present.

By the way, if you have any worries, come to the meeting on Friday week, that's the 11th, and if they are anything to do with s.s.b. then there will be somebody there to help you along. That man will be Leo 2AC.

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and what he doesn't know about sideband isn't worth knowing. So let's have another good turn out even if it is a bit cold. If you feel like seeing this whistle demonstration then you'd better come to Bill's (2XT) on the fourth Wednesday, which is 23rd. He will show you. The monthly meeting is held at the University of N.S.W., Tighes Hill, and all the locals around Cook's Hill know where Bill lives. See you there. 73, 2AKX.

BOOBAGUL HIGH SCHOOL RADIO CLUB

Good news from us this month chaps. Ian has his exam, passed and is waiting for his ticket. He may have the call sign by the time this appears. We of course already have ours. If you are looking for us and you hear 2ATZ, then there we are. The boys are looking for contacts on Mondays, Wednesdays and Fridays, 1300-1320 and 1530-1615 hrs. The crystals we have are 7050, 7075, 7100, 7125 and 7140 kc.

Thanks to all concerned, we now have a transmitter made by the club members with a 1825 in the final, about 20 watts and plate and screen modulation. Thanks to all those chaps who have given us a QSO and especially

to Harry 2AFA and Jim 2AHT, who have helped us to get a reasonable signal on 40. We may even be on 20 one day Jim! Look for us in Education Week also. We hope to be on nearly all day on 11th August, our open day. See you then. 73, 2ATZ.

BLUE MOUNTAINS SECTION

The usual monthly meeting was held on 18th June in the club rooms at Lawson where seventeen members were present to hear a lecture on "Antennae," etc., from Harold 2AAH. Those present were 2QA, 2ZMS, 2ZFB, 2HZ, 2ADF, 2AVN, 2ART, 2ASZ, 2ABK, 2NK, 2AVK, 2RM, 2ADA, Noel Walker, Derek Boyd and Jack Ferris.

The meeting closed in record time at 8.55 p.m. and Harold took over with the lecture of the evening discussing all types of antennae including mobiles, which lasted two and a half hours. Supper followed and Harold was still answering questions at midnight, which added more wood to the fire. Thanks Harold for a very excellent lecture and we all hope you enjoyed your stay with us, even though it was windy.

Warwick 2ZMS was duly welcomed for the first time after not long moving down from the "cop shop" at Greta to Mt. Drullit. Warwick has a very nice sig. on 2 mx using a converted 522 tx and receives with a xtal locked converter to a h.f. receiver and then a Q5er, some twelve tubes or so. So all you have to do is to put your oscillator on and 2ZMS will hear you.

Up the mountains, Dave 2NK, at Lawson, is almost on the air with 2 mx and 40 mx mobile. Dave has a few trips to make as well as "Operation Picnic" soon and is killing two birds with one stone. Good for you, Dave. Coming down the mountain to Blaxland, my spies tell me that Norm 2QA has been on 40 mx and I understand that Norm talked 2UH (ex-2ASV) mobile from Springwood down to yours truly at Glenbrook. Kev. was slightly off course, what! Apparently he had been calling 2ADA from 1400 with no luck; no wonder, the receiver was off.

Al 2ZFB is building new gear on 6 mx to take away to New Guinea and I believe he will be away for two months. Looks like Al is setting up to work back home. Jack 2AAT and 2ADA mobilised to Katoomba the other Saturday to see the snow, barbecued lunch at Wentworth Falls, and a good time was had by all.

Ken 2AVN is working on his modulation for 80 mx and hopes to have it "A1" by Friday, 14th, which reminds me that the meeting decided to have a general get-together on the second Friday of each month, starting from 14th July, on 80 mx and 2 mx at 2000 hrs. —2ADA.

VICTORIA

MIDLANDS ZONE

An informal but useful meeting was held on 1st July to promote activities in this Zone which have been sadly neglected in recent years.

Much to the delight of the organisers, fourteen members attended and amongst these were 3FO and 3ZLJ from Maldon; 3ZKV, 3JW, 3UR, 3ZFB, 3ACN, 3QQ, 3VV and 3FY from Bendigo; 3BM, from Quambatook; 3SV and 3ZIK from Castlemaine, 3APJ from Kyneton.

The meeting was suggested by a number of these operators who have been conducting a two-metre hook-up every Thursday night which, although informal, has been noteworthy for its regularity and it was felt that this

ATTENTION ALL VICTORIAN AMATEURS

Until further notice the Victorian Division rooms at 478 Victoria Parade, East Melbourne, will not be staffed during the day, and no meetings will be held there.

Please listen to the Sunday Broadcast for details of the new meeting place and the office phone number.

All mail should still be addressed to P.O. Box 36, East Melbourne, C.2, Victoria.

would be a good basis on which to institute an official Zone hook-up. It was so decided and in future will commence at 7.15 every Thursday night.

The only exception to this programme was to have the hook-up on 80 mx on the first Thursday of each month to provide for those members without 2 mx gear and to act as a stimulant to the Z call holders to obtain their full ticket.

A programme of future activities has been tentatively drawn up and the first outing in September is to Mount Tarngower, the exact details of which are to be discussed in the Zone hook-up so that those who are interested can fire up the converter or wait until the next 80 mx hook-up in August.

At the end of the meeting, which at times developed into a v.h.f. group discussion, Neville 3ACN showed colour slides of the many W Hams he visited on his recent trip to the States. Although the faces of these Hams were not known to many, their voices were, as several are regular occupiers of the DX bands, probably the best known being Newt WBCR.

The outcome of the meeting was that a great deal of re-building will be conducted to t.v.i. proof low frequency tx's and to construct new v.h.f. gear.

3FY is endeavouring to t.v.i. proof a 522 despite the sceptics who say it can't be done although the book says it can. 3ACN is acquiring 150w. on 2 mx which, apart from helping him to join the Zone hook-up, will probably delight the ears of v.h.f. enthusiasts in the rest of VK3 land. With a converter feeding into the 75A4 and stacked five el. yagis in the highest spot in Bendigo, 2 mx contacts

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should be made without any strain. Tom 3JW is active mainly on 2 mx with a converter feeding into the 10 mx band of a Geloso TX. The tx runs 75w. to a QEQ06/40, well modulated, with a 10 el. yagi but crystal limitations place Tom's signal in the QRM in Melbourne.

Six months work on the part of 3VV has produced a t.v. free tx for 20 mx, the only band this DX hound works, but the verdict after the effort is "never again". The results have been worthwhile but now the other aspect of t.v. is intruding to reduce operating and that of course is the urge to view the monster. Jack has a very good location for transmitting, but it is also an excellent one for t.v. reception and a good picture is hard to resist.

MOORABBIN & DISTRICT RADIO CLUB

For the past few months the Club has been quite active both radio wise and socially. Eighty meter tx hunts have been very popular, a white elephant night proved a successful venture, and members have generally been active in various fields.

Some idea may be gathered from the following personal bits as to the activity of members. Our President, Arthur 3AWO, is in the throes of re-building, putting up quad antennae, and getting set for mobile. Our Vice-President, Ken 3ACS is mostly building and doing some 14 Mc. activity. Our Secretary, Alf 3LC, can be heard on 7 Mc. a.m. most evenings in sked with 3SA and others, also operates 144 Mc. some nights. Our Treasurer, Peter 3APD, is occasionally on 7 Mc. a.m. Our Asst. Secretary, Harold 3AFQ, is active on 3.5 Mc. c.w., and is doing some building and testing for v.h.f.

Jim 3KE is heard on 7 Mc. a.m. occasionally, as is Bill 3JE. Bruce 3BM is very active on s.s.b., 21, 14 and 3.5 Mc. Max 3DF is also quite active on 14 Mc. a.m. as well as 7 Mc. mobile. Stan 3TE and Bob 3NZ are mostly 14 Mc. a.m. Ed 3EM can be heard on 7 Mc. d.s.b. Stan 3ZE is very often mobile on 7 Mc. and operates 144 Mc. Bill 3CB mostly 14 Mc. c.w. and 144 Mc. Norm 3AZL can be heard most nights on 7 Mc. a.m.

Members are taking monthly roster to keep 3APC, the Club station, on the air and it depends who has the month on as to the frequency being operated.

Future activities can be summarised: 80 mx TX Hunts on the evenings of 4th Aug., 1st Sept., 6th Oct., 1st Dec. and any other time that may become practical. The general meeting of 18th August, Kel 3ZFQ is giving us a lecture on "Crystal Filters"; that of 15th Sept., some colored movies are being shown, and the night of 20th Oct., Lex 3AIL is lecturing on "Single Sideband." 73, 3LC.

QUEENSLAND

THE SUNSHINE STATE

Well, the enemy "time" has caught up with us again. What have we done in the last month? As far as the W.I.A. is concerned the important events were the June Council meeting, the Queensland Division Convention at Nambour and the usual monthly meeting at the State Service Union Rooms.

The June Council meeting was held at President Jim's QTH on Friday, 9th, and we did not finish by eleven o'clock, and Mrs. 4PR put on another good supper and we left the washing up to Jim who still said "goodnight" with a smile. Again thanks, Mrs. 4PR.

Jim 4PR was in the chair, Bill 4WX did what he could of the Secretary's job, he hasn't taken over yet, Keith 4DG was keeping both eyes open for the odd shilling, Ken 4VM did Hamsard, while Bert 4AC, Evan 4EF, Jack 4JF, Ron 4RL and myself had to use s.s.b. to get heard.

Printing of QSL cards was discussed and I have the job of following the matter through. It's well on the way to the designer's desk, in fact. Illness among members was discussed and where councillors knew of a case, someone has looked that member up, but until Keith's passing, for instance, no one knew that he had been ill. So please, chaps, pass that information along.

Members, whilst sorry to hear of the loss of two of our members lately, will be happy to know that in each case a wreath was forwarded and Mrs. Hawkes has already thanked us.

Some discussion took place on matters handled by the Treasurer and in future we hoped to have our books audited quarterly and a statement reported quarterly at a monthly general meeting. Evan reported on the £1 box situation and got a few names to bring that up to date. A few useful crystals should be available soon.

OBITUARY

RUSSELL FLEXMORE ROBERTS, VK4FN

June 12, 1961, saw the passing of an old timer in radio, Russell Roberts, VK4FN.

Russ was well known as a musician, Alderman and Radio Ham; he was associated with the Flying Doctor Service, was with the first B class radio station in Brisbane and was Treasurer of the Aero Club up until his passing. For 12 years he was Chairman of the Brisbane City Council Transport and Electricity Committee. His activity in Ham Radio was for many years prior to this time and again in the years after this period. It was while in the office of the Brisbane City Council he endeavoured to obtain a lease of land in South Brisbane for a home for the Queensland Division's station VK4WI, but this move was not proceeded with.

The personality of Russ is reflected in this flash back to the 1948 Annual Dinner of the Queensland Division of the W.I.A., when proposing a toast to the W.I.A., Russ spoke of the pleasure it gave him to speak once again of grid leaks, bottles, etc., and mentioned that although his activities did not allow him to be active as a Ham, he often took a look around the various bands—a little different from the old 30 metre days; he continued in appealing to all Hams to stick to the W.I.A. and work hard for the Division.

All Amateurs everywhere offer their deepest sympathy to Mrs. Roberts and family in their sad bereavement.

We did not get time to finalise our monthly meeting lectures, but there are plenty available and I'll have no trouble making up a programme for submission to next Council meeting. My remarks and notes of last month on lectures still stand. Just give me an idea of what you want. Some of the technical talks proposed are antennae, radio propagation, and recent research. Ionospheric prediction and theory, ionospheric research and sporadic E, transistors—all will be short and suitable for our meetings.

At the June meeting in the usual Elizabeth Street rooms, Jim 4PR was in the chair, Bill 4WX read the minutes, but we didn't finish the business until after nine. Main business was voting on preferences for a "John Moyle Memorial," the details of which will probably appear in "A.R." Suffice to say that first preference was the essay, followed by the s.s.b. competition and then the field day. Jim 4PR had another suggestion, renaming an existing competition, for fourth preference. Vince 4VJ was thanked for his efforts with the Convention. We'll have to get the business over sooner as all lectures should be finished by 9.30 to allow time for questions and to let people get home in good time.

Vince 4VJ went over the transmitting side of s.s.b. very capably I thought, and I'm sure had there been time there would have been a lot more questions. Bill 4WX passed a vote of thanks, carried by acclamation. Evan brought along some bargains in tubes and there was a ballot for transformers. We were happy to have John 4FT, a Past President, along and taking an interest in the meeting.

"Ock" Alder 4JB is getting interested again and we hope to see him at our meetings. I thought by now I'd have shanghaied "Tibby" 4HR to a meeting but I'm beginning to suspect I'll have to get a certificate from "Doc" 4MO to get "Tibby" along. He, 4HR, was spotted having a game of golf with George 4GB recently.

Frank 4SH gets some good QSLs on 21 Mc. Norm 4TY, who has been successfully collecting various certificates, has plenty of DX calling him on 14 Mc. Keith 4PM, a busy man catching up on QSLs received, when he arrived back from Davis after a year away. Talking of QSL cards—to prevent unwanted QSL cards taking up space and time, it is proposed to list about six call signs each month in "QTC," "A.R." and over 4WI, in alphabetical order. Cards of these call signs not claimed after a period of one month will be returned to the sender as "unclaimed." This month's list is 4AB, 4AC, 4BF, 4BT, 4GE, 4GC.

Southport Radio Club members are getting keen on 144 Mc. and soon the third 522 will be in action. Because of his pending transfer to the Murwillumbah hqdr. of the broadcasting company to which he is attached, popular Hon. Secretary, Ray Rumble, plans to tender his resignation at the annual meeting of the club on 19th July. It is not because his time is entirely taken up with 2 mx and the thirteen element beam for that band with which he is playing. A number of the Southport club

boys are keen on getting Dell 4RJ, who has not been well, on the air again very soon.

Now about "mankins" or "mannikins." They are dummy heads, life-like, with a tube running from inside the lips to an inflatable bag where the chest would be. Unless the head is held back in the correct position, air cannot be blown into the "lungs." All "contact" points are rapidly removable for sterilization. State health authorities require a high standard before mannikins are approved for instruction of "mouth to mouth." Everyone should be familiar with this method, which so often recently has proved itself, and the best way to be sure you are capable is to try yourself out in a practical way. So come along to our August meeting where we will have experienced instructors, and some interesting films. Don't YOU be found wanting. We hope "Doc" 4MO and David 4DP can be along to help with queries that only medical men can answer.

Have you noticed the absence of VK4 station and personnel photographs in "A.R."? Surely we have better looking blokes! We have more sunshine and some good stations worth photographing. Let me know the men with their stations and I'll do the rest, but I'd prefer to be "beaten to the post" by someone "coming good." The same goes for technical articles. What about it, VK4s?

Have you met Keith 4DG's friend, Gertrude? She rarely leaves his side—so attached are they. Ask for an introduction.

I've been told that on 20 mx sidebanders outside the U.S.A. and Canada are working a little higher than 14.1 Mc. in order to avoid the intense U.S. congregation of the 14.3 Mc. s.s.b. area. Librarian Ken 4VM asks that when requests for a particular book are made, would that person please state which article they are interested in so that if the particular book is not available, another book with a similar article may be forwarded. Ken is a bit diffident in stating who got the crossed dipoles this month, but I think it was Herb 4KM.

4WX heard the last few mornings working 4BJ and giving Institute news. Bill can be heard calling members of W.I.A., reminding them of general meetings. 4WX and 4UX see "eye to eye" as they are both in the optical profession. John 4RZ has sent 4WX a new front cover for his Geloso tx. Thanks, John. 4VR is building a new rig and he will be situated in comfortable quarters inside, instead of outside his dwelling. Rick is one of the "old guard" and can be heard on 20 mx on Sunday morning W.I.A. hook-up. 4ZM is as reliable as ever on the same band and he controls the session very efficiently.

It is not surprising that such a large body of chaps in close and regular contact should hear of some Amateur's trouble and desire to help. Much inter-station visiting has been done—"eye-ball QSOs"—and recently Frank 4FN told us to get busy and get "Dell" 4RJ on the air. Accordingly, George 4GG, Alf 4QL, Bill 4WS and Stan 4SA proceeded to Dell's QTH at Burleigh in Stan's car. The outlook from Dell's eyrie is wonderful as he is on the side of a steep hill overlooking Tallebudgera and the Pacific. An east-west dipole would be ideal for southerly propagation and with the help of a little diffraction Dell should also pump a hefty signal up north. I had last met Dell—a Minister—in the middle twenties and was quite surprised to see how well he had weathered the ravages of time. He should be on the air as soon as we receive a few more parts from Frank 4FN, and a power point connected in the shack. Look out for him, chaps, and give him a real Ham's welcome when you hear him. He does not keep the best of health but your co-operation and friendship will help.

It was noted that the VK5 Official Station, VK5AA, has adopted the habit of contacting Amateurs whose transmissions are not quite up to the mark, and advising them of their trouble and suggesting a remedy. The operator, whose name is Barrie, then stands by while adjustments are made and the trouble cleared up. I heard Amateurs contacted in VK2 and VK4 and also heard most enthusiastic remarks of appreciation from Amateurs in three States. Congratulations on a really good job of public relations, Barrie!

Members are reminded to forward all outward QSL cards to R. Feenaghy, Dulcie St., Salisbury, and not to Box 638J.

That's about all for this month. Thanks for your help with news items, chaps.—4PJ.

TOWNSVILLE

The editorial in June "A.R." is very timely, and as stated it will not be long before the Easter Convention is with us. The year 1962 seems very auspicious because Australia will then be holding the British Empire Games and maybe a pointer to good things in store, which we can obtain if a concerted effort is made



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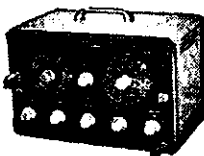
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O-12

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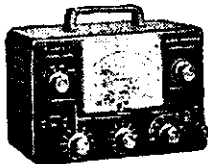
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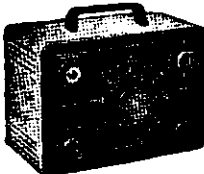
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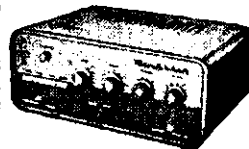
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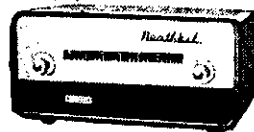
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S-88



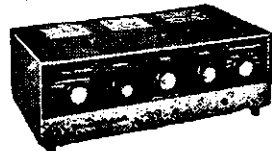
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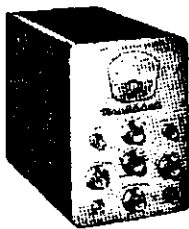
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by Amateurs in general, although some of us have the parochial outlook, and want to know, what we personally will gain, with never a thought to the old proverb "It is better to give than receive."

Now is the time to ask for expansion of frequencies and an allotment for "Citizen Band Operation." The latter would help to popularise Amateur Radio and our ranks would very soon grow. Surely if our friends across the Pacific can have these, we could also emulate them and bring pressure to bear on the "powers that be" and progress in step with the march of time. I for one, and I know there are many, many others, hope that these requests will be made and granted.

Quite a few contacts can be made each day on 7, 14, 21 Mc. If one has the patience to just wait for the respective bands to open for a short period. It will be quite a long time yet before the bands are wide open again and one could pick any band and work around the globe.

Things locally are in the doldrums, very few being heard. Must be engaged in other pursuits, no local ragchews being heard. Chas. 4RQ flew in and out on a business trip and did not have time to do any local visiting, but promises to put the s.s.b. rig in the port for next trip and do the honors and visit the various shacks. Evan 3WC was another caller who could not resist the tourist delight—"Sunny North Queensland"—and called on the scribe and a few of the other boys.

Bill 2AJL, together with Phyl, the better looking half, arrived by boat, spent the night and day looking all over the local beauty spots and sampling the pawpaws and bemoaning the fact that the mangoes trees were only in blossom. Flew through to Cairns to see our tropical north and visit our beautiful Tablelands before returning home by boat to the drab cold Sydney in winter time (hi).

Bob 4MF reports that the classes on Morse are going along smoothly and aspirants should have no trouble when they face the sound barrier. 73, 4RW.

SOUTH AUSTRALIA

The monthly general meeting of the VK6 Division was held in the clubrooms to a capacity audience (standing room only, and very little of that) and took the form of a buy and sell night. These nights seem to go in cycles, one month there is only a normal amount of gear to sell and then along comes a month when everybody decides to give the shack a clean out, and the clubrooms are not big enough to hold all the assorted remains of a mis-spent youth, and this particular night was no exception. I have never seen so much gear available before and although an all-time record of sales were made, unfortunately a few members were forced to take home their contribution to the night. This is bad luck, although unavoidable, and nobody regrets it more than Council, but everybody takes it in good part, or else they are remarkably good actors.

Now there is not much that can be written about these nights, which follow a set pattern, and a description of one fits all the rest. Of course I could say that the auctioneer was muscular, physically well-proportioned, debonaire, a master of repartee, silvery-tongued, dressed in the latest fashioned hessian suit, but I won't, because in view of the fact that I was the auctioneer, there would be some nasty-minded people who would hint that I was boasting, and of course such an insinuation would upset me because of my natural modest and retiring nature. However, I can say that apparently Council reads the VK6 notes, because before the bidding began, Ian 5QX, representing Council, referred to my grizzle of a couple of months ago in which I complained that they had purposely denied me an opportunity of viewing the excellent slides presented to the meeting by Ron 5ZDC during my vacation. At the conclusion of his explanation he handed to me a slide viewer and one slide, and said that Council hoped that I would forgive them all and have a little slide evening all to myself.

Extremely touched at this generous gesture (although keeping one eye open for the nigger in the woodpile), I proceeded to have my little private view, accompanied by the members personal interjections, who seemed to think that because my hair stood up on end and I viewed the slide must be of a risqué nature. Nothing was further from the truth, and if I can slip it in the notes without the Editor waking up, I will let you know just what I saw.

Well, to make a short story longer, the bidding got under way, most of the gear was disposed of, and everybody left apparently

having thoroughly enjoyed the fare offered, and retired for their couches of virtue at the nocturnal hour of 11.15 p.m.

Speaking personally, I feel that since we have been in our new clubrooms the buy and sell nights do not flow quite as smoothly as they did in the old clubrooms, and I suggest to Council, with all humility, that (1) the gear be stored in the kitchen out of sight, (2) that the gear be sold in the order in which it is handed in, in other words first in first sold; (3) that the auctioneer operate from the front of the kitchen and not from the stage, and last but not least, some form of barricade be built around the auctioneer to protect his life and limb, in view of the mad rush which took place when the Morse keys were offered for one shilling!

I was intrigued to watch the expression on the face of the Sultan of S.s.b., Comps 5EF, when this rush was on and he realised the threat to his dominion. Nevertheless, he nearly succumbed to the temptation himself and half rose from his seat several times, only to finally sit tight, possibly because he realised just what an uproar would take place, with the auctioneer well in the van!

By the way, I am beginning to think that I am a success at last. A certain v.h.f. member, who for obvious reasons shall remain nameless, has never been entirely enthusiastic in his attitude toward me, possibly because he has taken to me seriously my occasional jibe at his beloved v.h.f. thawed considerably as he smilingly said goodnight to me after the meeting, gaily adding that not only was I old, but also that there was some doubt about my parentage. Well, well, well; you never know do you? My cup of happiness is full to overflowing.

Heard Bill 5KB in contact with Lance 5XL on 7 Mc. the other Sunday, and so pleased was Bill with his new transistor converter that he finished talking Lance in to giving it a go, mainly because, to put it in the words of Lance, "I am very pleased with my new transistor converter, it's a beaut., if it would only go!"

Barry 5BQ was also heard the other Sunday morning exchanging pleasantries with Dave 5AW who was mobile and a good signal too, somewhere in or near VK3. The navigator for Dave was someone named Al, and to my untrained ears it sounded like 5ZCR, and from the general hilarity in the mobile unit, I feel that if it had not been for the guidance of Herb 3NN from his QTH, Al would have blotted his navigating copy book more than once!

Much flurry, skurry and bustle, to say nothing of harsh language on the part of Doc 5MD, who is the Minute Secretary for the Division, when he discovered that the minute book was missing after the general meeting. Almost in unison, Council accused me of auctioneering off the said book, an accusation brazenly repeated by Tom 5TL on the W.I.A. call-back last Sunday, and for a few moments it looked like my being a permanent guest at Doc's boarding house. Anyway, after an extensive investigation, Ian 5QX broke down and tearfully admitted on the W.I.A. call-back that he had picked it up by mistake and taken it home, and Council and I are re-united. Doc suggests, after reading the probationer's report on Ian, that he be released on probation providing that he writes up the minutes before returning the book. Just as well they did not see my probationer's report. I would have got six months in chains. Anyway, I could have used Doc's receiver, or could I?

What's that? What did I see on the slide? Just a sec., while I take a peep at Ye Ed. Nothing doing, he is still half awake. Stick around, he won't last much longer.

Hughie 5BC has been dabbling in a little re-building, outside my department so to speak, and I understand that he had his elder boy in the Adelaide Hospital recently but all is now well. Tom 5TL has been giving some attention to the electric detonator position and has come up with some statistics on the matter, including the fact that a half a volt was enough to set one off. Careful Tom, keep your parachute handy!

A welcome visitor to the general meeting was Tony 5ZAL, all the way from Bordertown. I don't usually mention the Z boys for fear of treading on the corns of the v.h.f. correspondent, but as Tony was introduced to me by Barry 5BQ, who is the said correspondent, I feel that I am on safe ground. Tony seemed very keen on Amateur Radio and put himself in my good books immediately by telling me that he liked the VK6 notes. In support of this I can only say that he struck me as a person of very keen discernment!

Reg. 5ER heard calling portable in VK3 several times with an extra good signal at all times. Have heard no information as to his complete coverage on what was apparently

his vacation, but hope that he came through unscathed from what I always think as hostile territory!

Tom 5TL writes from Denmark to say that the last couple of Sundays have not helped the 5W1 broadcasts, in fact the VK2 signals have been well out in front, to the detriment of the broadcast. No mention of any one call, much to my disappointment, as I was hoping that Max 2ARZ would be one of the culprits. I would love to get something on him. Talking of VK2s, Dud 2DQ is quite active on 3.5 Mc. these days, and I also heard Bob 5OD on that band. There seems to be quite a migration to this band these days, although the dangers of neighbourly interference tends to keep a number of the gang from pushing their luck too far.

What did I see on the slide? Shush, shush, he has still got one eye open. Stick around.

Pete 5FM has been heard quite frequently although I believe that he is only using his mobile gear pending his settling down in his new QTH. Ray 5FF also heard with his mobile gear with an extra good signal, in fact so good was the signal when heard here that I was quite surprised to find out that he was mobile. Dave 5DS heard in contact with Luke 5LL on 7 Mc., and when heard was in the middle of a fish story that brought down the house, a brick at a time! Steve 5ZB was heard in the wilds of VK2 with 3 watts input to a mobile set-up, and the signal had to be heard to be believed. Heard him in contact with a VK6 using the same set-up, and the report that he received must have been music unto his ears.

Rex 5DO, at the time of writing, is sojourning in enemy country, VK3 to wit, presumably renewing acquaintance with his usual Sunday morning mate, Bas 3ABJ. I hope that Rex is not making any statements whilst in VK3. I have a copyright on all of his statements; have I not Rex? Vern (by now a Z call, congratulations OM!) is better known to VK5 as the "Admiral," and has further claim to fame as being the father-in-law of Brian 5ZBI. This "Admiral" business had me intrigued, so putting on my Sherlock Holmes outfit I tracked down the origin. It appears that Vern is the proud possessor of a six foot (or thereabouts) dinghy and when cruising on the bounding main is suitably attired in rubber shoes, white trousers, reefer jacket and peaked cap complete with suitable emblem. Need I say more?

Keith (5KH or 5WL, take your pick) is at the moment holidaying at Clare and the Sunday morning session is being handled by John 5JC. Just how long he will be away is at the moment a well kept secret, but never fear. I will find out, despite the efforts of Council to stop me. Incidentally, talking about Keith (don't ask me why), reminds me that he has been appointed by Council to look into the pros and cons, the pitfalls and precipices, the reasons for and against, the experiences of other Divisions on the subject of VK5 owning their own clubrooms. This matter is by no means a new one as I can remember Joe 5JTS being very keen about it ten or fifteen years ago, but the main obstacle of course was the financial angle. Joe never had any qualms on this and in discussing it with Keith, neither did he. Of course to peasants like myself, ten bob is a matter of finance, but to financial tycoons like Keith and Joe, and their ilk, money presents no terrors. Now don't deny it you jokers. Anyway we have nothing to lose and everything to gain from the outcome of Keith's investigation, so go to it OM, and you can count on my empty bottles and rags and bones, particularly my rags!

What's that? Oh yes, just a sec. No, it is still no good, he has a glazed look in his eyes, but then he always has that look. Be patient, the secret of the slide will soon be disclosed.

I knew it, I knew it, advice has just reached me by carrier pigeon (a pretty big carrier pigeon) that Frank 5MZ has done it again. This time he has managed to fall over at work and bust a couple of ribs and is living the life of luxury on "compo". I don't know what to do with him, we will have to put him in a little cage and only let him out for feeding, or any other little jobs he might like to do. Carl 5SS could then call him up on the air and sing him that old-time song, "Only a bird in a gilded cage!"

Cec 5BZ, if rumour can be believed, travelled as far as Canberra with Doc 5MD, leaving Doc to finish the journey to the Gold Coast. Apparently Cec has enough gold hidden in his backyard without travelling all that way to get some, although I gathered that Doc did not exactly find any gold up there. May I add, "all is not gold that glitters." Have not heard any news of Buck 5DA and can only assume from that lack of news that he is doing all right. Could anybody oblige? Doug

SDW, a keen 7 Mc. habitue of many moons, seems to have lost interest in the hobby of late. He tells me that he is not very active these days and feels no pangs of remorse. However, he is not the first to say that and definitely won't be the last. Wait and see, Doug.

Max 5GF can be heard most nights mobile on 7 Mc. on his way home from toil, and judging from the number of VK3s heard calling him, he must be putting an extra good signal over there. You should have seen the look on Ted's (5JE) face when the mad rush was on at the buy and sell night for the Morse keys. He was tickled pink and could not have been happier if I had been selling allotments for occupation on his beloved 7 Mc.

Paid a flying visit to Lloyd 5OK the other night. As a matter of fact I had bitten him for some of those used hyperdermic, hypodermic, ripodermic, well anyway, those "poly" thingamebobs that have such universal and many uses in our hobby, and whilst I was there, he gave me a practical demonstration of how much "juice" he could pick out of the sky from the A.B.C. station, 5AN. This station is only a stone's throw away from his QTH and he tells me that he is quite upset that both 5CL and 5AN are moving away in the near future. 5CL goes to 50kw., and 5AN also on the increase, see what I mean? By the way, Lloyd, my XYL sat on the paper parcel in the back seat of the car and called me a naughty word. Get the point? She did!! Excuse my girlish ripple.

George 5RX, our genial QSL officer and tame certificate hunter, managed to snare plenty of publicity in the daily papers this month, photo and all. Nice work OM, but how long since have you had a Byer tape recorder in your equipment? Gordon 5XU (and ex-5WI) noticed at the meeting night. He tells me that he is very busy at the University these days, as a student and not as a chalk wielder. Have you had six handers yet, OM?

A couple of months ago I made passing reference in these notes to the Adelaide University Amateur Radio Club, and also to the fact that I was an honorary member (having passed through the said University on my bicycle one day). Imagine my embarrassment and consequent shrinking within myself, to read in the latest copy of their club magazine, "Splatter", the following, which I quote as a matter of interest and also as an excellent example of the Editor's sense of humour:

"Mr. Parsons ('Pansy' to us) has seen fit to favour us with 17 lines of illustrious prose in that celebrated daughter magazine of ours 'Amateur Radio'. As a matter of academic interest, it was decided at a meeting of the Radio Club sub-committee for the advancement of technical knowledge at the Very High Frequencies, that they, the 'Z' boys, should invite 'Pansy' to ride his bicycle through the grounds once again (if it will stand the strain), and make himself known to us. We are noted for our hospitality, and the bones of the last Radio Inspector to visit us are on display at the bottom of the lift well."

I thank all for the generous invitation, but feel that I must refuse the obvious rise in social status of sharing the lift well with the present tenant!

He is well asleep now, so here goes, and don't forget you asked what was on the slide — I distinctly heard you, it's on your own head —

"There was a young man with a hernia
Who said to his doctor 'Goldernia'
When fixing my middle—don't you dare
to fiddle—
With matters that do not concernia."
—SPS (PanSy to you).

STOP PRESS

(What Divisional scribe did not know that a tribe member had a broken rib? My, the intelligence service is not up to standard!—Ed. —and still awake.)

ELIZABETH AMATEUR RADIO CLUB

The Elizabeth Amateur Radio Club station (VK5LZ) will be on 80 and 40 metres during the Elizabeth Sixth Birthday Celebration on November 18, together with a number of other Elizabeth stations. We would appreciate some contacts on that date.

- REPAIRS and CONSTRUCTION,
- WIRING and TESTING,
- RECEIVERS and TRANSMITTERS,
- T.V. ALIGNMENT.

ECCLESTON ELECTRONICS

146a Cotham Road, Kew, Vic. WY 3777

WESTERN AUSTRALIA

News is very scarce this month due to several causes, the main ones being end of financial year activity, farming, test cricket and on 80 mx very poor conditions for this time of the year.

The monthly meeting at the Perth Tech, was very well attended, the main attraction being an outstanding lecture and film on the evolution of time pieces and space travel, leading up to the latest in wrist watches, powered by a mercury cell, through a transistor and tuning fork. Many envious looks were given the one which was passed around for inspection. The lecture was given at the start of the meeting to enable some of the students from Tech. to attend. After the lecture the normal meeting was held and quite a number of unfamiliar faces were to be seen. One visitor who is becoming quite a regular attender was 6XO, even though his QTH is over 140 miles from Perth.

There has been some activity on the higher bands, but it is very spasmodic. Skipper 6WS has had contacts and Bob 6RG is heard occasionally in contact with Eastern States stations. 40 mx has had some activity on it, during the day light hours, from the shift workers and gentlemen of leisure. Henry 6DC, Bob 6RG and Horrie 6GD are heard occasionally among others.

Clem 6CW's voice is beginning to filter through the empty paint tins and layers of paint. It is much stronger since you had that window put in Clem. Ian 6CL is not heard here very often lately, I suppose he is tidying up for R.D. Your score last year nearly did the job, Ian. Les 6WL is still trying to quieten his t.v.i. gremlins, but they keep on bobbing up. Hope you soon get them tamed Les, we miss the m.c. on 80 mx. 8RY is a call which is not heard often enough on 40 mx and 80 mx. Should hear more of you Roy, but your c.w. sessions to 6 mx are appreciated. Bob 6ZZ manages to have some contacts through his network of power lines. They are certainly up against you Harry. 6RX is heard occasionally on 20 mx and you are making many DX friends, Bill, with your beam.

Members will be interested to know that our "W.A. Bulletin" has now been registered as a periodical and from this month will go at bulk rates. Any items of interest, articles, Chioe items, etc., should be forwarded to 6LS.

We note 6ZCS has been confined to bed and trust that Len is on deck again by the time these notes appear. 6ZCK per 6LS.

TASMANIA

Remember the R.D. Contest, the second week-end in August. Take part, and submit your log before the end of August so that your efforts will help our Division retain the trophy. We challenge the other Divisions to give us a good fight, we will swap a number with anyone entitled to participate, so go to it.

On the night of 14th June, five Hobart stations entertained members from the Short Wave Listeners' Group by entering into a lengthy QSO on the 80 mx band. It is gratifying to the stations taking part to know that their efforts were appreciated.

Len 7LE has shifted his QTH from just below Channel 2's aerial to Lindisfarne, where he has temporary accommodation pending the construction of his new home in that locality. Len is hopeful that the lower sideband of the aforesaid t.v. transmitter will not now appear across the 6 mx band.

At the July meeting of the Division, we were very pleasantly lectured by Bill 7BN on the history and nature of air navigational and radio aids. We can only be proud of Australia's contribution to the advances in both fields over the years, from both government and private sources. The wonderful record of air safety in our land is adequate testimony to the excellence of the equipment developed.

Ken 7KA is delighted that a volunteer has offered his services as assistant secretary, and we welcome our Associate member, Eric Grainger, into that position.

Night time conditions for the past month have been generally poor, except for the 80 mx band and even that band was subject to severe static for about ten days. So it can be said that activity within the Division has been very slight.

As Federal Councillor, I seek your assistance in one matter. It is now time to forward items for inclusion on the agenda for the next Federal Convention. If you have any such items for consideration by this Division, forward full particulars either to me as Federal Councillor or to the Divisional Secretary. This matter is of great importance, please give it the consideration it deserves. 73, 7ZZ.

NORTH-WESTERN ZONE

The year is fast slipping by with the Remembrance Day Contest hard upon us once more. May I take this opportunity to wish everyone the best of luck in the ensuing battle, but may Tasmania once again be successful.

Not a great deal of interest has taken place during past month, not even much DX as I believe 20 mx has been out.

The July meeting was held as usual, it being a social one, and I was not a little disappointed that more did not attend to avail themselves of the excellent information given out by Ken 7AI in part one of his lecture on s.s.b. Ken has gone to a lot of trouble in preparation of this lecture. I wonder who will be next out of this Zone to go onto s.s.b.? Seems to have a lot in its favour—perhaps it doesn't sound so much like a wagon load of monkeys on a proper s.s.b. rx. Anyway, hope it won't be too long before Ken can get round to finishing the lecture.

At the last meeting supper constituted a minor affair as there was a colossal accumulation of "junk" (and some of it was just that) to be disposed of and the auction took quite a considerable time, the night having given way to morning 'ere we got cleaned up. I sincerely hope Zone funds were amply added to. This month also gives us our Zone Annual Meeting. I wonder who the new office-bearers will be.

HAMADS

Minimum 5/-, for thirty words.
Extra words, 2d. each.

Advertisements under this heading will only be accepted from Institute Members who desire to dispose of equipment which is their own personal property. Copy must be received at P.O. Box 36, East Melbourne, C2, Vic., by 5th of the month, and remittance should accompany the advertisement. Call signs are now permitted in Hamads. Dealers' advertisements not accepted in this column.

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SELL: AR7 Receiver in good order, modified to receive s.s.b. and coil boxes bandspread and include 28 Mc., pow. supply, spkr., spare tubes, manual, etc., £28/10/-. Also wanted, booklet on Walkie-Talkies BC611F. VK4SS, 35 Whynot St., West End, Brisbane, Qld.

SELL: BC453 Q5er, £3/10/-, also quantity of crystals, 7 and 3.5 Mc. (mainly FT243) at 10/- each, and around 6900 kc. five for £1. Roth Jones, 131 Queen Street, Melbourne, Vic.

SELL: Bendix BC221AG Frequency Meter with power supply, calibration charts, excellent condition, £35. VK4FJ, 76 Newman Avenue, Camp Hill, Brisbane. 98-1774, 98-4418.

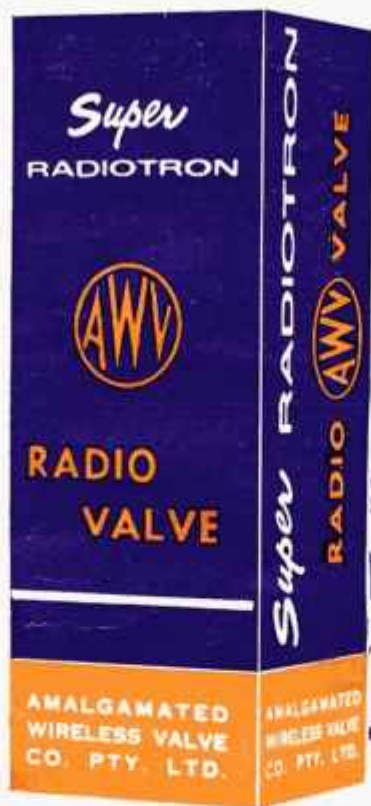
SELL: TR1196A and No. 11 Sets, both new and complete. 23-pin plugs suit MN26. Command Recrs.: 190-550 Kc., 3-6 and 6-9 Mc. Xmitters: 5.3-7, 4-5.3 Mc. and ant. relay unit, cheap. M. J. O'Brien, C/o. P.O. San Remo, Vic.

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WANTED: Johnston Match Box Coupler. Particulars to VK3OM, Phone 560-9215.

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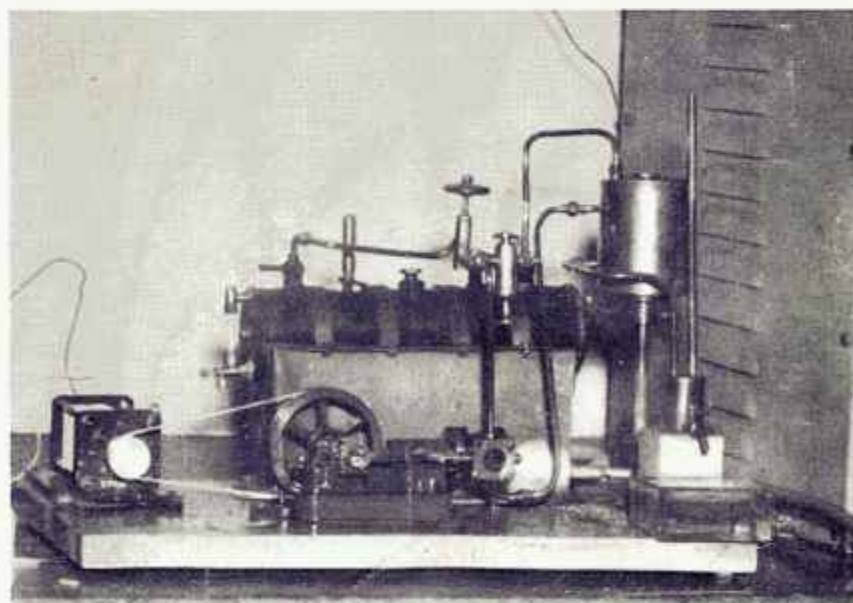
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VK4WI: Sundays, 0900 hours EST, simultaneously on 7145 Kc. and 14.342 Mc. Intrastate hook-ups taken on 7105 Kc.

VK5WI: Sundays, 0800 hours CAT, on 7145 Kc. Intrastate hook-ups taken on 7125 Kc. Frequency checks given when VK5WI is on the air and also by VK6MD by arrangement.

VK6WI: Sundays at 0830 hours WAST, on 7145 Kc. Intrastate hook-ups taken on 7085 Kc.

VK7WI: Sundays at 1000 hours EST, on 7145 Kc. and 3672 Kc. Intrastate hook-ups taken on 7115 Kc.

AMATEUR RADIO

JOURNAL OF THE WIRELESS INSTITUTE OF AUSTRALIA

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EDITORIAL



AMATEURS AND AUSTRALIA

IT'S a long time since the Amateur physically manufactured the component parts for his equipment from the raw materials for the simple reason that the making of such parts requires processes and machines inaccessible to individual people.

As the science has progressed so the Amateur has of necessity moved further away from manufacture and has contented himself experimenting with the practical application of circuitry using manufactured components.

The science itself has taken giant strides ahead, making it impossible for individuals to participate even in many of the practical applications. Who, for instance, could afford to erect radio telescopes; who could afford to indulge in multiplexing high speed telegraphy equipment; who, out of individual Amateurs, could afford the modern test equipment to carry out the work done in laboratories. None! Unless he (or she) is employed in industry or

Government instrumentalities. And this is where the Amateur of today is of such importance.

In industry, laboratories, broadcasting stations, television stations . . . everywhere in fact that one finds electronics one finds Amateurs and the "employer" derives the benefit of his natural attribute and keenness for his work. In this category falls the defence services and elsewhere in this edition of "Amateur Radio" will be found a story of what the Amateur can do in defence even whilst carrying on his work in other fields.

To say that Amateurs serve no useful purpose is so very false because many of the highest technical posts in the country are held by Amateurs; it is because they were initially Amateurs which encouraged them to study further into the world of electronics—a world which is daily crying out for more and more technical skill.

FEDERAL EXECUTIVE.

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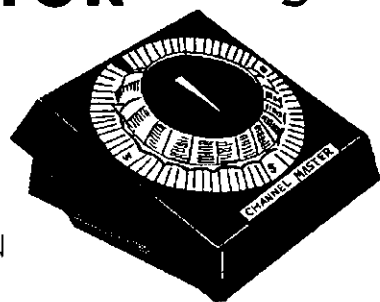
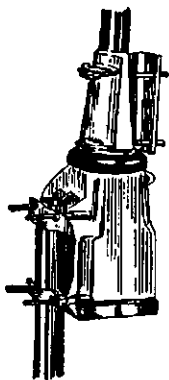
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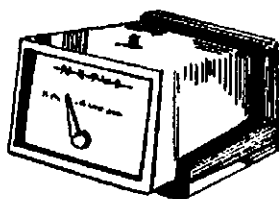
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NARROW BAND F.M.

P. A. LOWE,* VK3ZDO

FOR quite a long time the author has regarded f.m. as more desirable than a.m. for local work on the v.h.f. bands. Until recently this view was held on theoretical grounds, but a recent trial has confirmed its practical advantages.

An f.m. signal may be generated by modulating the oscillator of a conventional c.w. or a.m. transmitter. Fig. 1 shows a simple method of frequency modulating an existing v.f.o. A junction silicon diode (type 1N1169) is used as a variable capacity device, back bias is not applied from an external source but is presumably derived by rectification of r.f. from the v.f.o. Audio is obtained from the existing a.m. modulator. Fig. 2 shows the arrangement of the components in the tuning box of the v.f.o. in the writer's unit.

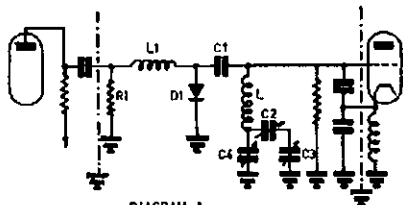


DIAGRAM 1.

C1 5 pF., R1 100K, L1 2.5mH. r.f.c.,
D1 1N1169.

In order to maintain the deviation constant it is desirable to apply some sort of a.g.c. to the modulator (e.g. a clipper filter arrangement). If this is not done, when the voice is raised (as in a DX opening) the signal will become rather broad, much to the annoyance of those nearby.

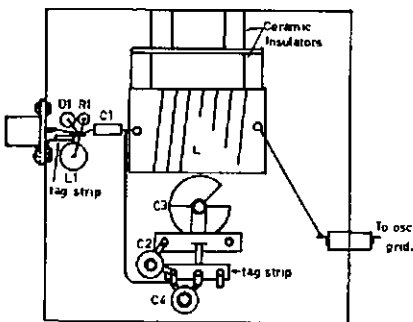


DIAGRAM 2.

From the receiving angle, f.m. is the only system by which complete amplitude limiting may be obtained without distorting the signal. This means that all a.m. components, including man-made noise, can be removed from the incoming signal. This is a very real advantage in most city and suburban locations. Amplitude limiting such as this will also eliminate fading, as experienced in mobile work on any band and may even be of advantage in DX work on 6 metre Es.

* Ormond College, University of Melbourne, Parkville, N.2.

The main problem in f.m. reception is that to realise the full advantages of this system fairly complex demodulating circuitry is required. The unit to be described for this purpose is perhaps a fairly simple answer. This unit was first used in the U.S.A. as a 5 metre receiver to demodulate modulated oscillators. Just after the war the circuit appeared in "QST" for use with a 200 kc. i.f. and it has most recently appeared in June 1960 "QST" for use with an i.f. of 80 kc. The constants in each circuit are almost the same, the variations being minor and apparently of no practical importance.

group is using converted superseded commercial units. Such units may appear on the general market before long. These units are basically for broad-band f.m., but have facilities for reducing the deviation. Jim VK3ZFS will be active mobile soon and anticipates being on the air every afternoon on his way to and from work; and as he works on Mt. Dandenong he should put out quite a reliable signal.

F.m. also has its advantages on the h.f. bands. Those troubled with particularly obstinate cases of b.c.i. will find that f.m. should produce a satisfactory cure. Most b.c.i. is due to cross

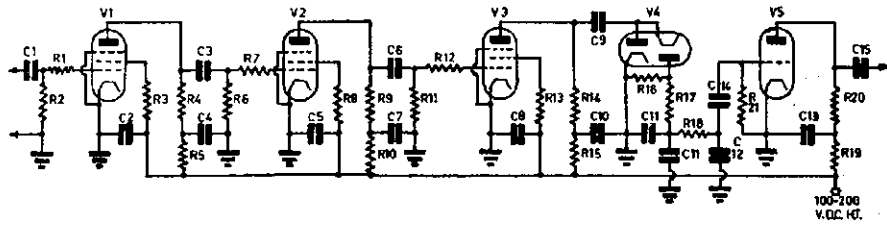


DIAGRAM 3.

C1, C3, C6—47 pF.
C2, C4, C5, C7—0.01 μ F.
C8—0.1 μ F.
C9—25 pF.
C10—0.5 μ F.
C11, C12—0.002 μ F.
C13—0.05 μ F.
C14, C15—0.005 μ F.
R1, R3, R8, R13—100K ohms.
R2, R4, R7, R9, R14, R20—15K ohms.
R5, R10—2.2K ohms.
R6—33K ohms.
R11—22K ohms.
R12—8.2K ohms.

R15—27K ohms.
R16—47K ohms.
R17, R18—6.8K ohms.
R19—1K ohms.
R21—500K ohms.
V1, V2, V3—6AK5 or 6AC7.
V4—6AL5 or 6H6.
V5—6C4 or 6J6.

Notes: The suppressor grid of the 6AK5 is internally connected.
The value of C10 determines the base response of the unit. This being greater when C10 is large.

The circuit is shown in Fig. 3. To insert the unit in the receiver it is necessary to provide an i.f. output, an audio input, and some means of disconnecting the a.m. detector (see Fig. 4).

V1, V2, and V3 are audio limiting, the output from these being square waves, which actuate a pulse counting type detector V4. V5 is an extra audio stage if necessary. At the low h.t. used, the valves recommended for V5 run at zero grid bias.

The acceptable deviation for this unit is governed by the passband of the i.f. strip. If the received signal is too broad gross distortion results. Limiting may be adjusted with the receiver r.f. gain control and results have been found quite satisfactory in eliminating car noise, electric drills, etc.

Active in Melbourne on 6 metre f.m. are VKs 3BX, 3ZEL and 3ZFS. They are using a net frequency of 50.97 Mc. VK3ZFS also is on 50.32 Mc. This

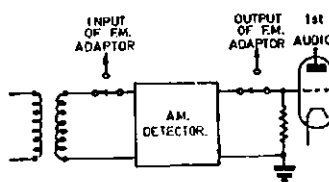


DIAGRAM 4.

modulation or audio break-through when an a.m. signal is used, an f.m. signal will not produce these effects, so eliminating the trouble. Those who have used narrow band f.m. on these bands find that there is little to choose between it and a.m. of equivalent power.

F.m. activity is appearing in Melbourne, but I know little of happenings in other parts so if anyone would like to drop me a line to the address shown, I will include the information in a further letter.



AMATEURS! YOU CAN ASSIST TO PUBLICISE OUR HOBBY

The Elizabeth Amateur Radio Club will be operating its Club Station, VK5LZ, at the Elizabeth Birthday Celebrations to be held in November. The station will be on the air from Friday evening, 24th November, until Saturday evening, 25th November.

To make the display more interesting to the public, the Club will be looking for plenty of good contacts on 40 and 80 metres. All Elizabeth Amateurs will be on during the Saturday so if you are interested in obtaining an "Elizabeth Award" a good opportunity will be during that day.

THE ANTENNA MATCH*

Part 1.—General Considerations of a New Aid to Maximum Efficiency in Aerial Matching

F. HICKS-ARNOLD (G6MB)

IT is a fundamental truism that "any given aerial is only as good as the matching between it and the transmitter permit it to be." Unfortunately, this is all too often overlooked and much useful power is wasted on its way to the radiator.

Power transfer from the transmitter to the aerial system is nearly always carried out by the use of some form of transmission line between the output of the transmitter and some convenient feed point along the aerial itself. When the transmission line is correctly terminated to the load presented at either end, and the line itself has the correct characteristic impedance, then, and then only, are the voltage and current uniform throughout its length and r.f. power flows along the line in the form of a travelling wave.

The ratio of voltage (V) to current (I) is the characteristic impedance (Z_0) of the line and is determined by its type of construction. Correct matching and uniform travelling wave occur when the aerial load is equal to Z_0 and the load offered to the transmitter is also Z_0 . If the load at the aerial or end of line remote from the transmitter is of a pure resistive nature and of Z_0 impedance, then it will accept all the power which the line offers. Should this not be so, a second travelling wave will be reflected back from the load to the source of power.

The interaction between the forward travelling or power wave and the reflected backward travelling or loss of power wave results in periodic variations of V and I along the line, referred to as standing waves. The impedance V/I offered to the transmitter now depends on the degree of mismatch and the length of the transmission line, since for every volt offered to the line by the transmitter there is a reflected voltage fed back along the line. The phase angle between the forward and reflected voltages may be of any relative angle depending on the length of the line and may either aid or oppose the transmitter. If the mismatch is severe it may be difficult to load the transmitter correctly, and as the average current in the line is increased, so is power lost by line resistance also increased. If the load presented to the transmission line is of Z_0 impedance and purely resistive, then the phase angle of voltage and current flowing along the line will be zero, and the total power presented to the line will be accepted by the load. Should the load be not purely resistive, but reflect back either capacitive or inductive reactance, then the phase angle will change from zero to a figure depending on the magnitude of the reactance and of a sign determined by whether the reactance is capacitive or inductive.

● It is never very easy to be quite sure that a transmitter is delivering maximum power to its radiating system but the instrument to be described in this and the succeeding article enables the necessary measurements to be made quickly and simply. The Antenna-match is one of those devices which, once installed, is likely to leave the user wondering how he ever managed without it. Its construction should be an urgent project amongst all those wishing to employ their transmitting equipment to best advantage.

LOADING THE TRANSMITTER

Thus it can be clearly seen that for maximum transference of power from the transmitter to the aerial two conditions are required: correct impedance and zero phase angle. The ratio between forward and reflected current in a transmission line is called the Reflection Coefficient K and is related to the standing wave ratio by the equation:

$$\text{S.W.R.} = \frac{1 + K}{1 - K}$$

K is always less than unity, since the load cannot reflect more current than it receives, so that for a perfect match K is zero.

If these two conditions are not present, difficulty will be found in loading the transmitter with the correct coupling. How many of us have been guilty of adding another couple of turns to the link coupling to the p.a. tank when it appears that the final will not load to the correct value? Such expediency is unforgivable and quite useless as a method of getting more power into the aerial—it serves only to increase the standing wave ratio on the line and to increase the circulating current, thus further increasing losses by heat and reactance thrown back along the line.

With the ever increasing popularity of the pi-network and its advantages for harmonic reduction, correct matching between the final stage and the aerial becomes even more important. If the load presented is not correct, the Q of the final tank circuit will not be as the designer intended, and efficiency will be reduced. Should there be standing waves on the transmission line, a "low pass filter" inserted in the line cannot work correctly and instead of attenuating the undesired harmonics it may make matters worse.

LOW PASS FILTERS

Many commercially-made low-pass filters have incorporated in them fixed capacitors of comparatively low voltage rating; a correctly terminated low impedance line has a voltage across it

well within the rating of such capacitors, but should the filter be introduced at a point where high voltages exist (due to standing waves caused by incorrect load matching) then there is every likelihood of the capacitors breaking down and destroying the filter. In fact these very points were brought home to the writer when using parallel 807s in a final stage and a pi-network for matching the anode impedance of the 807s to 75 ohms. The low impedance line from the transmitter (75 ohms) to the aerial matching network was terminated by a single turn Faraday screened link. This single turn was made from the same coaxial cable as the line, and was of a rating suitable for 150 watts input to the transmitter. In spite of this the link got so hot that the inner conductor melted its way through the polythene insulant and shorted through to the outer screening. The insertion of an r.f. ammeter in the 75 ohms line showed a current of 6 amps! If all were well and the line correctly terminated, then such a current into 75 ohms would indicate a power of 2.7 kilowatts—rather a lot for two 807s!

It was evident therefore that all was not well and that a bad standing wave existed on the 75 ohm line.

THE PI-NETWORK CIRCUIT

For a pi-network final, conditions for C1-L-C2 must be of the correct calculated value for the frequency in use, and the Q value desired in the network. The network has a specific job to do—and that is to give an impedance transformation from that of the anode load impedance, of whatever valve is to be used in the final, to some specific impedance required to be presented to the transmission line. This specific output impedance is usually 50, 75 or 100 ohms to suit the characteristic impedance (Z_0) of the transmission line to be used. Only when these exact values and conditions are observed can the impedance presented to the line be correct. All possible variations of these values should be eliminated. In practice, the use of a large variable capacitor for C2 should be avoided, especially if L is also made variable. For ease of band switching C2 should be a fixed value as calculated for conditions required, and L either tapped and switched or made variable.

Theoretically, it can be shown that for any given set of conditions the values of C1-L-C2 are fixed and of one value only and can be made so in the transmitter; in practice, due to variations in the mains voltage and changes from one end of the band to the other, it is desirable to have some control of the final loading. Such a control can be arranged so that C2 is made up of a fixed value to very nearly the correct theoretical value, plus a small amount of variable capacity in parallel to take

* Reprinted from R.S.G.B. "Bulletin," May '55.

care of voltage and frequency changes. Better still, the whole of C2 should be fixed at the correct value and L made variable. With C1 and L at resonance and with the final stage operating under correct conditions of input, one can be sure that the impedance at the output and presented to the power end of the line will be of the correct calculated Z.

PI-NETWORK CALCULATIONS

Methods of calculating values for C1, L and C2 have been described many times both in the "Bulletin" and other technical journals and the writer would refer the reader to a most excellent article entitled "The Design of Pi-network Tank Circuits" by H. Whalley (G2HW) in the R.S.G.B. "Bulletin" for April 1952.

It may be as well, however, to re-emphasise here some of the more important points to bear in mind when designing such networks. In order to calculate the values of C1-L-C2 for any given frequency it is necessary to know the values of R1 and R2, which are the resistances to be matched and XC1, XL and XC2 which are the reactances of the network components (see Fig. 1).



Fig. 1.—Pi-network suitable for harmonic suppression.

In such a network the sum of the capacitive reactances must be equal to the inductive reactances when at resonance, and of a suitable Q value, in order to give the "flywheel effect" so essential for the operation of Class C r.f. amplifiers. Q values from 10 to 15 are suitable for efficient operation of the p.a. and for reasons explained in the article already referred to, the impedance ratio to be matched, i.e. R1 to R2, should be appreciably less than 100:1. R1 is the resistive impedance that the p.a. must work into in order to deliver its rated power output.

In class C operation and steady carrier condition, the r.f. voltage at the anode of a p.a. valve is about 80% of the d.c. supply voltage. If the h.t. voltage be called Eb, then the peak r.f. voltage will be 0.8 Eb, and the r.m.s. value of this voltage E will be $0.707 \times 0.8 \times Eb$ or $0.57 Eb$. The r.f. power actually delivered from the p.a. valve may be taken as 66% of the d.c. power input. This power is delivered into the effective anode load R1, thus $E^2/R1 = P$, and $R1 = (0.57 Eb)^2/P$. R2 is the surge impedance of the transmission line to the aerial system and in many cases will be around 75 ohms. This value will not be affected by the inclusion of a low-pass filter provided the line is correctly terminated by the aerial system and the filter has been designed for an impedance input of 75 ohms.

PRACTICAL EXAMPLE

Taking a specific example, suppose that the d.c. input to the final is 750 volts at 200 mA. (150 watts input). Then Eb will be 750 and P will be 100.

From the formula,

$$R1 = \frac{(0.57 \times 750)^2}{100} = \frac{427.5^2}{100} = 1830 \text{ ohms.}$$

$$R2 = 75 \text{ ohms, and}$$

$$\frac{R1}{R2} = \frac{1830}{75} = 23:1$$

For convenience and greater ease of the use of the excellent graphs in Whalley's article, an answer sufficiently correct can be found from $R1 = 2,000$ ohms, $R2 = 75$ ohms, and $R1:R2 = 25:1$, and the circuit Q value 12. From the curves we then get $XC1 = 185$, $XL = 220$, and $XC2 = 25$. From reactance tables the exact value of C1-L-C2 for each frequency required can be obtained. Since $750V \times 200 \text{ mA.}$ is a popular condition, using such valves as a 4D22, 829B and QV06/40 (sections in parallel) or a pair of 807s in parallel, actual values are given in Table 1.

Freq.	C1	L	C2
3.5 Mc.	250 pF.	9.5 μ H.	1400 pF.
7.0 "	125 "	5.0 "	650 "
14.0 "	65 "	2.5 "	300 "
21.0 "	40 "	1.75 "	210 "
28.0 "	30 "	1.2 "	150 "

Table 1.—Values of C1-L-C2 for conditions of 750 volts at 200 mA. and Q of 12.

For efficient operation and good harmonic reduction the ratio of R1/R2 should be as low as possible and the Q kept at 10 or 12. For this reason low voltage and high current type valves are easier to use with good efficiency than those of the 4/65A or 813 types using high anode voltages.

With these features established and put into operation, one can be sure that the correct impedance will be presented to the power input end of the transmission line. There remains then only the problem of ensuring that the load or aerial will reflect back a similarly correct impedance at zero phase angle, for the total power generated by the transmitter to be transferred to the aerial. (Ignoring normal line losses which cannot be avoided.)

MATCHING THE TRANSMITTER TO THE AERIAL

Unfortunately this problem is not so simple to resolve—somehow the aerial has to be arranged so that when coupled to the low impedance transmission line from the transmitter, it "looks back" along the line as a pure resistance of 75 ohms. Many devices have been used in Amateur Radio to tell when the transmitter is matched to its aerial load: impedance bridges, r.f. ammeters, s.w.r. detectors and similar devices all supply valuable information. Not one of them, however, is capable of telling the whole story. Ideally, what is required is some device that can be inserted in the low impedance line between the transmitter and the aerial matching network, a device that can be left permanently in the circuit and capable of passing the full power from the transmitter. This apparatus must be able to detect any deviation from correct impedance and zero phase angle

and be able to compare these factors directly with conditions set up in a perfect load.

Such a device is The Antennamatch which has been devised and adapted for Amateur use from a unit designed by Virgil True of the U.S. Naval Research Laboratories. It was originally intended to drive an automatic aerial tuning system and is capable of furnishing valuable visual information for any radiating system.

The Antennamatch as now developed and adapted will furnish the following information:

- It will indicate when the load impedance is of the desired magnitude or if it is too high or too low.
- It will indicate when the load is non-reactive, or if not, whether the reactance thrown back is capacitive or inductive.
- When the load has been adjusted to the correct and desired value and is non-reactive, it will indicate the power output from the transmitter as accepted by the aerial.

The device consists essentially of three measuring instruments in one unit:

- (1) Impedance magnitude detector.
- (2) A phase angle indicator.
- (3) An output section containing an r.f. ammeter and a dummy aerial. The particular version described in this article is designed for use with 75 ohm line and a maximum r.f. power of 100 watts.

The theory of the impedance magnitude and phase angle detectors is not at first glance apparent and the following brief explanation as to their working may serve to show their particular suitability for helping to solve most of our aerial matching problems. Fig. 2 shows the essential circuitry of both the impedance detector and the phase angle detector.

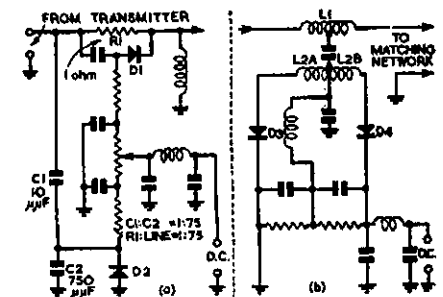


Fig. 2.—(a) Circuit diagram of the impedance magnitude detector. (b) Circuit diagram of the phase angle detector.

IMPEDANCE DETECTOR

From Fig. 2a we see that a resistor is placed in series with the transmission line. The r.f. voltage drop across this resistance is detected by means of a crystal diode D1. At the same time a voltage which is a portion of the line voltage is applied to a second diode D2. The voltage applied to D2 is a constant fraction of the line voltage, determined by the ratio of C1 to C2. The voltage applied to D1 is the voltage drop across the one ohm resistance R1 inserted in series with the line. The ratio of C1 to C2 is approximately 1 to 75, thus when the total load impedance meas-



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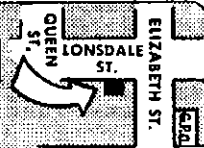
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ured at the output of the sensing circuit is 75 ohms, the voltage applied to D1 is 1/76 the line voltage, i.e. the same magnitude as the voltage applied to D2. We have therefore two arms of a bridge circuit and the d.c. output voltage will be zero.

The accuracy of this circuit is such that as the ratio of C1 to C2 is 1 to 75; at balance condition the impedance seen by the sensing unit is 74 ohms. The terminal impedance to the feeder line then 74 ohms plus the one ohm series resistance or 75 ohms. If the terminal load impedance is greater than 74 ohms, the voltage applied to D1 is less than the voltage applied to D2 and the d.c. output will be positive. Conversely, if the load impedance is less than 74 ohms the voltage applied to D1 is greater than the voltage applied to D2 and the d.c. output will be negative. Such a d.c. response varying both in polarity and magnitude according to whether any incorrect load presented to the output side of the detector is either too high or too low in impedance is ideal for indication on a centre zero reading meter or for operating a servo controlled balancing system.

THE PHASE ANGLE DETECTOR

The phase angle detector (Fig. 2b) consists essentially of an inductance in series with the line, coupled to another inductance across which a Foster-Seeley type of discriminator is connected. The coupled inductance is centre tapped and is in effect two inductances L2A and L2B in series. The voltage applied to D3 (a crystal diode) is the vector sum of VC2 (a voltage in phase with the line voltage) and VL2A an induced voltage that leads the line current by 90°. Similarly the voltage applied to D4 is the vector sum of VC2 and VL2B, an induced voltage that lags the line current by 90°. The d.c. voltage VO is the difference in magnitude of these two rectified voltages.

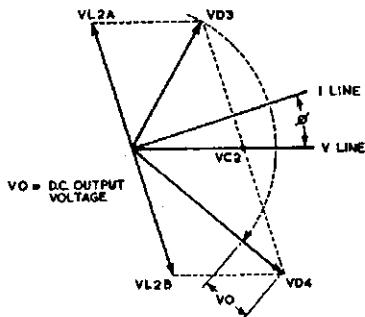


Fig. 3.—Vector diagram of the phase angle detector.

A study of the vector diagram (Fig. 3) reveals that as the phase angle goes to zero, when the load becomes purely resistive, the output of the circuit goes to zero, and that the sign of the error voltage is dependent upon the sign of the phase angle and whether the change be caused by an inductive or capacitive reaction reflection. These are the two prime requisites of a detector to control a servo system or indicate on a centre zero reading meter. Another desirable feature of this circuit is that the sensi-

tivity, defined by the rate of change of voltage out with respect to a change in phase angle, occurs in the neighbourhood of zero phase angle. This permits extremely accurate phase angle correction.

From this theoretical explanation of the working of the impedance and phase angle detectors, it will be seen that the output from both detectors is zero when the terminal impedance of the line is 75 ohms in magnitude and has a phase angle of zero degrees. This is the condition for a perfect match between aerial and feeder line, and as such, a condition for maximum transference of power from transmitter to aerial.

When in practical use, the output side of the detectors is first connected to an ideal pure resistive load (i.e. dummy aerial) and the transmitter set up to its tuned up condition (i.e. minimum dip on the p.a. current meter at the correct current reading in loaded condition). In our specific example previously mentioned this would be 200 mA. with the anode volts at 750. As the transmitter will then be operating into the correct load, both centre zero reading meters on the detectors should read zero. If this is not the case, small corrections can be made by use of the two variable potentiometers. The purpose of the potentiometers is to bring about a correct balance and to permit of some variation in the fixed ratio of C1 to C2 or R1 from one ohm thereby making the circuit components less critical.

The transmitter having been correctly set up into the dummy load the output is then switched to the aerial matching network which is so adjusted to bring both indicating meters to their centre zero point. When this has been achieved the aerial should present the correct load and accept the same power at exactly the same d.c. input to the p.a.

(Part 2, to be published next month, will describe the construction and use of the Antennamatch.)

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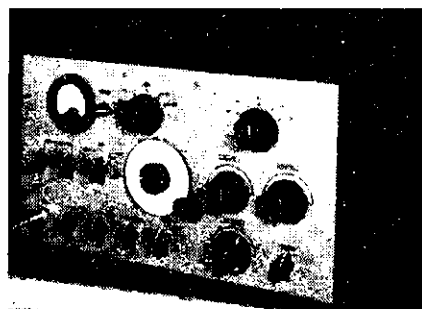
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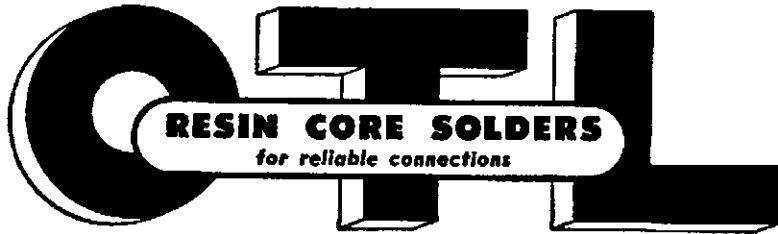
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PREDICTION CHART, SEPT. '61

Mc.	E. AUSTRALIA — W. EUROPE S.R.	Mc.
0	2 4 6 8 10 12 14 16 18 20 22 24	0
45	GMT	45
28		28
21		21
14		14
7		7
0	2 4 6 8 10 12 14 16 18 20 22 24	0
45		45
28		28
21		21
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0	2 4 6 8 10 12 14 16 18 20 22 24	0
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21		21
14		14
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14		14
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14		14
7		7
0	2 4 6 8 10 12 14 16 18 20 22 24	0
45		45
28		28
21		21
14		14
7		7

A SPECIAL PLACE FOR THE RADIO AMATEUR IN NATIONAL DEFENCE

Part-Time Service with the Citizen Air Force (Auxiliary) Squadrons

DO you, the Radio Amateur, realise that, because of your special skills, you have a lot to contribute to the national defence of Australia?

Are you aware that training is available to you which will increase your contribution and at the same time broaden your own knowledge of Radio?

If you cannot answer these questions in the affirmative, the following article will tell you how part time, paid service in the Citizen Air Force can help the nation and help you.

WHY WE HAVE A CITIZEN AIR FORCE

In time of war or national emergency the R.A.A.F. will be required to step up its activities. Certain sections of the R.A.A.F. will need greater numbers of skilled technicians and tradesmen to cope with the increased amount of work. It is the task of the Citizen Air Force squadrons during peace to convert skilled men to R.A.A.F. procedures and equipment so that they will be immediately available for productive service in time of war. It is considered that in a future war there will not be sufficient time for men to be trained as was the case in World War II. This leads to common acceptance of the fact that we will fight with what we have at the outbreak, and the C.A.F. auxiliary squadrons will be a part of "what we have".

This concept of C.A.F. service is not new to the Radio Amateur. Before World War II. the R.A.A.F. Wireless Reserve was formed to ensure that the large body of Radio Amateurs, who were willing to serve the nation in wartime, would be better equipped to do so by being trained beforehand in R.A.A.F. procedures and equipment.

This organisation was of tremendous importance to the R.A.A.F. when war broke out. Its members quickly filled key posts in the larger R.A.A.F. allowing a great expansion to take place very rapidly. By the end of the war many members had reached senior rank and one had become a Group Captain.

C.A.F. squadrons exist in five of the States and are located at bases adjacent to their respective capital cities as follows:—

Victoria: No. 21 City of Melbourne (A) Squadron, R.A.A.F. Base, Laverton.

New South Wales: No. 22 City of Sydney (A) Squadron, R.A.A.F. Base, Richmond.

Queensland: No. 23 City of Brisbane (A) Squadron, R.A.A.F. Base, Amberley.

South Australia: No. 24 City of Adelaide (A) Squadron, R.A.A.F. Base, Edinburgh.

Western Australia: No. 25 City of Perth (A) Squadron, R.A.A.F. Base, Pearce.

Each of these squadrons utilises the training facilities available on the base and as these vary from base to base the squadrons have slightly different requirements for technical personnel. For instance, No. 21 Squadron is mainly interested in you, the Radio Amateur, because the R.A.A.F. School of Radio is also based on R.A.A.F. Laverton and extensive facilities are available for training radio technicians, telecommunications technicians and operators. A limited number of suitably qualified personnel are also required for training as airframe and engine mechanics and fitters.

THE IMPORTANCE OF RADIO AND COMMUNICATIONS TO R.A.A.F.

During an increase in R.A.A.F. activities in war or national emergency, one of the first elements to feel the strain is that concerned with message handling. It becomes necessary for 24-hour watches to be maintained, thus requiring more operators. The handling of more traffic means less time for servicing and maintaining the transmitting and receiving equipment. Much the same considerations apply to the equipment used in connection with aircraft, such as navigational aids, control tower equipment and radio and radar gear carried in aircraft.

To keep the aircraft flying at a high rate, serviceable radio equipment, whether on the ground or in the air, is just as important as an adequate supply of fuel, bombs, ammunition or missiles. This is particularly so in these days when aircraft operate in all types of weather and rely exclusively on radio and radar for navigation and, in many cases, for weapon releases. It is clear, therefore, that increased numbers of skilled radio and communications personnel are required to carry out repairs and service the various equipments in the shortest possible time.

During war an aircraft, grounded through unserviceability, is of no use at all. Similarly, unserviceable communications equipment or shortage of operators will soon cause a backlog of messages which will lead inevitably to delays and difficulties in the planning and execution of flying operations.

ADVANTAGES OF C.A.F. SERVICE TO THE INDIVIDUAL

Apart from the needs of the R.A.A.F. for more airmen in a war or national

emergency, which have been outlined above, there are some definite advantages to be gained by the individual who elects to serve in the C.A.F.

Once in the C.A.F. an airman has access to different and more advanced equipments than those normally available to the average civilian. This being so, he will obviously enhance his value, and thereby his prospects of advancement in his civilian employment. If he is strictly a hobbyist he will certainly improve his technical knowledge.

The comradeship which C.A.F. service offers is similar to that which exists in a club. Men with common interests are grouped together and form a team. The members of this team learn to work and act together and by doing so build up a spirit of mutual reliance and pride in their group. From this a keen spirit of rivalry and competition is built up between the various groups, which in the R.A.A.F. are called flights or sections, and ultimately between the five squadrons.

Each year the C.A.F. squadrons proceed Interstate by service aircraft for a continuous technical training camp lasting up to 16 days. This period is the time when the training which has been carried out at home bases is thoroughly tested under operational conditions. The C.A.F. airman works alongside his counterpart in the Permanent Air Force and if he does this successfully he has achieved his goal. This year No. 21 Squadron will proceed to Townsville in early September for one week. "On the job" training will be provided for the second week of the camp at Laverton.

The prospect of promotion in C.A.F. squadrons is good for the right type of individual. Initial periods of enlistment are for two years, followed by subsequent re-engagements of one year. A training year consists of up to 52 days which is made up of 12 week-ends and a 16-day continuous camp, totalling 40 days. The remaining 12 days may be made up of "on the job" training by mutual arrangement between the member concerned and his particular squadron.

C.A.F. service costs the member nothing. He receives pay for each day of attendance. His uniform, accommodation and meals are provided and he receives an allowance for fares to and from training parades. However, he must live within a 50-mile radius of the location of the C.A.F. squadron to which he belongs.

It is therefore clear that part-time service in the Citizen Air Force is extremely worthwhile to Radio Amateurs who have the qualifications and the time to spare. Should a situation arise where mobilisation is ordered,

(Continued on Page 12)

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FOURTH JAMBOREE-ON-THE-AIR 21st and 22nd OCT. '61

Time of commencement: 1000
hrs. Sat. 21st. Duration: 48 hrs.

Interest in this event is growing rapidly, as more and more Amateurs and Scout Groups are getting together to arrange their participation. In most cases the Scouts and Cubs are being invited to visit the Amateur Stations, but in some areas portable stations will be set up in the Scout Halls and Camps. Radio Clubs are offering their full co-operation; the outstanding one so far is the possibility of the Moorabbin Radio Club setting up a portable station at Clifford Park. 500 Senior Scouts from all over Victoria are expected to be in camp there for the week-end.

In areas where there are no Amateur Stations available, listening groups will be established. It is hoped that s.w.l.'s. will help in this way and submit logs.

The following Amateurs have accepted appointment on behalf of the Boy Scouts Association of Victoria to assist with the co-ordination. They will be available on Tuesday and Thursday evenings on 80 metres from 2030 hours.

VK3ARL—Lin Brown, Eastern Melbourne Suburbs.

VK3WC—Ewan Cameron, Western Melbourne Suburbs.

VK3AUL—Arthur Lock, Central and North-Eastern Area.

VK3AKW—Bill Kinsella, Central Western Area.

VK3ZK—Jim Stevens, North Western Area.

VK3TH—Gordon Morrison, Gippsland.

VK3ABT—Jim Barber, Geelong Area.

VK3AGD—John Woodburn, South Western Area.

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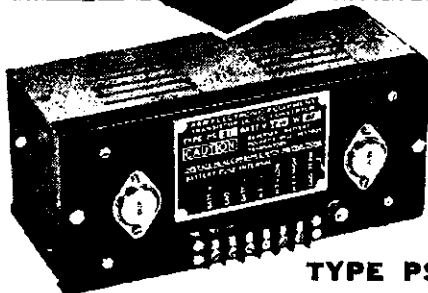
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400 & 200 simultaneously or 300 & 150 simultaneously.

D.C. Output Current: 150 mA. maximum total from full
and half voltage taps or 150 mA. each if switched to
alternate loads.

Efficiency: 78% at 60 watts output.

Operating Frequency: 1 Kc/s.

Maximum Operating Temp. (i.e. ambient air temp. at
point of installation) 150°F. (approx. 65°C.).

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DX

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It would seem that conditions during July hardly came up to expectations. 7 Mc. has been particularly poor and from a prefix point of view very disappointing. Apart from W and J very little else has been heard or wkd. here. By all predictions, 7 Mc. should have been better than this.

14 Mc. has been better, but again new prefixes or countries are hard to come by. The solar activity which affected the bands here for about three days from the 19th, produced a few gratifying results. On the morning of the above-mentioned date, the band was wide open to LU via the up and over path, i.e. via the Mediterranean and down the east coast of South America. It is exceptional to have such a long path circuit open at this hour in this area.

On the 20th and 21st, the band remained open to Europe on the S.R. until well into the day. Apart from this the 20 mc band seemed to be its normal mediocre self and rather lifeless at night.

VK lifeless was also down this month, quite markedly. The bed, with its warm blankets, is certainly more attractive than a DX-less band these bitter nights—or could some of you be afflicted in a manner similar to the VE, of whom you will read at the end of this column.

NOTES AND NEWS

John 5A5TA is particularly anxious to work VK7 and VK9. His operating times are 0600 GMT L.R. and around 2100 hrs. GMT S.R. 14 Mc. c.w. sigs from his beam are good via both ways.

The Europeans and Ws are still calling TT8AC. Has any VK wkd. him? It is reported he is also on 14 Mc. phone as well as c.w. Danny Well, VP2VB, now plans to set sail for the South Seas in the first week of September with quite an itinerary of rare spots on the programme.

Alan VR4CV is to be heard regularly on 14 Mc. c.w. steadily working his way through the waiting queues. He responds readily to VK calls and has worked quite a few.

Anatol UTSCG is a Russian with very good English for those who like to rag chew, but don't get excited over the call, it's the same area as UBS.

YN0NW may be good for W.P.X. 14 Mc. c.w. at 0600 hrs. GMT.

CN2BK sneaks in out of the silence on 7 Mc. sometimes around 0600 hrs. GMT.

For those who want Monaroc for D.X.C.C. may achieve it with 3A2BV. 14 Mc. c.w. around 2100 hrs. GMT.

VP3YG is still working 7 Mc. c.w. sometimes around 1000 hrs. GMT.

YJ1ZA is on 14 Mc. s.s.b. and as might be expected, very busy each time he appears around 0700z.

VK9AM is active from Nauru, on 14 Mc. a.m. I don't think many VKs worked 9K3TL. This was an Expedition to the Neutral Zone of Kuwait.

BY1PK—S9 plus around 2100z 14 Mc. c.w. VP7NQ—peaks through rather weakly around 0700 hrs. GMT 14 Mc. c.w.

ACTIVITIES

David VK3QV keeps his ear on 26 Mc. and reports that the band opens up often to W land around 0200z. This was being wkg. ZL but not VK. He wkd. JA3BEA, JA4OI, WSLKP, VK6RG and heard CO2AM, K6CT, WJJSZ and others. He recd. QSLs from UA3KND, UA-0LBQ, ZC4AB, ZS6ARX. (Thks David, and pse don't forget the column when the band comes to life in spring.)

Hal VK4DO has not been very active this month because the bands at his QTH have been dead after dark. He reports working 7 Mc. a.m. VR2DI, 14 Mc. c.w. F3JE, HAAKYB, OK1ADF, OK1FO, OK1SV, UA0EW, UA0LL, VE7BN, VP7NQ, W, K, etc. 14 c.w. heard: BV1USA, DM3RD, FASJO, IICFY, IICRY, OK-1CG, LZ1DZ, UA0CF, UA0KKD, 14 Mc. a.m. worked: W and K. 14 Mc. a.m. heard: HC1FG, KX6AF, YV5AQ.

Tubby VK5NO has taken the trouble to send me a good coverage report which shows plainly a better set of July conditions there in VK5 than we experienced in the tropics. He says

28 Mc. has been open to W around 0000z. 21 Mc. also open to the States. Best times were around 2200z and 0730z. Some Southern Europeans (CT, EA) and a few others (G, F, etc.) on the long path around 2300z, and sometimes good openings on the short path about 0800z. Southern and Eastern Asia and Africa are workable in the late afternoon. Conditions generally worsened, as the month progressed; no good after dark.

14 Mc.: Extremely good most of the day—Asians and nearer Pacific stations start coming in at 2100z, followed by Northern and Southern Europe, and (on the long path) Central and South America. Band opens to Europe on the long path and South America on the short path shortly before 0230z; at about 0500z the Stateside stations come up to S9, and last till 0830z. In the evenings the Eastern Asians are very good until about 1200z, when Western Asia and Eastern Europe come in. We have noticed several Zone 35 Africans on the long path at about 0630z and these seem very keen to work VKs. The band is beginning to open to Europe at 2100z.

7 Mc.: Americans and JAs are easy to work in the evenings. Europeans are still coming in here in the mornings, but not workable, probably due to the European QRM.

His best worked on 14 Mc. c.w. were: 5N2LKZ (0800z), OH0A (1415z), ZK1AK (0830z), UF8FN (1415z), HM8BM (1300z), VR4CV (2100z), HM4AQ (2300z), UA0YA (2330z), 14 Mc. phone: HM4AQ (1300z), VR4CB (0645z), FB8ZZ (0820z).

Don L2022 sends in a good list. 3.5 Mc. c.w.: W6BQM, K7CLL, K6PST, KW8DG, and ZL. 7 Mc. c.w.: KG1GH, KW0DA, VP3YG, JA7FN, OK3AL, UA3GH, SM5BV, UA3FT, OH4NC, WA6AWM, KX6EA, K7VAU, W0LZZ, K3JYE, W5EXG, K5DRG, K2HS, K4PYX, OK3AH, UA-1KAE/2, KL7BJR, KH6CFE, VR2DK, KL7BJW, KH6AXY, JA7AS, WH9Q, LZSP, W3QT, JA-1CIU, KH6CAH, KW6DF, VE7BCG, KX6BU, KC4USV. 7 Mc. a.m.: WA6s, 14 Mc. c.w.: UB-5JX, VK0VK, KH6GP, UA1KAE, ZK1AK, U57AC, HP1IE, EA3NR, VK9GP, U18KAA, I1BVP, KC4USN, KC4AAC, DU7SV, V81FZ, ZK1AR, UA2KAC, ZS5UR, KR6KS, 14 Mc. a.m.: XE2WC, FB8ZZ, VR4CB, VK9AM (Nauru), KG1AD, FK8AU, 14 Mc. s.s.b.: OA4DI, KH6BB, KX6NF, W4WYI/MM, HR3HH, YJ1ZA, VE3CCK, VE7PV, JA8AA. 21 Mc. a.m.: JA7UJ, W5FJS, K6VYU, KH6EDX, W5AEW, VK9CP. 21 Mc. c.w.: K4VUR, VR2AS, W9WNB, XE1VI, W5VGR. New countries heard: VK9AM, YJ1ZA, U7AC, Cards in: KL7BJC, DL1EE, G3GRM, ON4QX, CR5AR, YV5AJX. Considering the conditions, Don, that's a pretty good month's effort.

Eric BERS-195. 3.5 Mc. c.w.: W6BYB, 1315 GMT. 7 Mc. phone: FK8AU. 7 Mc. c.w.: DM-3FNU, OH7NF, SM5LK, SP6WL/6, SP8LR, UA4NR, UA0AQ, UC2KS, Y0TKBS, JA7YC/MM, LASHE/M, LA7RF/M, W6ANKM/MM. 14 Mc. phone: VK9GP, VR3L (0845z). 14 Mc. c.w.: BV1US, BY1PK (0845z), FB8XX, FK8AW, HCLJU, HK1QQ, JZ0PH, KJ6BV, KM6CE, KW-6CGA, UC2BL, U18KAA, 8KBA, UL7KAA, UR2KAN, VK9DM, VK9GP, VK0FZ, VR4CV (0730z), UZ2NR, ZC4AK, ZK1AK, ZK1AR, LA-5HE/M, LA7RE/M, SM3CAE/MM. QSLs recd.: EPLAD, FQ8HW, IT1AT, KP4AOV, MF4BCC, VR1G, VS8EP, ZS4LH, ZS6BAE, 601MT.

Jeff VK5NQ sends in some real choice ones. On 14 Mc. c.w. he worked 5N2LKZ (0810z), VR4CV (0800z), ZK1AK (0200z), S70VU Crete (0230z), KV4AA (0250z), KH6EDY Kure Is. (0810z), UA0YA (Zone 25, 1340z), BV1USA (1140z), EP2AF (0312z). 14 Mc. a.m.: Y09WI (0500z). 21 Mc. c.w.: VP5GT Grand Turk at 0120z.

ADDRESSES
HB1TC is HB9TC—Will Bodmer, Der Ey 36, Esslingen, Zurich.
HK3RQ—Dr. William Elasmar, Apartado Aereo 4488, Bogota, Colombia.
KA9MF—Field Station 6612th A.A.U., A.P.O. 181, C/o, P.M. San Francisco.
YV5AWM—Radio Club Venezolano, Apartado 2265, Caracas.
ZE1JN—Peters Berry, 7 Montgomery Ave., Um-tali, S. Rhodesia.
5A3TN—Lew Biribek, Box 372, Tripoli, Libya.
CO7HQ—Dr. Miguel E. Sola F., P.O. Box 28, Camaguey, Cuba.
BV3HPT—K. K. Chen, P.O. Box 11, Hsintain, Taiwan, Rep. of China.
VR4CV—Alan, P.O. Box 49, Honiara, Guadalcanal, Solomon Is. Group.
VK1DG—David Gothard, Box 60, Canberra.
FQ8HW—Louis Buccell, Estima, Fayalargeau, Rep. of Tchad.
VP5GT—Grand Turk, A.A.F.B., Gmr Box 4187, Patrick A.F.B., Fla., U.S.A.

SUMMARY
September should see some activity on 21 Mc. As the spring matures into summer, this band may begin to show her worth. The predicted sunspot activity is low so it will be interesting to see how this band behaves. In

past years during the summer it really has been good in the daylight hours.

I would like to thank Bud VK2AQJ for his s.s.b. activities, but I would like some other s.s.b. men to show me what DX they are working. Also, some notes and news from VK6 would be appreciated. The boys in the West face an entirely different set of conditions from us here who look out on the globe in an easterly aspect. So please, you sand gpropers?

Even though 7 Mc. this past month has given us the cold shoulder, don't in return give it the brush off yet. The DX does come through at odd times and Sept. and October may see an improvement, before the summer QRN paralyses the ears.

An s.w.l. complains that no matter how long he listens, he hears only a fraction of what's printed here. This brings up the question: "Do VKs get their share of DX?" In view of our isolation geographically, I feel we do very well for ourselves, in this now highly competitive activity. If you will take a look at the map of the world, you will see that Australia, for several thousand miles, is surrounded by an area of little, or no Ham activity; this means that, when the longer circuits are out, the bands lie quiet. This is in contrast to areas such as Europe, North Africa, W land and the West Indies, who are surrounded by so much activity that the bands are crowded, day and night with a great variety of calls. A station in the Mediterranean area could easily D.X.C.C. with no QSO over 5,000 miles, probably on 7 Mc. We here in VK have to get most of our stuff over long paths and our signals at the other end have to compete usually with short skip QRM.

My thanks to all those who have taken the effort to send information for this column. My plea is, keep it coming—and more.

Did you hear about the VE8 who, instead of sitting up working DX, would harness up his dogs to the snow sled and travel 25 miles just to kiss his girl good night and then slog the 25 miles back again? It sounds a lot of mush to me.

73, Al, VK4SS.

VK-ZL CONTEST

PHONE: 30th SEPT. and 1st OCT.
C.W.: 7th OCT. and 8th OCT.
1000 hrs. GMT to 1000 hrs. GMT

W.I.A. D.X.C.C.

Listed below are the highest twelve members in each section. New members and those whose totals have been amended will also be shown.

PHONE

Call	Cer. Cnt- No. ries	Call	Cer. Cnt- No. ries
VK6RU	2 256	VK3ATN	26 204
VK3AB	45 256	VK6KW	4 202
VK6MK	43 249	VK4HR	12 192
VK4FJ	21 221	VK4RW	23 184
VK3AH	51 218	VK3BZ	3 178
VK3WL	14 211	VK3GB	50 171

New Member:
VK2AIA 52 107 VK3AXR 53 110

Amendment:
VK3TG .. 48 115

C.W.

Call	Cer. Cnt- No. ries	Call	Cer. Cnt- No. ries
VK3KB	10 289	VK4HR	8 218
VK3CK	26 280	VK6RU	18 215
VK4FT	29 264	VK3XU	48 213
VK3NC	18 246	VK7LZ	17 212
VK3PH	15 236	VK3XK	41 214
VK3BZ	6 322	VK3YL	39 203

Amendment:
VK3ARX 66 156

OPEN

Call	Cer. Cnt- No. ries	Call	Cer. Cnt- No. ries
VK2ACK	6 289	VK4HR	7 233
VK6RU	9 271	VK3BZ	4 231
VK4FJ	32 267	VK3WL	45 225
VK6MK	74 253	VK7LZ	23 223
VK3NC	77 250	VK3XU	61 221
VK3HG	3 235	VK3AHO	76 221

Correspondence

Any opinion expressed under this heading is the individual opinion of the writer and does not necessarily coincide with that of the publishers.

ROSS HULL CONTEST

Editor "A.R." Dear Sir,

Although it is rather late to suggest rule changes we wish to support strongly the suggestions made by VK3QV.

Most entrants would agree that if the objects of the Contest are to be realised then its conduct should be such that:—

- (a) All entrants compete on an equal basis—no geographical bias.
- (b) Scoring is weighted according to the difficulty of the contact.
- (c) Scoring and checking is as simple and rapid as is consistent with (a) and (b).
- (d) Rules are clearly stated.
- (e) Results of the Contest are in a form enabling analysis of v.h.f./u.n.f. propagation conditions.

Without wishing to submit detailed proposals, we make the following comments.

(a) "Cross town" contacts are clearly "out" because their admission favours the heavily populated areas, quite apart from the absurdity of giving points for contacts which require no operating technique or effort. An exception should be made for u.h.f./s.h.f. contacts which should be encouraged.

(b) and (c) Insufficient incentive is provided for u.h.f. activity. Points should be at least doubled for successive higher band contacts in the u.h.f. region. A number of anomalies

exist in the present method of 50 Mc. band scoring. Equal scores are awarded for all overseas contacts. This ignores the original handicaps that exist for overseas working. Neither is an allowance made for the differing propagation condition within a State call area. It would be desirable to examine previous Contest results and divide VK land into areas (perhaps cutting across State lines). The scores could then be weighted according to the rarity of the openings between these areas, as in the present system. This would improve the present system without introducing the labour involved in distance scoring.

(d) The '60/61 rules are NOT clearly stated. Example, Rule 5 "Only one contact per band per section each calendar day" should read "Only one contact with the same station per band per section on each calendar day." The bonus system is also ambiguously stated and has been misinterpreted. The flat bonus gives no credit for the rarer call areas and should therefore be modified. Also the final scores do not reflect the effort made by the keeper operators since only one point per contact is awarded once the few initial contacts are made with a given call area.

Our final comment concerns the scientific value of these Contests. There must be a considerable amount of useful information on propagation patterns lying dormant in contest logs. We therefore offer, should F.E. and F.C.C. be agreeable, to inspect and analyse the results of the next Contest in order to glean as much data as possible. Has any such effort been made in the past?

—Paul Edwards, VK7ZAJ.

—John Humble, VK7 Associate (ex-VK0JH).

[Correspondence on this matter is now closed as the F.C.C. have reached a decision which will be published in a later issue of "A.R."—Editor.]

REMEMBRANCE DAY CONTEST

Editor "A.R." Dear Sir,

It is with regret that I write this letter, but I feel bound to refer your readers to Rule 12 of the Remembrance Day Contest—"A.R.," July '61, page 8.

My remarks, of course, do not apply to all Amateur Operators who participated, but to those selfish and irresponsible few who, in their quest of high scores, (a) purposely and consistently exceeded the modulation capabilities of their equipment, apparently to draw attention to their presence; (b) purposely "squat" on an occupied channel while numbers are being exchanged, apparently to clear the frequency of an irritating weak signal, and then politely call the other station.

The unhappy conclusion to be drawn is that those concerned care little, if anything, for the purpose of the Contest, or for what the general public, who may be listening, think of the Australian Amateur Radio Operator.

If Rule 12 was enforced the number of acceptable logs would be reduced, but at least in years to come the R.D. Contest would be conducted in a right and proper spirit.

Now the point of this citation. I suggest and request that in future Contests of this nature a number of responsible persons monitor the various bands, and where necessary recommend to the Contest Committee the public disqualification of offending operators.

I realise that the wrath of many will descend upon me, but it will be well worth while if my plea has the desired effect, that is, a Contest in Remembrance of Amateurs who paid for our present conditions with their lives, and not a cacophony of worse than mediocre signals such as obtained on August 12 and 13, 1961.

—Morton P. Davis, VK3JANG.

[Other letters received will be published next month.—Editor.]

RADIO AMATEURS IN NATIONAL DEFENCE

(Continued from Page 9)

you would be in a position to know what you were doing from the outset. You would, because of your basic skill, to which C.A.F. training has been added, be of infinitely greater value to the defence of the nation than the man straight from the street. Last, but by no means least, your chances of quick promotion would be immeasurably greater.

VISIT TO NO. 21 CITY OF MELB'NE (AUXILIARY) SQUADRON

So that No. 21 Squadron can show you the training which it has to offer and the types of equipment available, a visit to the R.A.A.F. School of Radio at Laverton has been arranged for Radio Amateurs on Sunday, 8th October, 1961, from 1 p.m. to 5 p.m. All Radio Amateurs are cordially invited.

The four other C.A.F. squadrons have a much smaller requirement for radio personnel because of their relatively limited training facilities in this field. However, if you are interested in C.A.F. service, you should contact the Commanding Officer of one of these squadrons or the local R.A.A.F. Recruiting Officer.

Commanding Officers are listed below:—

- No. 21 City of Melbourne (Auxiliary) Squadron: Sqn. Ldr. L. M. Bird, 68-0311.
- No. 22 City of Sydney (Auxiliary) Squadron: Sqn. Ldr. L. Reading, D.F.C., Windsor 2271.
- No. 23 City of Brisbane (Auxiliary) Squadron: Sqn. Ldr. W. N. Nichol, Ipswich 4051.
- No. 24 City of Adelaide (Auxiliary) Squadron: Sqn. Ldr. W. C. Keritz, M.B.E., Adelaide LX9.
- No. 25 City of Perth (Auxiliary) Squadron: Sqn. Ldr. C. F. Fivash, A.F.C., Perth 74-1271.

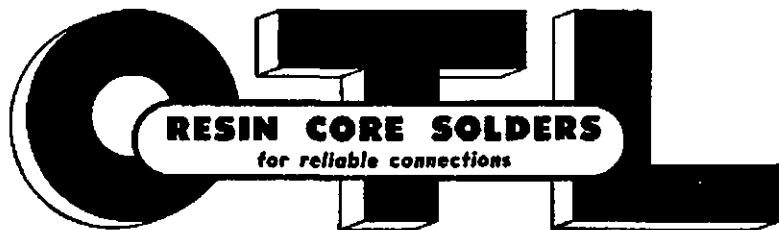
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VHF

David Tanner, VK3AAU
17 Wolsley Street,
Mont Albert, Vic.

Things seem to be very quiet on the v.h.f. bands at the moment. I can only repeat my comments from last month about the migration to the low frequency bands. The latest one to appear there is Bruce 4BZ, no doubt the purpose of these operations being to arrange skeds and such things with chaps on v.h.f. bands. I will add a word of caution about hooking up on low frequency bands before trying to make contact on v.h.f. It has been noticed in the past that there is a tendency to get bogged down and waste time instead of getting on with the job in hand. This is particularly so if there are a few chaps involved. It might be better if tests were first carried out at the sked times on the actual v.h.f. bands concerned and then, if the tests are unsuccessful, a post-mortem could be carried out on the low frequency band.

I'm glad to see that the subtle reason for my changing the notes to their present form has been appreciated, even by those who it was aimed at. I was beginning to despair that I would have to enlist the aid of our good friend Pansy (friend was the word) to coerce people to read the v.h.f. page. I heard a rumour that the same gentleman was seen befriending a certain v.h.f. type. Surely he is not thinking of invading our domain.

SIX METRES

Continuing on from where we left off last month, it seems that July 8 and thereabouts produced openings all over the place. VK2 worked into VK3, 4, 5, and 7, while VK7 worked VK2, 4 and 5. They had signals for about eight hours from 1100 hrs. Only six VK7 were on though. The sporadic E m.u.f. reached at least 90 Mc. in Hobart, but a search of 2 metres proved negative. The local ambulance network on 85 Mc. reported reception of Newcastle Police and a picture was received from ABN until the local station fired up. On 11th at about 2000 hrs., VK5s were heard in a local Morse practice session. The local newspaper gives a report that ABT was received in Port Pirie around this time.

VK6s were also having their share of openings over the same period. On the first occasion, 9th July, VK6RY was heard in South Australia and called to no avail. The following Saturday, Mike VK6ZCR heard VK5s and made contact with VK5ZDR but nothing more. On the following Saturday again, VK6RY heard VK5 5ZCR, 5ZPQ and 5ZFG. The latter was running broken tone and calling CQ with his beam to the north. His signal was peaking to S7. Many watts were wasted trying to break into the contact between the first two, but all to no success. Roy now knows what it is like to call and not be heard.

No other activity has been reported on 50 Mc., which is not surprising if activity in other States is as low as it is in Melbourne. There seems to be a fresh upsurge in sideband activity, VK3AQJ please note. Lance VK3AHL is still active, Michael VK3CZC has been heard and both Ivan VK3ASG and Jack VK3ZLQ are both almost there using s.s.b. Yours truly has the mobile sideband rig tamed at last, with about 50 watts to peak to a 6146 and a large halo antenna, watch out in Adelaide in the middle of September as I shall be heading your way.

TWO METRES

Les 2ZBJ (ex-3ZCN) has been working on transistor equipment for 144 Mc. A mod. osc. of all things for a tx and a converter/rx for reception. He has worked 2ZVL using the equipment. Dick 2ZCF has a new mobile converter which leaves a lot of home stations for dead. A 6CW4 nuvistor as a neutralised triode, 6ES8 half as a grounded grid stage, second half as a mixer, 12ATT-6AK5 xtal osc. and multiplier. A very fine converter.

New stations heard north of Sydney include 2ZJT, 2IN, 2ASA, 2ON and 2NL. Local activity around Melbourne is fairly low at the moment. A look around on last Friday's activity night revealed a marked preference for the fire and t.v. set. Those who were around were rewarded by either hearing or working Ray 3ATN in Birchip, about 180 miles north-west of Melbourne. Ray was first heard working 5ZCR in Mt. Gambler. He later

told me that he had worked into Adelaide to 5ZDR. Long distances don't mean anything up there, and a contact of 150 miles or so is regarded as quite normal by most of the gang around the Mallee. 3ATN's frequency, for those interested, is 144.42 Mc. and he is running 100w. of a.m. to a 56 element beam up 120 ft. Ray also hopes to have a sideband rig going soon.

Alan 3AEL at Ascot Vale is making a comeback to two metres with a 522 and eventually the high-powered rig will be stoked up again. Two new stations are 3FY at Bendigo and Merv. 3ZMT at Heidelberg. 3DF at Mentone hopes to have 150w. to a pair of 24Gs. Max 3ALK has a tape recorder now and will be available to record and replay transmissions on two metres.

Nothing to report from VK5 except that 5ZDR and others are still working Herb 3NN at Yanac quite regularly.

The boys in Hobart are hoping to see a new batch of refugees from the low frequency bands soon. TCT and 7OM have been mentioned. 7JD is back after a short absence. Another New Norfolk station due back on the air is 7AB. A new call at Ostlands, Midway between Hobart and Launceston, is Phillip 7ZBA who will be operating on two metres. In spite of what has been said to the contrary, receivers are getting continual attention to extract the weaker signals. 7ZAO is now using a 6CW4 nuvistor preamplifier which really does what the books say it should, but no distant signals have been provided to check its worth. No doubt 7LZ and company would be pleased to supply some.

The July night event in Sydney was a hidden tx hunt organised by 2ZPJ and 2ZXY. They were hidden in a very inaccessible spot in Duffy's Forest. No one found them, and when the hunt was called off and instructions given on the exact location, most of the hounds still had considerable trouble getting in. The day event, a mobile rally for both h.f. and v.h.f., finishing at Dural, was won by Dick 2ZCF on v.h.f. and Bob 2ASZ on h.f./v.h.f. The day was not as successful as hoped, due to the very bad weather. (Sydney weather no doubt.) The mid-winter contest, open section, was won by Dick 2ZCF, the one-band winner is yet to be decided when all the logs are in.

The VK3 two metre scramble on 9th July was quite successful with 3R stations competing. The country section and outright winner was Dick 3ABK at Geelong, with Eric 3ZL and Rex 3ZBK filling the other two places. In the city section, Alyn at 3ARC was first, followed by John 3ZCB and Frank 3AFW. The fox hunt on the evening of 12th July had Russ 3ZEZ and YL (Dawn) as the fox. A very enjoyable night was had by the three hounds, the winner being Maurice 3MS, with Peter Read second and Tom 3AOG third.

The chaps in Perth had another very good tx hunt on 16th July with some ten or twelve cars taking part. Some of these had no gear, but they either used the clues to go to the tx, or else they followed another car. Lance 6ZBK, ably assisted by Gill 6ZBW, was first in, followed by Charlie 6ZCE with his assistant Mike 6ZCX. Roy 6RY was shortly on the scene also. Rolo 6BO found that his Isis would go cross-country and had to back-track before eventually getting there. They were very pleased to see Jack 6BV and Bob 6RW participating again. Other news is that Brian ex-6ZBJ now has the call 6VV.

It is very pleasing to report that permission has been granted for the West Australian V.h.f. Group to set up their beacon on 144 Mc. They are going ahead with the programme of construction, and it looks as though they will be using a QQE03/12 in the final. Further advice on frequency and times of operation will be given later.

ONE METRE AND ABOVE

Dick 2ZCF has had some enquiries from VK6 for more information on 576 and 1296 Mc. gear, and Eric 2ZDP is trying to get some of the chaps to write some articles for "A.R." Ron 3ZER at Ballarat and Geoff 3AUX at Elsternwick are still keeping skeds each Monday and Friday night at 8 p.m. They have each heard each other, but very weakly, and no QSO has taken place. David 5AW has been carrying out checks with Herb 3NN with pleasing results, though the signals are a bit down on the 144 Mc. sigs, probably due to power antennae on 288.

The following is my present supply of distances worked on 144 and 288 Mc. Some of the distances may not be very accurate, so if you have any amendments, don't hesitate to send them along. Some of the call signs listed are not very active these days, but they are included for interest. We would particularly like to see what distances have been worked by some of the newer operators, so if you have anything over 100 miles or so, let's have it.

	144	288	144	288
	Mc.	Mc.	Mc.	Mc.
VK3AAU	350m.	250m.	VK5BC	570m.
VK3ATN	440m.	—	VK5KK	—
VK3ATY	345m.	110m.	VK5RO	400m.
VK3ALZ	340m.	280m.	VK5ZDR	180m.
VK3CS	350m.	110m.	VK5ZFG	180m.
VK3ZCG	280m.	250m.	VK5ZK	240m.
VK3ZCW	512m.	—	VK7LZ	570m.
VK3ZD	390m.	—	VK7PF	480m.
VK3AW	480m.	250m.		

Next month I will publish the six metre information, including the number of States worked and the number of DX countries and call areas worked.

V.H.F. GROUP MEETINGS

The July meeting of the VK2 V.h.f. Group was entitled "A Mobile Forum." Jim 2PM was in the chair, with Bob 2OA, Dave 2AWZ, Phill 2ZBX and Dick 2ZCF/2 on the panel. Dick was unable to be in attendance so he provided the other end of a demonstration of two metre mobile work. Bob had his two metre mobile gear at the meeting so Dick was able to hear the discussion at the meeting and then give them his views on the subject. A very successful arrangement.

The VK3 V.h.f. Group meeting was held in the very pleasant surroundings of the Secondary Teachers' College, thanks to John 3AKJ. After the business they were treated to a series of lectures on mobile gear by John 3ZPJ, Michael 3ZCZ and Bill 3ARZ. The boys also took the opportunity of saying farewell to Alyn 3ZGA who is being transferred to the West.

The last meeting of the West Australian V.h.f. Group was the annual general meeting and Wally 6ZAA was elected President and Rod 6ZDS as Secretary.

The Hobart July meeting took the form of a demonstration of test equipment and its application to v.h.f. rx alignment. Equipment supplied by 7EJ and 7ZBE included c.r.o., marker generator, etc., and noise generator with associated equipment. Two metre rx's supplied by 7EJ, 7MY, 7ZAK, 7ZAV and 7ZAO were put through their paces and not found lacking.

Have you passed along your two metre frequency to 3ZDE yet? He is compiling a list to enable newcomers to pick a clear spot and also as a means of helping you locate the rare DX. Ray can be contacted at 16 Clinkick St., Reservoir, so drop him a line.

COMING EVENTS

From 5th to 9th Sept. the VK7 Division will stage an exhibit in a Career and Hobbies Exhibition at Hobart. Included will be a display by the V.h.f. Group. 7ZBE's station will be used on 2 mx and we're hoping for plenty of local activity and mobiles around the city.

Peter 3ZDO has asked me to say a word or two about a project which he is trying to organise. The ultimate aim of this project is to accomplish communication between VK3, VK5 and VK6 on 144 and 288 Mc. High power, big beams, c.w., s.s.b., low noise rx's and most of all, persistence with skeds are a must if this is to be accomplished. There are many of us who think that it can, even though it may take a while. If you are interested drop Peter a line and give him some encouragement. It may be possible for one or two of you to get together and pool your equipment as 3CS and I are doing to get a really first-class station going; to me this appears the most practical way. Peter is sending out a questionnaire to all those interested in early October, so see what you can do.

The VK3 V.h.f. Group has finalised the rules and dates for the coming field days. This year it will be competitive, with sections for both single and multiple operator stations, and also home stations. The field days will be held on the third Sunday of each month with the exception of Feb. which will coincide with the National Field Day. The hours of operation are from 11 a.m. until 5 p.m. Operation may be on any v.h.f. band. Crossband operation is permissible but the special points available for 288 Mc. and above are not claimable. For multiple operator stations the original group of call signs are the only ones to be used. (Make up your numbers from the start to be on the safe side.) Connection to public or private mains is not allowed, but the use of portable generators is permissible. The portable station must be more than one mile away from the usual QTH.

There are eight field days to enter in but only your best five scores will be used to pick the winners. The scoring will be 2 points per contact for portable to portable, and 1 point for a portable to home contact. On bands 288 Mc. and above, the score is doubled, except for crossband contacts which will be as for 6 and 2 metres. For the longest distance work-

(Continued on Page 15)

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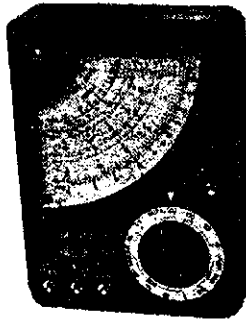
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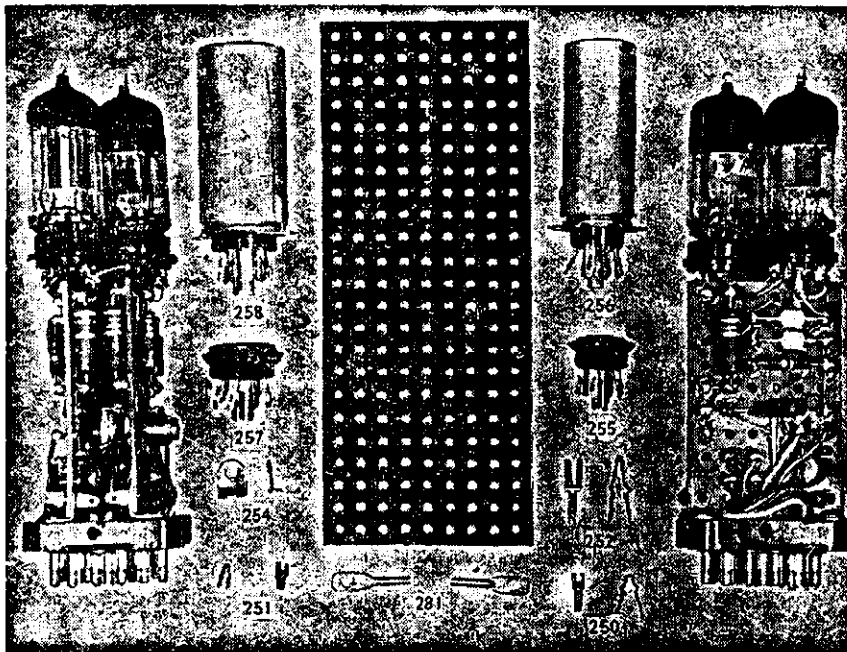
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SIDEBAND

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S.S.B. HAMFEST

No doubt you have already heard of the wonderful success down in Melbourne when the W.I.A. Victorian Division and the Collins Radio Co. got together and organised a demonstration of single sideband equipment. Our reporter, Jim 3JK, covered the event for the Sideband notes. Jim says that Melbourne W.I.A. official circles declare that it was a record attendance at any W.I.A. "do" since the W.I.A. began. The Sideband Convention was held at the South Melbourne Town Hall on 29th July. Executive and Technical Staff from Collins Radio (Aust.) Pty. Ltd. were in attendance and two operating Amateur Stations were in action — one on 20 mx and the other on 40 mx. In addition there were several static pieces of equipment such as a 75S1, 75S2 and a 32RS1, which is a commercial transceiver with four pre-set channels in the 1.5 to 15 Mc. range, single sideband of course. Collins do not make one single piece of a.m. equipment.

At 7 p.m. when the show began, about 120 were present, many more than were expected, and the final figure was in excess of 250 "when counting became difficult". Mr. Alan White, Chief Field Engineer, gave a fine talk on the production of s.s.b. and the construction, function, working and manufacture of mechanical filters. This was an eye-opener to many. Then followed the production of s.s.b. with a 75S1 transmitter and the reception of it with a 32S1 receiver. Next came a colour film with sound on s.s.b. and Collins equipment. This was received by a very attentive audience indeed.

At 3.15 p.m. the practical demonstration commenced and large crowds surrounded the two Amateur Stations. Each Amateur Station consisted of a KWM2 transceiver and a 312B-4 Station Control with a semi-vertical dipole fed with 52 ohm co-axial cable. The 312B-4 Station Control contains a speaker, a directional wattmeter and a phone patch and has been designed for use with the Collins Amateur receivers and transmitters. Plenty of DX was worked on 20 mx while the 40 mx station was used for VK contacts. These took place simultaneously without a trace of interference to each other.

Any Amateur who went away from this demonstration still thinking that s.s.b. is yet in the experimental stage does not want to think otherwise. Victorian Amateurs owe a debt of gratitude to the Collins people for this fine display and while it brought Collins equipment before those who attended, it did something much more. It showed just what s.s.b. equipment can do, how effortless and enjoyable sideband contacts can be, and, in fact, what the a.m. operators are missing.

It is to be hoped that the South Melbourne function will be repeated in other States, overwhelming support is a certainty.

The thinking 1961 Amateur is very interested in Single Sideband.

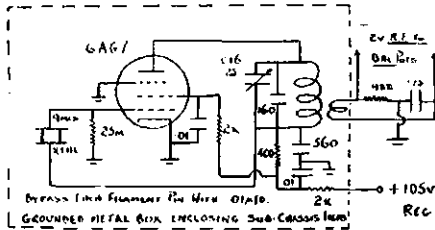
THE 9 MEG. SECTION AT VK20N (Fourth Part of Series)

The oscillator circuit shown, using a 6AG7, will make almost any crystal work. The writer tried his hand at grinding an 8.5 meg. crystal up to 9.0 megs. The result was a rather sluggish crystal. The 560 pF. plate coil by-pass is the value giving best oscillation. The L/C ratio used is unnecessarily low and a coil with more turns, and about 50 pF. capacity would help when the next re-building is in progress. Nine meg. oscillators can be a bit tricky anyway and low capacity v.h.f. tubes are to be preferred.

An alternative circuit using a 4.5 meg. crystal, doubling in the plate circuit is worth considering. If the v.f.o. covers 4.5 to 5.7 megs., the result is then a happy one for three-band operation. This gives a range 2.05-2.2 meg. to cover the 40 mx band (see previous articles) with much better separation of spurious v.f.o. signals on this band.

When tuning C16, place the r.f. probe on one balance-pot, and set condenser on the gradual decline side of the voltage peak. Oscillation starts more readily this way.

Shielding and by-passing is very important, especially the 0.01 μ F. disc ceramics, at the heater pins. Not a whisker of 9 meg. r.f. should

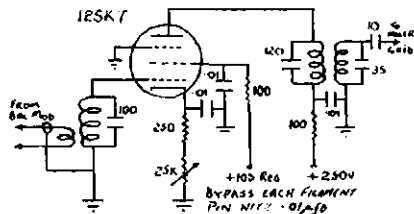


9 Mc. Oscillator.

reach the 9 meg. amplifier except what comes via the balanced modulator. Actually the one sub-chassis metal box encloses both the 9 meg. oscillator and the EF86 first audio, with a metal partition between these. It was not necessary to place the 9 meg. crystal inside the box, and it is above chassis.

Leakage around the bal. mod. may be tested by checking the point of balance of the balance pots at different settings of the 9 meg. gain control. The balance pot settings should be the same at all degrees of 9 meg. amplifier gain. To diminish leakage the oscillator should run at a low power level, just enough to supply 2v. r.f. to each of the balance pots.

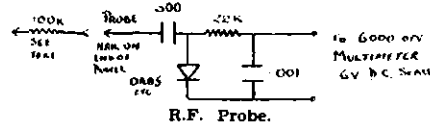
For the 12SK7 9 meg. amplifier stage, 30 meg. i.f.f.s. from the RT34 were used, requiring additional capacity. A g.d.o. is useful here to find the required amount for resonance. Full gain in this stage is never required, but the variable control is very useful. The audio gain is advanced as far as possible short of distortion and the 9 meg. gain is decreased in step. The result is a very satisfactory carrier suppression and freedom from carrier "drift". A further gain control at the first linear stage (6AG7 in AB1) ensures that no stage is overloaded and there is correct drive to the final linear on all bands.



9 Mc. Amplifier.

Note again the by-passing of the heater line at the 12SK7 socket with 0.01 μ F. disc ceramics. As noted previously, this stage is called on to deliver a peak of 3 volts only to the mixer, so a gain of five times would be sufficient for most purposes. When balancing-out carrier, however, one can turn the gain to maximum.

The r.f. probe is worth its weight in gold and takes about 20 minutes to put together. The four miniature components are arranged and tied near the end of a short length of dowel rod. Where it is wished to measure r.f. without disturbing the tuning of a circuit, a tiny 100K resistor (with twist of copper wire at one end) may be attached to the nail on the end of the dowel rod. The addition of a small "aerial" to the probe allows one to use it as a radiation meter when the final is operating. (See previous "A.R.'s." for similar devices.)



R.F. Probe.

U.S. CONTACTS ON 20 METRES

In a recent conversation with Bob VE3AYE, the situation on twenty was discussed at length and Bob makes the suggestion that when working U.S. stations from the low end, indicate that you will listen exactly 200 kc. higher in frequency. The method has been adopted by recent DX-peditions and found to be very workable. It enables the State-side operators to switch ranges on their transceivers (KWM1, KWM2, 75S1/32S1 combinations, etc.) and quickly go from listening on, say 14133, to transmitting on 14333 kc. The DX operator can also employ this method if he is lucky enough to own such equipment. I will leave it to your imagination as to what the 14300 odd kc. frequency will sound like if the DX is very rare.

VHF NOTES

(Continued from Page 13)

ed on each band a bonus of 10 points by the contest committee if both stations claim, so keep your distance recorded. Serial numbers with the usual RS and RST reports should be exchanged. For your score to count, the following information must be forwarded to Bill Roper VK3ARZ by the following Saturday.

Your score, together with the longest distance worked and with whom that contact was, as well as your portable location. It is suggested that you carry with you an envelope, stamped and addressed to VK3ARZ, Lot 57, Orchard St., Mount Waverley, so that you may post your score on the way home. These scores will be your only claim in the contest, so it is up to you to ensure that it is there for the final tally.

The winners of each section will receive a trophy for their efforts, details of which will be announced later.

The dates for those without calendars are: Sept. 16, Oct. 15, Nov. 19, Dec. 17, Jan. 21, Feb. (N.F.D. date), Mar. 18 and Apr. 15—3AAU.

LOW DRIFT CRYSTALS

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S W L

Maurice Cox, W1A-L3055
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Olympic Village, Heidelberg,
N.23, Victoria.

There were only nine letters received this month, apparently all have gone into hibernation for the winter—what, with no DX around! Oh well, if you s.w.l.'s want this page to appear every month, pen me a letter, we don't mind as long as it's about radio in some form. I would like to hear from the Groups in VK2, VK6 and VK7 again sometime, just let us know how you are going.

The awards are well under way again, so by the end of the year we will all know what they are about.

Contest—I shall not be long now chaps and it's a beauty. I made a mistake in last month's notes re a proposed newsletter. Forget all about it—reason being it can't be done as simply as we thought. So for the time being, we will content ourselves with this page, but mind you, its success depends upon your activities and how you pen them to me. Mac Hilliard and I hope you all went very close in winning the listener's section of the R.D. Contest.

I've just woken up to why I haven't received many letters; you've all been listening to the Test Cricket to the wee small hours of the morning, eh? I know I've been doing it. But it's been mighty interesting don't you think?

VK NEWSBEEL

VK3: The last meeting was held at our temporary building at 282 Queen St. and 20 s.w.l.'s heard a very fine, interesting and knowledgeable talk on how to build converters from Bill SARZ. Judging by the questions and the notes taken down, I think Bill may have started something. I expect to see converters for the h.f. bands in the near future. Bill held us spellbound for over an hour. I have not much technical knowledge and even I could understand it all. Bill, on behalf of the VK3 gang and myself, thanks a lot!

Gee, I almost forgot, last night (4th Aug.) nine of us budding would-be Amateurs (except Mac and I) visited Bill's QTH and saw one of the neatest laid out Amateur shacks we have ever visited. Bill gave us a taste of 2 mx then down to 80 mx. No sigs., then up to 40 mx and made contact with 3AY on s.s.b. A pleasant evening was had by all. So once again Bill, many thanks for your interest in the Group.

Next month I will inform you all of your new VK3 office-bearers who will further your s.w.l. interests for the next 12 months. I won't be standing for office at all in the Group due to unforeseen circumstances. I will, however, carry on with the notes for a short while yet. I think your next scribe will be Mac Hilliard and I want you all to help him as you have helped me. I'll still be in the background to assist as much as possible.

VK5: Seven of the local s.w.l.'s in Mt. Gambier (at the time of writing) are going camping for the R.D. Contest, so they are tuning up their rx's. Colin found that a 6U7 i.f. amp. gave up the ghost in his 7-valve rx. On replacing it, the rx burst into life on 80, 40 and 20 mx, but nothing heard on 10 or 15 (your not alone in that Colin). Al Rechner, SZCR, is now back in Adelaide and they are trying to get assistance from one of the local Amateurs. They were very pleased to have Al's help and thank him very much for the improvement of their radio knowledge. The boys hope to do their A.O.C.P. in October.

Garry L5026 has just completed an Amateur band tuner which will feed into his 7-valver which at the moment is being re-built to accommodate the tuner on the same front panel. Trevor took some photos of the group, but the flash light was not working 100 per cent so the photos were no good, but soon we hope to have one for this page. Colin has fitted an Eddystone dial to his rx; it has a 10:1 ratio drive and a nice calibrated dial it is. Colin received a letter from Len Cook in Darwin and he hopes to get a Command rx soon. How are you, Len? How's listening?

That's all for the VK newsreel and as I said last month, I hope to hear from you other groups in the coming months.

CORRESPONDENCE

Thank you once again chaps for your letters. They have come from Col Hutchesson, L5031; Chas. Abernathy, L2211; Peter Drew, L6021; Peter Field, L5039; Afton Westcott, L2136/VK4; Eric Trebilcock, BERS-185/L3042; John Walker, L2214; Dave Jenkin, L3039; and Ian Thomas, L3065.

The Master first, Eric went to the monthly meeting and heard a very good lecture on the University balloon efforts. The Uni. physics boys had equipment on view and Eric said he could follow the lecture very well. Eric has given his opinion re our quest for changing the s.w.l. number. He thinks that it is important that the call sign be as brief as possible. Therefore, he thinks that in his own case VK3-042 would fill the bill. It could be prefixed in line above by "short wave listener" or s.w.l. or it need not be. Could be some indication somewhere on the card re s.w.l.

Well Eric, I agree to a point. I, like many others, think VK3-L55 is much better. VK is the country, 3 the State, L for listener, and 55 the person's number. The other way could mean VK country and 3,042 listeners, which is wrong for sure. So we are submitting VK3-L55. Advice re the acceptability of this change in number will be mentioned in this page as soon as it is approved.

Eric has had 99 countries confirmed this year to date and has had 362 cards from 34 zones; last month's best cards were FQ8HP, M4QAR and UA2AC. The FQ8 was a new country for him. He has heard 17 ships this year, but only four QSLs. Not much listening done since last writing and what he has done has been on 3.5 Mc. However, other than VK and ZL, nothing heard. Seems to be more and more VK stations coming down to 80 mx and you're quite right, Eric, 14 and 7 Mc. are not good at all after dark, but sometimes 14 does open to W land around 2200 E.A.S.T.

Letter from Ian Thomas, L3065. He talks of his doings on the v.h.f. bands now that he has his Z call, is having bugs, etc., ironed out and has been given a lot of help, however he's still interested in s.w.l. when he gets time. Good for you, Ian, and we all hope you soon get going on the v.h.f. bands OK and work that elusive v.h.f. DX.

Dave Jenkins, L3039, is next and says he has good news for me. He has at last counted his countries heard score (see the ladder), but is not clear on the zones. He should be now, I've sent him a list of them. He had a letter from Jack Clayton, L3015. Jack is interested in the three-dipole antenna arrangement, plus transistorised power supplies. Dave wishes he had a c.c. on up at Orbest, then he would buy a AR7 or H.R.O. as he is more interested in operating than building, although he admits that one gets a kick out of building something on a few occasions and seeing them work well. By the way, he says Jack Clayton is using an Astor all-wave six battery set covering 80, 40 and 20 mx. Has had two quad antennae for 20 mx, but they both blew down in gales, hence the interest in dipoles—less wind resistance.

John Walker, L2214. He's just received his s.w.l. number and is quite thrilled. John boards at the Armadale School and he reports that for the last fortnight 40 mx has been very erratic at times; he's going to do more listening on 80 mx, though the Ws are very strong on 20 mx at times. His best DX was XE1JT. John reckons that the VK4 fellows must have very good beams, he can't hear a peep out of them when they work the Ws. Well, John, I don't think it's their beams, it's skip between VK4 and VK2. It's the same here on 20 mx, I can't hear the VK2s working Ws, maybe once in a blue moon. John's rx is still in the workshop awaiting to be re-aligned; apart from a guitar amplifier he's making, there's not much news.

Malcolm Hannah, of VK4, wrote asking me about a good rx to buy. I have advised him as best I could. Hope it's what you wanted Malcolm.

Peter Field, L5038, never stops listening, this lad; he and Peter Drew are the best two DX hounds at the moment—they sure log plenty. Peter hopes to add another rx to his collection soon for use on the v.h.f. bands with converters feeding into 3.5 Mc. He says "I've just got going on 288 Mc. and have heard absolutely nothing, except car ignition and noise, hi. It does work though, well at least it lines up with the g.d.o." What about your antenna Peter, how and what is it? Peter also makes mention of two new listeners in Elizabeth, L5042 and L5044; former uses a AR8 rx and the latter a 5-tube converted b.c. rx. All the best to you both.

Howard Harvey, L5034/SZBE. Howard's activity is at zero potential. At the moment he is using an old 1945 5-valve superhet, but it is as selective or sensitive as he would want it to be on 20 or 40 mx and it doesn't work

on 15. It now leaves him 1 mx to work on and he works it now that he has his call sign. He's changed the antenna system on 1 mx and is now using two 11 element beams, one wave-length spaced. At the moment Howard has a new h.f. rx on the drawing board. It will be about 13 valves dual or even triple conversion on 7, 14, 21 and 28 Mc. It will be a crystal locked 4-valve converter feeding an 11-valve 3.4 Mc. rx. More details next month.

Poor old Chas. Abernathy, L2211, the cold weather has him down; his listening time is limited to Sunday afternoons. The reasons being he's getting older, weather colder, and the one-eyed monster—shame on you, Sir Charles, fancy letting little things like that get you down. It must be hard for you not to brave the cold in the shack. Look at all the DX you are missing.

Peter Drew, L6021—the last for this month. At last he's heard his first W on 80 mx. It was KARID and he heard him on the 8th and 9th July at 1030 and 0930 GMT, he was 4 x 4 on s.s.b. Peter was using a 3-tube regen. rx and a piece of wire 15 ft. lying on the floor. The reason for the short antenna was to cut out the QRN. Of course it cut out a lot of signal. Also on the 8/7/61 he heard on 80 mx PZ1AX who was 2 x 2 on s.s.b.

The most startling DX was on 20 mx s.s.b. which was absolutely flat and out of the blue popped YS1MS who was 5 x 9, also PZ1AX (where have I heard that before?), YJ1ZA and HZ1AB. Peter has found 20 mx much the same as we have over here, poor, occasional European, some Ws and VEs. Much of the DX is on s.s.b., which gets through much better than a.m. even with his queer method of dissolving it.

This boy has been reading a book and I pass it on to all you other lovers of DX. In "CQ" recently, they printed some prediction data. The next minima will be in May 1965 and the next maxima in 1969 or 70 when conditions will be much about the same as now. Conditions will not be like the 1958 feats until about 2850 (I won't be worried about it then, for sure!). Gee that's grim chaps, I hope they are wrong. Yes, Peter, it sure was a feast on 10, 15 and 20 mx back in '58.

Nearly forgot Afton Westcott, L2136/VK4. He has another country confirmed HB1KU/FL which brings him up to 71 confirmed. Man, you sure have gone ahead in leaps and bounds in the last three months. I hope it continues for you. Don't apologise for sending a lousy report Afton, we know the bands are in a bad mood and won't let us hear any DX; just keep listening, they will come good.

DX LADDER

	Countries		Zns. S.s.b.		S.s.b. No.		Cds.
	Conf.	Hrd.	Conf.	Hrd.	Conf.	Hrd.	
E. Trebilcock	270	277	40				6948
A. Westcott	71	157	30		31	92	
M. Hilliard	32	189	25				157
M. Chillard	32	189	19		3	66	43
C. Abernathy	26	65	20				78
I. Thomas	17	136	13				36
T. Heywood	16	90	11				21
P. Drew	17	162	14				36
P. Field	13	118	9				
N. Harrison	11						142
D. Jenkin	10	137	7				
R. Wood	3	3	3				3
R. Thompson	2	73	2				2
D. Allen	2	18	2				5
T. Mills	2	14	2				2
J. Walker	1	8					1

Well my friends, there's the DX ladder again, quite a few alterations this month. Don't forget now about letting me know of your additions. I must repeat—if no alterations, then I must omit you from the ladder until advised of new figures. I hope you all will abide by this rule. Also, if any of you have any suggestions re what you would like to read in this page, just write me a letter. And I would like to hear from the other VK s.w.l. groups re their activities.

So that's all for this month. The very best of DX, 73, Maurice L3055.

WANTED!

ARTICLES

Can you write an article for "Amateur Radio"? How about one for Hints and Kinks?

NOTES

NEW SOUTH WALES

GENERAL MEETING

An excellent attendance occurred at the July general meeting under the chairmanship of the President, Bill 2YB. The lecture for the evening was by Paul Free, of Standard Telephones and Cables Ltd., his subject being "Silicon Rectifiers in Power Supplies." Those present were well briefed on the use of these more recent developments which will no doubt result in their use in preference to the tubes which have been with us so long.

An important item of general business was the ratification, by the meeting, of the Council's recommendation to proceed with the building of extensions to Divisional headquarters at Crow's Nest. Building will commence shortly and should be completed early in the coming New Year.

TAPE SERVICE

Of the many functions of this Division, possibly one of the most important is the service we render to country clubs and individual groups in that we record lectures so that they in more remote parts of the State may hear the lectures which are given at our monthly meetings. This service has proved very popular since its inception and has been patronised by many of the clubs in N.S.W.

The following tapes are immediately available for your use: Transistors by 2AAH, V.H.F. Omni-Range by Paul Griffin, S.S.B. by 2AC, Master Oscillators by 2JR, T.V. Suppression by 2FA, H.F. Direction Finding by 2JR, and S.S.B. (Part Two) by 2AC, with a number of others to follow on various subjects of interest.

Members are invited to contact the Education Officer, Harold 2AAH on this matter and arrange a tape lecture for your next meeting. There is no charge for this service, only the return postage for the tape. Slides and/or drawings accompany these lectures.

COMBINED OPERATION—DURAL

Many hardy souls ventured forth on the westest Sunday for month in the direction of Dural for the combined operation of the W.I.A. (N.S.W. Div.) and the 1st Divisional Signals Regiment. The day commenced with a mobile rally, all cars converging on Dural by the end of the morning.

A unit of the 1st Divisional Signals under the command of Capt. A. Ballentine was in attendance at Dural, and despite the weather demonstrated some of the equipment in use by the Armed Forces at the present time.

Results of the mobile rally are: low frequency mobile, 2AAH and 2AMA, a dead heat.

COUNCIL MEETINGS

Your Divisional Council has been extremely busy this last month with the administrative functions of the Division. It will be realised that the duties are heavy indeed, more especially since the great increase in membership over the past few years. The result is more and longer meetings for those seven members of Council.

As members of an association which is progressing at a fantastic rate, let us take stock of our activities, and really see whether we as individuals cannot spare a few hours weekly, not only for our own benefit, but for the good of our fellow Amateurs. We are fortunate in having many willing helpers in our many activities, but believe me there is plenty of room for more of you. Just a word to any of the officers of the Division will fix it. You'll be welcome with open arms.

Council has met in July on three occasions and has attended to all current matters.

SILENT KEY

It is with deep regret that we record the passing of:—

VK2AKR—John A. Lindsay.

VK3QK—E. H. Jenkins.

VK4KL—Ivo Johnson.

JAMBOREE-ON-THE-AIR

In conjunction with the Boy Scouts' Association this Division is taking its part in the Fourth Annual Jamboree-on-the-Air. It will be recalled that in previous years other Divisions of the Institute have played their part in this event which has done much to cement goodwill among Scouting Members in other States and throughout the world.

The Jamboree this year will be held on Saturday, 21st Oct., and Sunday, 22nd Oct., from 0001 GMT to 2359 GMT.

Located in Ottawa will be a station operated by the Boy Scouts' International Bureau under the call VE3JAM which will operate on 28490, 21195, 14195, 7210 and 3750 kc. for the duration of the Jamboree. This station will issue a special QSL card for all contacts.

Members are requested to contact their local Scout Groups and with them make contact with the many Scouts who will be happy to speak with their fellows at home and abroad.

SECONDARY SCHOOLS RADIO CLUB

A number of Radio Clubs have been formed at various schools to enable some of the younger generation to receive some instruction in the rudiments of Radio, and which will no doubt encourage them to join our ranks in the future. Such clubs are already in operation in Canberra, Bass Hill, Booragul and Kingsgrove, with others to follow, and consultations have been made by Harold 2AAH, Max 2MP, Rex 2YA and other on this matter. With the assistance of this Division it appears that approaches may be made to other schools in the State and also to youth clubs and similar organisations. Those of our members who may be able to give assistance to this scheme are requested to contact any of the gentlemen mentioned above.

HUNTER BRANCH

A complete ban on the use of sidecutters was in force during the July meeting of the Branch. The cause of all this was the visit of Vol 2VO to our monthly meeting to deliver his lecture "Wrecking Disposals Gear." Vol gave a most interesting lecture and the largest gathering of members and associates seen for some years, yes I said years, was there to hear him. Just in case you don't believe me, I've checked with the attendance book and I notice that the only time, excluding Annual Dinners, was 14th Feb., '52, when 63 were present. At the moment, Mr. Mullen, of budgerigar fame, has my bound copy of "A.R." for '52, so I cannot say what the meeting was all about. Suffice to say that 9½ years later there was a rollup of 41 to hear Vol.

What with the Trade Fair and all things have been pretty hectic this month and the man from the swamp, 2ZL you know, took three days off to visit Sydney and look around. Bill's still having trouble with S9 noise level and the boys from Nesca did a quick job out there the other day putting a new insulator on the power line. All was well until some north-of-the-border mist came along and now we're back to taws. Of course, the battery charger radiates a good signal too, Bill, and after all that twisted string goes very near it. Anyone got some coax?

Have you been to Toronto lately? Low flying aircraft beware of Jim 2AHT. An addition to the farm is the 15 mx beam atop the big mast. Jim says sigs are fine and the local spies report that DX for Jim is commonplace these days. One of these days I might get the other mast up at this QTH. The small one was raised into position the other day to the cheers of the locals. It remains to be seen what will happen when the other one is erected and a wire swung between them. Even 2AWX may hear me.

Another lakeside Amateur who deserves praise for a job well done is Harry 2AFA. He is now proudly displaying the Australian D.X.C.C. on the shack wall. I might mention that Harry's 20 mx antenna is a flip-flop beam, but it must work well. Of course, although he denies it, Harry's not a bad lad on the key and I'm sure that here is where the secret of his success lies. Another Amateur with a mighty antenna is Les 2BE. It is said that now it has been raised to above the level of the fence. Whether or not this is true, I'll leave you to judge, but the signal has improved so those broom handles must have done some good.

There are some, of course, who hide their aerials to foil the kind viewers. A resident of Westly named Bob has been doing this for years but at last his sins have found him out. Not that he wouldn't have got away with it for ever but he has to go and spoil it all by going on 80 mx. Now, I ask you, how is it possible to hide an 80 mx dipole behind the garage? Mummy, I just saw Mr. Rose on our t.v. He was just standing there in the middle of Six O'clock Rock. But he wasn't dancing

Mummy, he was talking about some game with three balls on a green table. Exit to the tune, "They Wouldn't Believe Me." There's something else I can't believe. Our well known v.h.f. man, Stan 2AYL, has a problem so they say. His son has a car and Stan is said to be going mobile with this vehicle. It is not said if on 2 or not, but I'll believe it when I hear him. The problem, by the way, is who buys the petrol.

Varley 2SE is preparing for his forthcoming lecture to the branch by making pretty patterns on a c.r.o. There is a wobblator too, in this setup and much midnight oil is being burned, say the spies. Whatever is afoot I cannot say, but a visit to the October meeting will reveal all.

Several new members have been recruited, and three that I know of are Norm Mortimer, Nev Woods and Allen Vitnell. Norm is from Newcastle while the other chaps are from the coal city and were introduced to Amateur Radio by Chris 2PZ. Chris dusted down the posthole digger the other day and erected yet another mast in the back yard. It's proposed to support a full wave on 40 with this to favour the Sydney path and 80 mx working is also contemplated. A really big signal is promised in the future. The pi-coupler is to be scrapped and a new aerial coupler will get more r.f. into the high wire.

Bill 2XT also has a signal on 80 and each other band through to 2 mx. The Thunderbird works very well and pulls in the DX consistently. Bill must have been doing some persuading too, because Bob 2AQB also mutters something about 2 mx. Can it be true? Harold 2AHA has at last been heard on 40. He came back to 2AWX the other Monday with phase modulation. From all reports the signal is f.b. and it's really good to hear you back on Harold. Although Harold has no trouble with phases, there is one local member who does. This man, who prefers to remain anonymous, placed his nice new Japanese multimeter across the 240 while it was set on the millimetre range. Of course the meter didn't like it very much and showed its disapproval by bending its needle all out of shape. Result, more trade for Japanese meter repairers. He has a certificate though, numbered 1096 and headed P.M.G., so he'll be all right.

Our worthy president 2AYF is just about ready to put a signal on the band. He has apparently settled all his differences with the electrical fitters and wires and the new shack progresses at a great rate. So watch out all you Bar Beach fans and hang on to the gain control lest you are unprepared when the big signal hits the air.

There often is mention of "G.E. Ham News" and articles extracted therefrom. Gordon tells me that it is possible to get a bound volume of these useful magazines by writing to Mr. Hannom, A.G.E., 167 Kent St., Sydney. I cannot tell you the price, but should you be interested, Mr. Hannom or Gordon can give you the details.

The big event this month of course is the Annual Dinner and Field Day. The Dinner this year is to be at the Esplanade Hotel on Saturday night, 30th Sept., at 7.30, while the Field Day is being held at the usual place, Blackalls Park on the next day, Sunday, 1st October, beginning at 10 a.m. A really first class programme has been organised and you

W.I.A. N.S.W. DIVISION
HUNTER BRANCH

TENTH ANNUAL
CONVENTION

will be held on
SATURDAY, 30th SEPT.
and
SUNDAY, 1st OCT., 1961

ANNUAL DINNER

at the Esplanade Hotel, Newcastle,
7.30 p.m., Saturday, 30th Sept.

FIELD DAY

at Blackalls Park, Lake Macquarie
10 a.m. on Sunday, 1st Oct.

Full details will appear in the September
Bulletin.

Book Accommodation now with G. Sutherland, 15 Marine View, Newcastle.

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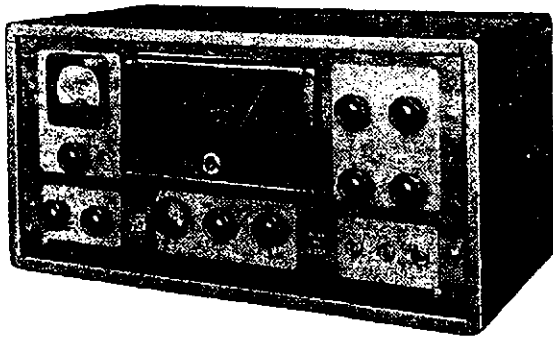
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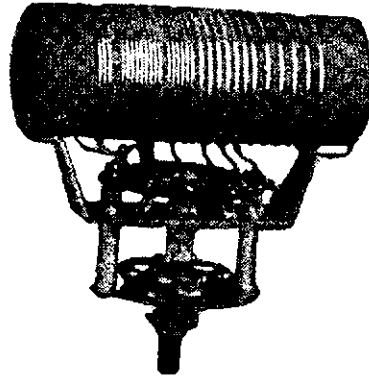
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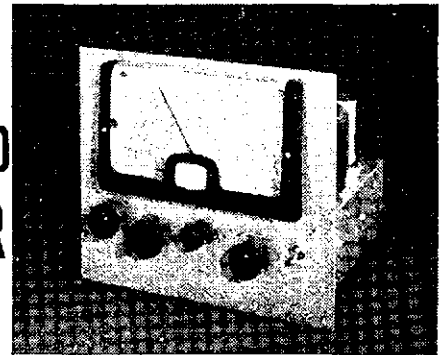
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cannot afford to miss this event. The total outlay is 25/- for both functions, but should you not wish to attend the field day the cost for the dinner is £1. If the Field Day only attracts then Gordon is going to ask you for 10/- . So why not be in it and lash out with 25/- for the two. You'll not be sorry. All the details will appear in this month's Bulletin and anybody who can't find their way then will have to ask a policeman.

Our old pal Ben 2ABT has been up to something odd so it seems and has managed to break his leg. This will never do Ben, you'll have to get better for the Convention. All the chaps wish you a speedy recovery. Also on the sick list this month is Max McLachlan. Hope you are soon 100 per cent. again Max. The only other sick man I can think of is Lionel ACS. He's sick of seeing 27 Mc. radio control gear that won't do as it's told. Apparently the rx plays strange tricks. If your rx plays strange tricks too, then you'd better bring yourself along to the next meeting. Keith Jeffcoat, 2BK, will be there with two rx's, one modified and one unmodified, CR100. He proposes to tell you how to get the most out of your rx. So come along and hear how it's done. That includes you Shannon! For those who don't know, we hold our meetings on the second Friday of each month at the University of N.S.W., Tighes Hill. This month the date is the 8th, so drag yourself away from the one-eyed monster and put in an appearance at 8 p.m. See you, 73, 2AKX.

SOUTH WESTERN ZONE

The South Western Zone, N.S.W. Division, held a meeting at Wagga on Sunday, 23rd July, to determine where they would hold their 9th Annual Convention. The meeting was well attended, there being 17 members and four associates present. The boys from Tumbumba put forward the suggestion that they be given the opportunity of holding the Convention at Tumbumba this year and this was supported by all present. The dates for this important event are the 30th September and 1st October, 1961. A warm welcome is extended to all Amateurs who wish to attend. For further information, seek the Notice in this issue.

During the meeting, the Zone Officer, Jim 2AJO, tendered his resignation from that post. Jim has given nine years' service to this Zone and his resignation, for personal reasons, was accepted with regret and many thanks for all he has done for this Zone and Amateurs in general. A new Zone Officer was appointed, Bill 2AHV, who, after election, assured the meeting that he would do all he could to fulfill the confidence the meeting had shown in electing him to this position.

The meeting closed when afternoon tea was kindly served by a number of XYLs.

THE BLUE MOUNTAINS SECTION

The July meeting was held as usual at Lawson and ten members were present. As the President was not able to be with us, Bob 2ASZ was "in the hot seat". There was no lecture set down for the evening, but a lengthy discussion on 2 mx portable occupied most of the evening. Wal 2MZ gave us all the facts and figures and is working on the project so that we may assist in communications with the Bush Fire Brigade, etc. Some very good ideas were discussed and it looks like we will get many takers. There being little business, the meeting closed and a hot supper was enjoyed.

HALLICRAFTERS COMMUNICATION EQUIPMENT

Agents are to be appointed for this very fine range of equipment for the following States: Queensland, Victoria, Western Australia, South Australia, Tasmania, and Northern Territory.

A good knowledge of import procedures would be an advantage, but not a necessity.

Write for information to the Hallcrafters' representative:

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by all, followed by the usual ragchew. Some forty odd 6060 type tubes were made available by yours truly's salt mines and duly sold like hot cakes for the benefit of the club. The 6060 is identical to a 12AT7, so may have some more in the future.

The Club had its first get-together for some while, using two bands—80 and 2 mx. Everything seemed to go OK so keep it up fellows. Remember second Friday night, 80 and 2 mx, at 2000 hrs.

My spies tell me that Sid 2AVK and Stan 3AFL, who were visiting Sid, dropped down to Lawson for the meeting the Friday before. Well Sid, that is a new excuse to be clear of the house. Al 2ZFB and Bob 2ASZ called in on yours truly but we were well on our way to The Entrance. Sorry fellows, called on 40 mx mobile all the way to St. Mary's, so thanks Don 2ART, for entertaining my visitors. Anyway a nice week-end was had by all. Called in on Bob 2IN, who, incidentally, is on 2 mx, so turn your beams N.E. for Bob most nights at 2000 hrs. Also called in on Trevor 2TM at Woy Woy and had a very enjoyable afternoon. Trevor will be moving QTH to Glenbrook very soon. Another one to the clan.

Coming Events.—Lawson Field Day in October. Date to be determined at the August meeting. Full particulars next monthly Bulletin. Scout Jamboree-of-the-Air. Several Scouting groups on the lower Blue Mountains, Camden and The Oaks have been organised, the dates being 21st and 22nd October, so keep this in mind.—73, 2ADA.

VK-ZL CONTEST

PHONE: 30th SEPT. and 1st OCT.

C.W.: 7th OCT. and 8th OCT.

1000 hrs. GMT to 1000 hrs. GMT

BOORAGUL HIGH SCHOOL RADIO CLUB

A meeting of the School's Ladies' Auxiliary donated £10 to the club funds. This was received with much pleasure by members and it will go towards the purchase of a Geloso v.f.o. Our new modulator is nearly ready to go, but we are having trouble with an oscillating 6N7. Ian changed some of the coupling capacitors in an effort to overcome the trouble and while doing so nearly changed himself to dust by finding a live wire with his finger. Unfortunately one of our crystals, 7125, turned against us and went on the blink. We are unhappy about this but perhaps all will be well when the v.f.o. arrives. During Education Week we are having an open day. Among the displayed items will be a radio control tx built by Les Winters together with a matching rx constructed by Ian Forrest. 73, Bruce for 2ATZ.

CHRISTIAN BROTHERS' COLLEGE RADIO CLUB—VK2ATQ

Great progress is being made in the way of equipment, but operation on the air is still restricted to the few very keen members. With a good deal of assistance, we hope to be working s.s.b. after the holidays, and hope to have an occasional period off school-work to let the whole class talk over its problems with any DXers who'd like a yarn.

The new G5RV flat-top is working out well on 40 and 20 mx. We made it to the exact specifications given in "A.R." early this year, and it's a big improvement on the previous dipoles.

1,000 new QSLs are practically ready, and will be circulating by the time this is printed, so give us a call if you'd like one—20 or 40 mx most week days about 1245 E.S.T.

John (harmonic of 2LX) received a call from his uncle, 2MJ, and had quite a discussion of family affairs; hope it'll turn into a regular sked. A powerful mobile s.s.b. signal from Reg 2AI was often heard during the month. DX worked was nil.

An AV25 demonstration triode was set up for a week to help explain and show the working of valves.

A few contacts were made in the R.D. Contest, and log submitted. That's about the lot for now, so best 73 and good DX.

VICTORIA

VK3 Council has decided to change some of the membership fees of the W.I.A. It has decided to drop completely the entrance fee. Members will continue to pay £3/3/- p.a., associate members £2/15/- p.a.; however, persons under the age of 18 or full-time bona fide students not in receipt of a regular income,

under 25 years, can be full members for a fee of £2/2/- p.a. or associate for £1 p.a. Country members continue to pay £2/15/- p.a. for full membership and £2/10/- p.a. for associate. These fees are retrospective to 1st August for new members. Old members' this new scale comes into effect on 1/3/62. A "country member" now resides outside a radius of 25 miles of the Melbourne G.P.O.

ATTENTION VK3 MEMBERS

The VK3 Inwards QSL Manager requests that the undermentioned members take delivery of QSL cards intended for them, either by calling at 340 Gilles Street, Thornbury, in person or sending Eric a s.a.e. Those concerned have cards on hand dating back to at least 1958 and in some cases to 1955. Thanks to those members who have responded to the 3WI broadcast for stamped envelopes. The calls concerned are: VKs 3AB, 3AN, 3BQ, 3GA, 3GV, 3ID, 3JE, 3LQ, 3MS, 3NH, 3NJ, 3RP, 3SO, 3UK, 3WM, 3WR, 3WY, 3XU, 3ZJ.

Keep those stamped addressed envelopes rolling in chaps.

WESTERN ZONE

We welcome a newcomer to our Zone. He is Norman Blake, VK3ZLU, at Hopetoun, who after getting rid of some troublesome bugs in his tx is now active on 6 mx. His near neighbours, George 3ZEA of Rainbow, Herb 3NN of Yanac, and Max 3ZCW of Ouyen, have assisted to keep the airwaves busy in that area.

Keith 3QG of Murtoa has also caught the v.h.f. bug too and has a three element yagi on a 40 ft tower in readiness for a crossband contact. So far conditions have been against any attempt to make a QSO, but they should succeed very soon.

Norman is especially pleased in that he has also passed the exam for Broadcast Operator's Certificate of Proficiency. He is making the best of his opportunity to obtain further QSOs as he is due to leave for Missionary service overseas toward the end of this year.

We expect to have quite a few stations active on the air for the Jamboree-on-the-Air week-end, so expect a nice lot of contacts.—3AKW.

NORTH EASTERN ZONE

This Zone held the first Zone hook-up for many moons on Friday night, 21st July on 3.7 Mc. It was very pleasing to all concerned when the following stations reported in: Ken 3KR, Peter 3APF, Frank 3ZU, Vern 3AXW, and Arthur 3AUL. Apologies were received from Bob 3JUW a couple of nights previously, owing to a prior engagement at the Albury Radio Club.

Various suggestions were made and discussed, several of which could not be finalised as they were of such a nature that it was felt that more members of the Zone should be given the opportunity to voice their opinions on the various points raised.

Everyone on the hook-up were in agreement as to the night, time and frequency for future get togethers, which will remain as every Friday night at 2000 hrs. on 3.7 Mc., so chaps make a note of the time and frequency and of course remember the night—each Friday.

Peter 3APF and friend have been "busily flattening batteries or something, chasing around the countryside modulating lights? There seems to be more in this than meets the eye. Methinks, however, we shall be watching progress with interest. Peter and mate might be on to something. Frank 3ZU still busily engaged on the sideband rig and other gadgets and says he has three more prospective Hams over there in Yarrowonga

W.I.A. N.S.W. DIVISION SOUTH WESTERN ZONE

NINTH ANNUAL CONVENTION

at TUMBARUMBA

30th SEPT.-1st OCT., 1961

The usual field events will be held and a good time is assured.

For all inquiries and required accommodation, contact W. Coombs, VK2AWC, P.O. Box 61, Tumbaramba, N.S.W.

going for the Z call in the near future; good luck to you chaps, but what about the full ticket?

Ken JKR is really doing things in style these days. Goes to the pictures on Friday night and takes along a smoke signal rig, talks to the boys and watches the flicks at the same time. He reckons it may be the answer to t.v.i. problems too! Anyway an f.b. signal comes from the picture show at Benalla. Would like to know what you use as an antenna though Ken, maybe shoot it through the projector.

Another one to do things in style is Vern JAXW, of go-cart fame, believe it or not, he's persuaded the XYL to let him operate the rig from the kitchen while she does the cooking of cakes, etc.; can't see this going on for long though, as every time it is passed over to Vern he has just started or just finished another piece of cream cake. Things pretty quiet up Smoko way, maybe due to the snow and temperatures around the 19 degrees mark. Who said it was cold in the Antarctica? A ten element yagi on 144 megs. is ready to go up and the 522 is working OK, so it won't be long now before we find out if it is possible to get a 144 meg. signal out of the bottom of a valley and over the hills and far away.

That's about all for this time chaps, don't forget to look us up some Friday night and let the boys know what you are doing or planning to do. 73, SAUL.

MIDLAND ZONE

A gentle reminder regarding the 80 mx hook-up appears to be the first time. Following appearance of these Zone Notes last month with the details of the hook-up on 80 on the first Thursday of every month, a good attendance was registered, but unfortunately it resembled an s.w.l. night as almost everyone listened, heard no call, and gave up. If someone had had the courage to transmit, there would have been a hook-up and SAHA would not have built his fire in vain. Full of enthusiasm, he stoked his fire and tx in that order, but was rewarded with warmth and little else, because his signals were unheard in Maldon, Bendigo and Kangaroo Flat. Be not dismayed OM, better things are in store and someone will speak next month. Even if my XYL does come to the back door hurling abuse because Channels 2, 7 and 9 are no longer viewable. At least the beat pattern doesn't have any snow on it, which is more than you can say for the picture.

Two mx activity in the Zone continues unabated with 3JW calling most evenings around 7 p.m. He has a good signal out, but has difficulty in receiving weak Melbourne stations. From all reports the rx's in Melbourne are good, but tx's are underpowered, being mostly 522s. More power out from the city will help the country boys and do a lot to encourage activity in the bush. After all, it is useless to build good converters and tx's if those distant stations won't do likewise.

3FY finally put power into the aerial from a 522, but with the original oscillator, also put power into three t.v. Channels. Alteration of the oscillator to a 3rd overtone cured this trouble and harmony once more prevailed in the home. A minor detail such as the wrong crystal putting out a signal at 148 made the first contact somewhat difficult for 3JW to find.

3FO has plans to go mobile on 6 and 2 mx. Details are not available yet, but all Col needs to do is travel about 2 miles from home to the top of Mt. Tarrangower and signals should spread all over the State. The Mount will be the site for a Zone Get-together on Sunday, 24th Sept., so forewarned should be forearmed. At the moment plans are that it will be a free for all, with mobile rigs, ear bashing and any form of activity to pass a pleasant afternoon. If the weather holds, it may be a good idea to take the XYL, YL, and/or harmonics along for the ride, but everyone knows their own family best. Listen to the hook-up for precise details but don't forget the date.

After the first meeting of the Zone last month, 3BM took home a 2 mx converter for trial purposes, but to date we haven't heard whether Bruce has heard. Perhaps he is busy converting the signal from an HT37 to 144 Mc. so that s.s.b. can come from Qumabatook. If so, it will be a race between 3BM and 3ACN because Neville's last words on the subject were the product of 2 mx sideband from his HT32.

MOORABBIN AND DISTRICT RADIO CLUB

The month has gone around all too soon and happenings are a little slow, but nevertheless here are some items of interest.

At our August meeting, Kel 3ZFQ gave us a very interesting lecture on "Crystal Filters". At our Sept. meeting our film librarian Laurie 3CN has selected some very nice color films for our viewing. A group of members are attending the W.I.A. Dinner en masse and also

intend going along to the Ferny Creek Convention, making a picnic day of it. At the Dinner we are hoping to be presented with the Perpetual Trophy won by the Club at the last National Field Day.

As to personal bits, both George 3NQ and Bill 3JE are in the throes of the initial stages of getting going on s.s.b. The October lecture, by Lex 3AIL on s.s.b. should be of special interest to them as to Bob 3NZ. Alf 3LC, having heard the call for help put over the W.I.A. news, has signified his intention of co-operating with the Malvern Troop Scouts in the Jam-boree-on-the-Air in October. Peter 3XK is also participating and we hope many more members will be helping in this worthy cause. The club station should be ready for this event. Other than this our 80 mx tx hunts are still very popular and things are going along very smoothly, new members joining up every month.

In the Hamad section of this month's issue you will note that we wish to sell an ATS-AR8. This combination has been laying in storage for several years now and as we have several other projects on hand we thought it a good idea to dispose of it and get the necessary finance for these projects. It is as original and has not been tampered with or modified, so should be a very good buy for anybody needing an outfit of this nature. We would like to obtain a Type 3 Mk. 2 in good condition. 73, 3LC.

QUEENSLAND

Well, how did you like our freeze this year? Few early morning operators failed to tell how cold it was in their locality. Just as well we have so much of that beautiful warm sun. By the time you read this, winter should be well behind us and you'll be wondering where to try out the mobile. A trip away to the coast or country with the family is a good excuse. I anticipate quite a few new mobiles this year; let us tear ourselves away from 5 watts and 5,000 miles.

Jack 4JF's QTH was the place of our July Council meeting and Jim 4PR, Bill 4WX, Keith 4DG, Jack 4JF, Ken 4VM, Bert 4AO, Ron 4RL, Col 4EF and myself were present. Bert 4AO reported on Federal matters and brought up the matter of items for the agenda of the Federal conference next year. So chaps, if you have subjects that you think should be discussed on a Federal level start channelling them through your branch now.

Four new members were admitted; the correspondence, and how Bill 4WX has been hitting it, rushed through; certain items passed for payment; noted that Steve 4BB was in hospital; a nice reply from Mrs. R. F. Roberts in acknowledgment of our wreath received, and we were ready to listen to Stan 4SA who, with our auditor Don Hurley, had come along to present his "Methods of Operation" for, in this case, the Queensland Division W.I.A.

After outlining aims and objects, Stan dealt with system. Briefly, the duties of office-bearers and means of carrying out those duties are laid down on paper to try and ensure continuation of one effective system for as long as most of us can see ahead. This endeavours to ensure that as personnel of the organisation changes the methods do not change willy-nilly, and past mistakes are not repeated.

Coming closer to home, parts of the scheme should also simplify the work of our auditor, who is looking forward to a system of book-keeping that will simplify auditing. Some discussion took place as the report was being delivered and a few points tied up with giving receipts have to be settled. Stan's report was received and later Don had a few words to say on problems he comes up against.

Our thanks to Stan and Don for coming along and giving so much thought to the matter.

A QSL card has been designed by the Tourist Bureau and they will be calling quotes to see how far they are involved financially. Money is pretty short but quality is our first consideration and I have no doubts that the Bureau is making a sincere effort to meet us in our requirements.

Lectures.—At our September meeting, Dr. Morrison, 4MO, will give a talk, illustrated by slides, of his overseas experiences, dealing particularly with New York and a "Hamfest" he attended there. Note the date carefully on your calendar—22nd September—as there are five Fridays in September, and be along.

Subject to Council approval, the October lecture will be "Ionospheric Predictions and Theory," while the November lecture will be "Radio Propagation and Recent Research".

The July meeting was held on 28th at State Service Union Rooms, with a good attendance to hear Pat Kelly talk on "Radio Astronomy".

The Divisional Library has just received six copies of Phil Rand's T.V.I. Handbook

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Silly isn't it? Anyway I've given a lot of thought as to how to tell you what we've got, without taking up the whole magazine, and came to the conclusion that the best way is just to tell you as if you had asked me.

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In order to reach the widest possible market we have enabled almost any combination of components to be purchased separately; you can buy the complete 150 watt or 75 watt transmitters (two models of the latter) wired, or as kits; with, or without the v.f.o. (have you got a Geloso v.f.o. in that rig that gives you t.v.i.?). You can buy the chassis and cabinet only, all drilled with knobs and all, or undrilled for do-it-yourself drillers; you can buy the perforated final amplifier cage to suit almost any final, a set of drawings for drilling the blank chassis, the instruction book (very complete) for both 75 and 150 watt transmitter kits (why not the chassis and pi coupler kits for a linear amplifier); and a conversion kit for changing a 75 watt unit into a 150 watt unit.

Prices vary from £76/7/9 (for the wired 150 watt transmitter) downwards.

I haven't got room here for all the details, so why not write or phone us and we'll send you our descriptive catalogue.

Don't forget, you'll be able to see the equipment at the Victorian Division W.I.A. Annual Dinner at Scott's Hotel on Saturday, 30th of this month.

Until then, 73, Ian (Jock) Macmillan.

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which will be ready for distribution to members by the time these notes are in print. At this time three copies are set aside for country members and three for local members, but this will be varied according to demand. Ken 4VM, our librarian, hopes always to have a copy on hand for immediate reference. Please return them as soon as they have served their purpose, or within a month which is the normal term of issue; although extensions may be given.

The Crossed Dipoles award has been withdrawn as we are unable to keep up with demand, and they will be stored with our model of the AFDR1 receiver. They may be inspected on 32nd March, 1962. [An interesting historical item—the improved model—no transistors—now available.—Ed.]

This month's unclaimed QSL card list: VKs 4PB, 4GC, 4GE, 4GG, 4HB, 4HJ, ex-4JJ, 4JY, 4KK and 4KP.

I was pleased to note some of the efficient young chaps at the last Convention. We must have quite a few in the Institute. A good way to gain experience for administration is to become familiar with an organisation. A few of you young chaps could gain a wealth of experience and be of great value to the Institute by assisting councillors with their work. Not only would you be training for office, some of you have to do it some day, but you would ease the burden on older shoulders. Think how much easier the organisation would run if, when one of us became absent for some reason or other there is a "back stop" who doesn't let part of the show slow down, or stop. This should be a show with plenty of young men about. Don't wait to be pushed—take the initiative!

AROUND AND ABOUT

Over 200 W6 cards from VK4TY were checked recently for Norm's application for the "California Award". Geoff 4XB not seen or heard for a long time—last heard of was making receiver alterations using Gelson front end. New countries are being confirmed for Keith 4DG regularly. Being a keen stamp collector gives added interest to the pleasure of working DX. Steve 4BB, who is recuperating after an eye operation in Princess Alexandra Hospital, seen around city radio shops with Stan 4SA. Going mobile? Bill 4WS also looked Steve up, as did David 4DP. Ron 4ZDS, who is helping 4AO with the 4W1 tx, is a contender for his full license. 4PC Monto spending more time on t.v. these days but can still be heard around the bands.

Ron 4RL has built himself a "turret tuner" rx and reckons turret tuners are "the goods". Ron has also built his mobile converter. Brisbane chaps report a pretty good signal of Bob 4ME Townsville, from his new s.s.b. rig. Good to hear Bob 4RW on the Sunday morning hook-up recently. 80 mx is active with VKs and ZLs on s.s.b. and some good U.S. contacts are being made. David 4DP has a new TA33 beam in action. Evan 4EF was in bed with 'flu the other day. Knowing Evan, I doubt if that will affect the efficient handling of disposal matters.

Keith 4DG is very interested in the log periodic antenna and has the best information about them. Keith is also working on an s.s.b. portable. Jim Hillhouse 4ZO, of Carpet St., Collingwood, requires information on triband quad for 14, 21, 28 Mc. Ken 4VM has changed his mind about selling his outfit and will probably go for a s.s.b. adaptor. Chas 4RQ has disposed of his Heathkit and has a Collins KWM2 running pretty well; heard mostly on 14 Mc. Col 4CI has his own brand s.s.b. rig, and is at work on a rx for s.s.b., xtal control, Q multiplier, b.f.o., xtal converter—everything he can think of. Jim 4PR must be approaching D Day with his s.s.b. compact.

The Northern Command Club held their annual meeting in July, when the President's and Secretary's reports were delivered and the election of office-bearers took place. Elected were: President, Brian 4UW; Sec-Treas, Tony Crane, Committee; Ian 4ZCI, Colin 4ZBQ and Brian 4ZAF. A pleasant time was enjoyed by all and a \$22 rx was auctioned, while a s.s.b. handbook was raffled.

At general meetings on the first Monday at Kelvin Grove, visitors are welcome to come and also to stay for supper and a rag-chew. Major construction work is the installation of a complete 2 mx and 6 mx station which will take some months yet. Present work is modification of a 522 tx for 2 mx operation. A rotating antenna installed on 2 and 6 mx is in operation. The Club is active on 6 mx regularly every Tuesday and on the first Monday meeting night.

Due to the absence of the retiring Hon. Sec., Ray Rumble, the annual meeting of the Southport Radio Club was postponed. Ray's jalopy got off frequency on the way to the meeting. Ray was uninjured and managed to get the

OBITUARY

JOHN A. LINDSAY, VK2AKR

Many will remember Jack as one of the stalwarts of the 10 metre band in the days following the cessation of hostilities. Unfortunately Jack has for some years not enjoyed the best of health, which resulted in his death in the early part of July.

He leaves a wife and family to whom we extend our sincere condolences.

IVO JOHNSON, VK4KL

Ivo Johnson ("John"), VK4KL, passed away on 22nd May, 1961, after a short illness.

He was an old Ham and was famous for his machine-like fist on the key. "Johnno" took up radio way back in 1918 when he joined the Navy. Claude 4ZY, Frank 4FM and Basil 4ZW attended the funeral, which was a large one and well attended by members of the trade houses.

car to limp back to Murwillumbah. Notwithstanding this setback, the tape on Communications Interference was played to those present. It proved not only very interesting but also very informative and the opportunity of hearing it was appreciated by all. (Thanks for the prompt return of the tape, Bill.)

A bird flying over Gympie heard that the W. B. & B. monthly meeting was held in Gympie on 18th July and 23 persons were present, including OM, XYL and harmonics. They travelled from as far north as Bundaberg and from as far south as Nambour. The meeting covered mostly branch business and the XYLs provided refreshment at the appropriate time. In the afternoon a 144 Mc. hunt, run by Eric 4XR, was won by Ken Chiverton, of Nambour. Another cross on your "rush-box" Ken. Barry 4LN did not enter as he was trying his new mobile rig in readiness for holidays the next day when he was going north for more sun. Half his luck.

Gordon 4GH seen swotting up transistor circuits. Jim 4HZ still chasing over the Commonwealth for parts for the new F.N.H.Z. tx, when he is not watching t.v. Hughie 4HE travelled from "Bundy" with XYL and daughter for the meeting where a pleasant surprise in the presence of their son, Allen, of Brisbane University, who had travelled to Gympie to meet Ma and Pa.

Eric 4XR running the A.O.C.P. Class on Thursday evenings attended by four pupils. The class finishes with an excellent supper provided by XYL Jean—thanks Jean.

Fred Cox never misses a meeting, but just can't find time for that ticket; come on Fred. Bill Tomlinson travels from Tewantin every Thursday night to classes—doesn't get home until 1 am.; you deserve a ticket, Bill. Bill 4SW chasing the t.v. signals with an 100 ft. tower. What about a 144 Mc. beam on top, Bill? Vic 4BJ heard to tell he is going on 21 Mc. as there are now five new Amateurs in the town waiting for call signs.

Another bird flying over Cairns heard that Basil 4ZW is running classes to enable chaps to get their licences. Two members of the class sat on Tuesday 18th July, for their limited ticket and we hope they have passed. Two other chaps are nearly ready. This means in a period of twelve years since 4MH got his ticket there has not been an examination in Cairns until now when we have four chaps sitting in successive examinations. Good work Basil. Believe you are also assisting a pupil with correspondence. Alex 4MA has resigned from the Education Department head-teaching at Mt. Garnet, and has bought a small mixed business in Cairns. He won't have much time for radio in the future but any southern Hams mobile in Cairns should look him up.

John 4ZAV is leaving Atherton to join station 4OY at Gordonvale. We hope he and Basil 4ZW have a little more success on 6 mx. Basil uses a four element beam.

Kingsfisher Group—We hope the friendly rivalry which exists between VK4 and VK5 does not develop into a cold war but Pansy had better watch out as rumour has it that Howard 4WO, who has had quite a lot of verse published, will soon be persuaded to send in news in verse form. (For better or verse?—Ed.)

Interest in the Group has been sustained, there being at least six Kingsfishers participating each morning, the most consistent being 4OL, 4GG, 2GI, 4WO, 4WS and 4SA.

Bill 4WS, Alf 4OL and Stan 4SA made a further visit to the QTH of Del 4RJ, and by the time you read this Del should be on the air again. Del and his XYL looked ever so much better on our last trip. Bill 4WS, as usual, always talks about "front to back radios"

when passing through Surfers Paradise and there will be no holding him when the bikini's are more plentiful during the summer months. Alf 4OL is keen on experimenting and can be depended to change the circuitry of either his mobile or fixed station at least once per week. George 4GG puts out quite a good signal on both his Command and his big rig. George starts us off each morning with the thoughts for the day, his latest being "drive carefully! Your blood is better in the Red Cross Blood Bank than spilt all over the road."

Keith 2GI is trying to get his road fixed up and spends a lot of his time filling potholes with water to bog the Shire Engineer's car. Eddie 2BB has been sick with the prevailing 'flu, but is now restored to his usual "rude" state of health. Bill 4XO comes on when possible. Bill has gone overboard on s.s.b. despite the fact that he has a really f.b. a.m. rig.

Fred 4VB comes on with s.s.b. on his new KW Viceroy and his latest transmissions rank with the best we have heard. Get that big tower up Fred and let us hear how she sounds with an aerial. Bill 4WD had a visit from Bob 4NG. Bob's photo in "A.R." was a natural. Those of us who know Bob first looked for the pipe! If you find the pipe just feel along to the end of it and there will be 4 Nancy George. Bill sat for his exam. in his chosen sphere and is awaiting results. Let us know when you celebrate Bill.

Stop Press.—VK4WQ takes the air. Wide Bay and Burnett Branch commenced using their call sign on Saturday afternoon, 6th August. Congratulations W.B. & B.

That's all. Thanks helpers.—4PJ.

TOWNSVILLE

Those lucky enough to read "CQ" for April and May will have received a very good insight into "Sunspot Activity." This is in three parts, the final one being in June. After reading only the first two parts, one can really see why the squeeze was on the Amateurs to curtail their frequencies. The article points out the various sunspot activity for just over 200 years with a graph towards the future. The so-called 11-year cycle, also a new one of 168 years, which is in the throes of being proved, and it does not hold out much hope on the higher bands above 14 Mc. So look like us old chaps can just look back on the past peak as the best we ever had and never to see another like it. What tall tales shall we tell in another 10 or 15 years to the newcomers?

Yours truly paid a visit to "Uncle Xray" and this was the start of a procession of callers, who were Barrie 4LN and XYL, David 4ZDA, Jim 4ZO, followed by old timer Charlie Welch, ex-4CW.

Rumour has it a chap from Ingham sat for the last exam and promises to come up on 144 Mc. This might stir Frank 4FC into activity and gladden the hearts of the locals on this band.

Apparently my remarks in previous notes on time signal caused some furry, as I took the morse version of WVVH, JJJ, WVV, and not the tone as in the best informal circles.

Congratulations to our new scribe, 4PJ, in the last two issues of "A.R." Keep up the good work and boost our "Sunshine" (don't mention the drought). Maybe the "Fansy" will lift in face of such glowing advertisement of our State. Even see Doc 5MD visited the Gold Coast.

Marvellous what one can hear while tuning around the bands. The other day heard one chap moaning about how we get it in the neck (sic pocket) when buying commercial equipment from overseas. As he illustrated, say a tx costing £80 in England. It would cost £100 Australian (25% exchange), plus duty 27½% (now £127/10/0), plus 20% tariff to protect the Australian manufacturer who does not build this class of equipment (now £153), plus 12½% sales tax to help keep the country prosperous, making it just over £172. He forgot to mention freight and insurance. It is about time some of the imposts were removed. If these articles were made here, it would be understandable. As the Yanks say, "Do some lobbying!" Election is on this year and who knows?

Hope our State does better in the R.D. Contest. 73, 4RW.

SOUTH AUSTRALIA

Once again the monthly general meeting of the VK5 Division was held to a capacity audience, again standing room only, but I must admit that earlier in the evening I began to think that for once the attendance was going to be well below standard, because as the meeting was opened by the Chairman, John 5JC, there were seats aplenty. I woke up later

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on that the reason for this is that we are starting meetings a quarter of an hour earlier these days and it will take a little time for this to sink in to the general membership.

The meeting took the form of a film evening and without any doubt it was the most enjoyable and instructive night of this nature that we have had. Up until this, I think all will agree that the finest films that we have seen at the meetings were the ones chosen by Neil SZAW, but his record was well and truly broken by these films which were chosen, transported, set up and projected by Keith 5KH (or 5WI, suit yourself). Technical without being too technical, easy on the ear and eye, they retained interest throughout, and the vote of thanks to Keith was responded to in the usual manner, leaving no doubt in anyone's mind that the night was a huge success.

The full house remained for the business part of the night, much to the Chairman's surprise, and opportunity was taken to introduce the new Secretary, Pat 5US to all concerned, and keeping my ear to the ground after the meeting, I can confidently say that he made a good impression on all present and I think that we are lucky to secure him, although we are also sorry that Brian 5CA was forced, through pressure of business, to relinquish the post, having served the Division well and faithfully for some time. Little Divisional business came to hand the main thing was the mentioning of the proposal to ascertain the possibilities of owning our own clubrooms, and the appointment of Keith 5KH to the position of making all the necessary enquiries on the matter. A discussion took place on our new clubrooms, and it would appear that the only objections concern lack of seating space and the poor acoustics of the rooms, both of which are not unsurmountable. Federal business brought up the John Moyle Memorial angle, and the idea of a field day seemed unanimous. The question of t.v. fringe area Amateur interference, brought up by Pete 5FM, is still in the hands of F.E.

Just as the Chairman thought that all business was finished, a handsome, modest and debonair member, who for obvious reasons must remain nameless, rose to his feet and asked that Federal Executive be written to with regard to a privilege that seemed to be granted to VK2 but not to VK5, namely the payment of Radio Amateur licenses at any post office or money order office. A visiting VK2 in Jeff 2AHM then rose to his feet and said that as far as he was concerned no such privilege existed, and upon the aforementioned handsome, etc., etc., quoting a letter from "A.R." in support of his statement, the visiting VK2 said that he did not believe such privilege existed in Sydney or suburbs, to which the handsome, etc., etc., replied that neither did he but now was a good time to find out. Amidst jeers, catcalls, and derisive laughter, to which the handsome, etc., etc., paid not the slightest attention the Federal Councillor, Les 5AX, was instructed to do his duty.

The meeting then closed on a note of hilarity, with the handsome, etc., etc., more than holding his own, at the witching hour of 11.45 p.m., and if by any remote chance you are a regular reader of this column, then you will be prepared for the statement that all members retired to their couch of virtue, well satisfied with the fare provided. Once again I emphasise that this means the fare at the meeting, not the bus or train, or even the taxi fare to the meeting.

A welcome visitor at the meeting was Tony (ex G3FKO) and now, all being well, 5II. He is one of the growing number of Gs who come out to our fair State on duty, and are so taken up with conditions and the VK5 gang, that at the first opportunity they hurry back for permanent residence. Welcome OM, see you at the next meeting.

Heard "Shep" 5DC and Luke 5LL in an hour long contact on 7 Mc. the other day. Nothing important in that I suppose, but "Shep" was mobile through the Adelaide hills at the time and it was most interesting to watch the behaviour of his signals as he went up and down and round the corners. He was kicking against the wind however, because every time he nominated his signal strength as going up or down, he always picked the wrong one.

Always try to listen in to the schedule between Ken 5IM and his buddy from VK2 at early evening. Ken's homespun philosophies plus the rather coarse reactions from the VK2 help me to keep in my normal cheery frame of mind. Joking aside, it is quite entertaining and speaks volumes for the friendships made or continued via Amateur Radio.

Frank 5MZ, VK5's gift to chemists and doctors, is still at the moment of writing, laying in his cosy warm bed on these chilly mornings when we unfortunate fellow Amateurs have to sally off to daily toil. He has been

given a further extension of time off from work, but by the sound of his voice on 7 Mc., is getting a little fed up with it all. You sounded all right to me Frank.

It is said that unanswered letters eventually answer themselves, and this truism was demonstrated this week on the W.I.A. call-back. Last month in these notes I referred to the fact that I had heard nothing of Buck 5DA and was wondering how he was making out. On Sunday up he bobbed in person and sounded like his old self, although he did say to Keith 5WI that he was taking it a bit easy still. Nice work, Buck, good to hear you on the air again.

The DX position being what it is these days has forced me to invent my own methods of seeking excitement from my hobby. In the course of writing these notes I have been the recipient of letters, both polite and coarse, from various parts of VK, and I now have a board in my shack with a letter from all States excluding VK6 (apparently they are a little harder to needle than the wise men from the east). I am now concentrating on DX with these letters and this month I pinned up my best effort to date, which came from Charles Thorp, a VK4 s.w.l., all the way from Rockhampton, giving me the details of the E.A.R.S. award as asked for a couple of months ago.

Actually the matter came up when I referred to the fact that Ian 5QX had qualified for the award, and Charles tells me that he listened in to the particular contact and has received QSL cards from all three stations concerned. It also enabled him to secure the much coveted Elizabeth Award, and he says that if I QSO Tubby 5NO, to thank him for the certificate. Charles is apparently a canny bird, because he opens up his letter by saying "If you are serious about wanting to know the full title of the E.A.R.S. award, I will give you the full information at the end of this letter." If I am serious! Charles, how could you doubt me? Anyway, many thanks for the letter OM, and don't forget that you are the best DX to date!! and polite DX at that.

Talking of the Elizabeth Amateur Radio Club, it is interesting to note that they have enjoyed a satisfactory year, the Elizabeth Award has proved popular, 75 having been issued so far. The QSL Bureau has handled 10,000 cards since its inception, and last but not least the club won the multi-operator section of the last National Field Day. Speaking from my own observations I can safely say that they are the keenest club in my experience, and without mentioning individuals I feel that most of their success is due to the tenacity and faith in the hobby of Amateur Radio displayed by executive and member alike. The President Tubby 5NO and the Hon. Sec. Ron 5FY are to be congratulated on their efforts on behalf of one of the few clubs in VK5 that has not folded up after a few months feverish activity.

Tom 5TL is still conducting his Slow Morse Transmissions on Thursday nights, and if you want any further information as to times and frequencies, contact any member of the student classes; they are finding the transmission very helpful. Incidentally, Tom has overcome the habit of going on the air on Wednesday nights by mistake, he finds that too many of the VK5 boys have had a coarse and unrefined upbringing, judging by their remarks to him after being told of this peculiar habit of losing track of a day now and then.

Ses 5GP (ex-3ZBS) heard in contact with the above-mentioned forgetful gentleman the other night. The contact turned out to be a pat-on-the-back session for the G.P.O., because Frank 2ACQ joined in, and also 2NA. Everybody patted everybody on the back, and concluded with three cheers for the Commonwealth Service, and four cheers for themselves. I have forwarded a copy of a tape recording of the QSO to all four, so that they can hear how well the rattle of the tea cups and the pouring out of the tea came over the air. Made the whole contact sound so natural!

Len 5ZF heard in a hook-up on 80 mx during which a keen discussion took place on the merits and demerits of Heising modulation. The subject was tossed about from one to the other for some time, and culminated in "Shep" 5DC telling Len that if he liked to call out to the Baronial Hall of "Shep" he could pick up everything for Heising modulation. Great rejoicing thereof on the part of Len, and he and Carl 5SS duly went out and took delivery. Remind me in my next contact with "Shep" to cunningly bring the conversation around to a discussion on NC300s or perhaps a complete Collins set-up.

You know, it is possible to be unlucky. I rang Keith 5WI up and asked him to put over the session that I had heard that the whole area of Elizabeth, including the Elizabeth Radio Club, had been de-licensed, and I felt that the news was true because I had

received no notes from that direction for three months. Keith did his duty, and as I sat back with a smirk on my face, my better-three-quarters called out from the kitchen, "By the way, Petals, there is a letter from Elizabeth for you here. It came yesterday." At the moment I am well under cover, but I cannot dodge them for ever, and judging from the remarks attributed to Tubby 5NO after the broadcast, nothing less than boiling in oil will satisfy him. Oh me—oh my!

Len 5OC heard calling 5WI on Sunday with the usual good signal. Long time no hear this joker, and he pleaded guilty by stating that it was his first time on the band since the R.D. Contest last year. Looks ominous, does it not? Les 5AX heard for the first time since his return from the Apple Island. A real good signal from him although he was complaining of the poor conditions his end.

Quite a gathering of the stars on the 80 mx Sunday mornings at the call-back to Reg 5RR after his re-broadcast of the 5WI session. Among the galaxy noted were George 5GD, Carl 5SS, Les 5NJ, Len 5ZF and Rex 5KY. Tom 5TL heard in the distant background at times but just failed to make the grade. This band is becoming more and more popular and before long we will be complaining of the pile-ups. Incidentally, Reg 5RR has been putting in some consistent work on a xtal s.s.b. exciter, but at the moment of writing it is still in the unfinished stage.

The Elizabeth Amateur Radio Club has its weekly round-up on 80 mx each Monday night at 7.30 p.m. (for the uneducated), 2130 local time (for the phone man), 1000 Universal time (for the gentlemen indulging in the international method of communication). Everybody welcome, and that elusive station for the Elizabeth award may be on, so join in. In general, 5LZ, 5NO, 5FY, 5DY and 5EU are on consistently. The club will be setting up a station at the Elizabeth Birthday Celebrations in November, and further information will be available next month because of pressure of space at the moment. In other words, Ye Editor has the red pencil poised!

Jeff 5NQ may be taking up temporary residence in the city during week days, returning home on the week-ends. To dispel any thoughts that this means more air space, I have been hearing another junior operator from this QTH answering to the name of Jo. Her cheery voice can often be heard working the DX with Dad's burgundy-like tones in the background and it would seem that there is no lack of operators from 5NQ. Tubby 5NO is sporting a new antenna it has been described "as a co-axial feeding a feeder terminated by an antenna, and drooping very near the clothes hoist. Joyce is still managing to keep her weekly laundry above the whole concoction, despite Tubby's efforts to get the final in the washing machine. Probably after a clean signal, these modern detergents are wonderful! That should make him growl in his beard.

Steve 5HA has also been playing with antennae, assisted by Peter L5039. However, Steve is putting out a signal on the bands, after disguising his voice to sound like Peter's. Didn't trick me. Harry 5EU is still chasing those few extra S points to get ahead of 5NO, and rumour has it that a new anti-5NO device will shortly grace the 5EU backyard, which for every watt that Tubby uses, will rise, like Jack's beanstalk, another three feet in the air. Ian 5QX is still a one-man band—pardon me—a band man one—sorry—a one-band man, to wit 15 mx. The antenna array for this band possesses four elements, plus a chimney and a 5EU built-in trap, and Ian works the DX according to the direction of the wind. Judging by the results it seems to be a good system. Pete 5HB is off the air at the moment for the purpose of re-building. His re-appearance and cheery voice is being awaited with intense eagerness by his myriad of listeners. There I go again, it's the mis-turist in me. Don 5KD has decided to remain in Elizabeth and is working on a mobile rig as the only way to avoid the prevalent congestion in the area. Will your new boat have a built-in rig, Don?

Hugo 5ZDA and Bill 5ZDV sat for their c.w. exam this month and everybody has their fingers crossed for them; best of luck, OMs. Don 5TM is still very quiet on the bands, but a new rig is reported in the offering, complete with hot running maids and all mod cons. Clive 5PE is another quiet one these days, but we hope that the s.s.b. rig (horrid words) will eventuate one of these days. Ron 5FY is still trying to keep up with the competition and bobs up now and again. His junior operator Alan has been heard on 40 mx at times, and has succeeded in working enough stations to get the much coveted "Elizabeth Award," of which he is most proud. No doubt about it, they start them young in that area. Is he showing any ability in espionage Ron?

Keith 5EJ is spending more time at home these days and the 20 mx band results prove it. There should be more of it, eh Keith? Cyril 5DY has just about finished his sooper-cooper double perversion rx. It has more conversion stages than would be required to make a T model Ford into a Rolls Royce, and he has been assisted ably by Tony Strong who must be hiding his light under a bushel these days because nobody reports seeing him for some time. Bill 5ZDV heard on the "round-up" telling all and sundry of his best DX to date on 50 Mc. By the time that everybody had had their say, poor old Bill was not sure if it was 53 miles or 530 miles. Ignore them OM, it was only the Green-eyed-monster (sit down Comps, not you). Jealousy is a terrible thing. Look at what goes on between Council and I!

It would seem from the cryptic remarks inserted at the end of last month's notes by the Editor, that apparently I slipped up on the fact that somebody had broken a rib, or a promise, or something. Well, after all, I am not infallible, but I can be first with the news that a well known and highly respected, to say nothing of being modest, retiring in nature, kind and forgiving, and a perfect physical specimen of humanity, has been laid low on his sickbed with an attack of 'flu. I am feeling better now thank you, but am puzzling just how Pincott managed to get the germs over to VK5 this time! 73, 5PS (PanSy to you).

WESTERN AUSTRALIA

This has been another poor month for activity in VK8. Conditions on the high frequencies have been very poor and we are still struggling with the problems of t.v.i. as far as the country boys are concerned. Unfortunately reasonable pictures are received occasionally up to 200 miles from the tx. Enough, anyway, to warrant the purchase of t.v. sets. What one micro-watt of interference does to it is understandable. Of course it is always the Amateur in spite of the measures they have taken to prevent it. Especially 6WL, 6RG, 6CW and others. The result is that we do not have the QSOs on 40 and 80 mx which were once the scribe's storehouse of information. However, we still pick up an occasional item of interest.

The July meeting was well attended in spite of the very inclement weather and an interesting lecture on "Improvements to T.V. Sets for Better Fringe Reception" was given by Mr. Arthur Hayward. After the meeting much discussion was carried on about R.D. Contests, t.v.i. and putting out more watts, etc., while members had a cup of tea and biscuits.

During the month our "mobileers" 6BU, 6RW and now 6AB were heard in action on 40 mx from various parts of the city. 6AB hopes to make contacts with his 122 while on his country tours. 6PH is still having problems with his new tx. His main trouble seems to be making the extra watts leave the warm shack and travel up to his ice-bound antenna. Hope you sort it out by R.D. day Pat. Try putting a radiator in parallel with your antenna. 6BU found it too cold in the shack one Sunday so went mobile on the North Mole among the waves.

A stranger in our midst lately was VK9P/P in VK8 from Exmouth Gulf. He has probably moved on by now, but was heard in contact with 6LG. We welcome some new call signs to the bands this month. 6MJ, 6RB, 6VV, 6DW, 6CU (ex-6ZCU), 6ZDV, 6ZCI, 6ZCP, and hope they have many happy years on the bands. Our thanks must go to 6GH for the "Technical Cleanings" after the news each Sunday. They are always interesting and instructive. 6TH is going on a tour to Darwin and Alice Springs and hopes to keep in touch with VK8 with his 122 portable.

6CW is still trying to contact VR2EB, ex-VK6CO, and may have done so by now. We have not heard much of Clem lately in the city except on 40 mx Sunday mornings. Another call missing lately is 6DR. Bill has gone north for a short period I hope. Bill 6RX is heard here some times on 20 mx in DX contacts, that is when his beam is in the right direction. 6XK is fiddling with his modulator in spite of the good signal he generally puts out; hopes to do something extra on R.D. day no doubt.

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Judging by the "fiddling" that is going on VK8 will be on the ball for that R.D. trophy this year. It has been out on loan long enough.

Well chaps no more for this month. Hope to do better when conditions improve.—73, 6ZCK, per 6LS.

TASMANIA

This month we regret that we have to extend our deepest sympathy to two members; to Den 7DK, following the death of his father, and to Edgar 7RY, following the death of his mother.

Geoff 7ZAS has been on the sick list for about three weeks with pleuresy, but he has made a good recovery now. We were pleased to welcome Ray 7ZRJ, who was in Hobart for a few days, down from Launceston. Construction of new gear has been under way during the winter months, and Jim 7JO has his new portable in operation. Joe 7BJ has also got a 4w. rig operating and it puts out a good signal too.

Please remember our Divisional exhibit at the Hobbies Exhibition to be held in the City Hall, Hobart, from 5th to 9th September inclusive, from 11 a.m. to 10 p.m. daily. VK7WI will be on the air each evening and on the Saturday, either on the 80 or 40 mx band, as well as all the time on the 144 Mc. band. Please ensure that the operators will have someone to talk to.

Also, remember the Fox Hunt with direction finding of mobile tx's, on either the 3.5 or 144 Mc. bands, beginning at 2000 hours from the Customs House on Saturday, 23rd Sept. A fee of 10/- per car will be levied for the benefit of the Club Room Fund raising account. Black coffee will be available at 2 Merryville Esplanade, Sandy Bay from 2200 hours. Bring your own eats and milk if you want some. Another function to remember is the social evening at Linfield on Friday, 6th October, beginning at 2000 hours, again for the Club Room Fund. Admission £1 per head, each member can bring as many guests as he wishes.

Our August Divisional meeting took the form of a lecture by Alan 7MY on the basic principles for a rx. His topic was amply illustrated by the excellent rx of his own design and construction displayed to the meeting. Thank you Alan for a most interesting lecture.

Pat 7GV had a week's holiday on the north-west coast at the end of July, and he enjoyed the use of the Institute's Type A, Mark 3. Although it is not my usual practice to welcome new members to the Institute, yet I make an exception with John ex-0JH. John hopes soon to be on the air in VK7. 73, 7ZZ.

NORTH WESTERN ZONE

Annual meeting the other night. Was in the act of congratulating myself that I had finished my term in the chair when I was dlobbered on this job. So had best pull up my journalistic socks and get into oscillation. Our new President, Ken 7KH, takes office with our best wishes. It was a certainty of course that David 7MS would hold down the Secretary's job, as also associate Alan Baptist did as Treasurer. George 7XL suddenly found himself QSL officer, and Bob 7ZAA will still be v.h.f. officer. And so it's coats off and to the task. When you read this, the 1961 R.D. Contest will be another pleasant memory and we hope that the voices of this Zone provided some background to the general cacophony.

David 7MS is looking for a crane with a lift of seventy feet and a touch as gentle as a old time nurse, to lift his four-band, three-element comical quad into place. Or if anyone has some lightweight non-bendable angle iron, please advise. Heard Ken 7KH working cross-band duplex with himself the other afternoon. Or I think that is what he was doing. Ellis 7WA has ordered a pair of asbestos gloves. Necessary to handle his new pre-amp, they say. The surroundings of 7MX now sports another 80 mx dipole. The Flowers now find it difficult to navigate through the wires in early morning.

Was delighted to welcome Reg 7EL and his son to the annual meeting. We thought Reg looked bright and fit after his long convalescence. Best of luck Reg. Also pleased to see Wynyard represented by Harold 7MZ who, with Dennis 7DR, have had the treatment from the pictorial section of the local newspaper; nice pictures chaps.

Any locals who have a flair for pushing 45 ft. poles into a vertical position would find a ready outlet for their activities at the QTH of George 7XL. Advise George early so that gassy 807s can be on hand. A number of our members are doing night duty at the new St. John Ambulance services at Burnie and Devonport. Slightly different procedure and rag-chewing is definitely out on the air, but some good times are had in the recreation rooms. Amazing how a pack of cards can pass the time.

Wonder if any regulations were breached when associate Winston turned up at the meeting in a pair of the firm's overalls. Good plug for t.v. though. David 7DA was absent with leave. Understand he had a sked with Maid of the Mountains. Could he be a ham twice? Terry 7TT was pictured recently in a mainland paper in shorts and pointed hat. Could it be that he was getting up steam for the Scout Jamboree-of-the-Air? Well chaps, it's back to the rig. See you on the band and here next month. 73, 7MX.

HAMADS

Minimum 5/-, for thirty words.

Extra words, 2d. each.

Advertisements under this heading will only be accepted from Institute Members who desire to dispose of equipment which is their own personal property. Copy must be received at P.O. Box 36, East Melbourne, C.2, Vic., by 8th of the month, and remittance should accompany the advertisement. Call signs are now permitted in Hamads. Dealers' advertisements not accepted in this column.

EXCHANGE: Dual 300 Port. Stereo Record Player, Sunbeam Fry Pan super size w. aln. lid, Hotpoint Super De Luxe Antom. Toaster (all three items brand new, never used, original packed), for AR88D or similar Com. Rx in only excellent condition. Henry K. Ahrens, 1 Blackall Ave., Queanbeyan, N.S.W.

EXCHANGE: 17" Astor t.v. receiver, excellent picture (new picture tube) for good Communications Receiver in working order. Cash adjustment if necessary. VK3AFF, 98 Park St., St. Kilda, Vic. 690-130 Extension 6366.

FOR SALE: AT5-AR8 with antenna coupler, junction box and cables, in first class order as original, £35. Moorabbin Radio Club, 17 College Gve., Black Rock, Vic. Wanted Type 3 Mk. 2.

FOR SALE: Eddystone 750 Receiver, like new, had little use, £90. D. V. Scott, Johnson St., Maffra, VK3DY; or K. V. Scott, Princes Highway, Noble Park, VK3SS, phone 746-8984.

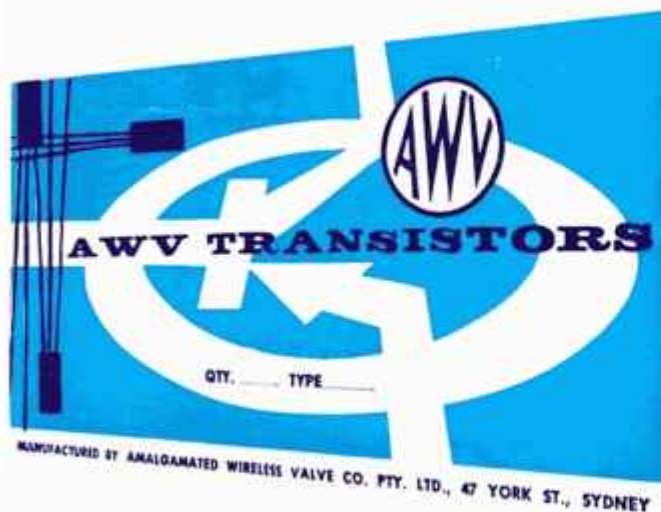
FOR SALE: Globe Electronics DSB-100 Transmitter, sideband-a.m.-c.w., all bands 80 to 10 mtrs. Also Globe model 755 v.f.o. and Globe Vox 10 Voice Control Unit plus Anti-Trip Unit. All connecting cables, plugs, handbooks, and Aerial Change Relay. Condition as new. Best offer to T. Donald (VK2FR), C/o. 11 Fitzroy Ave., Frankston, Vic.

FOR SALE: Type A Mk. III. 10 watt Portable Transceiver, 2.9-9 Mc., 150-240v. a.c. operation and also 6v. vibrator power supply. This unit is contained in neat carrying case and includes spare tubes, vibrator, etc. First class order. £14/10/0. VK3ZKW, 55 Skene Street, Shepparton, Vic.

SELL: Type 3 Mk. 2 with 6MS mod., £37/10/0; as new BC221 F. Meter, less book and rock, £27/10/0; ditto, used, £15; FS8 £14; Class C W. Meter, £12/10/0; BC342 rec., £32/10/0. VK-3APR.

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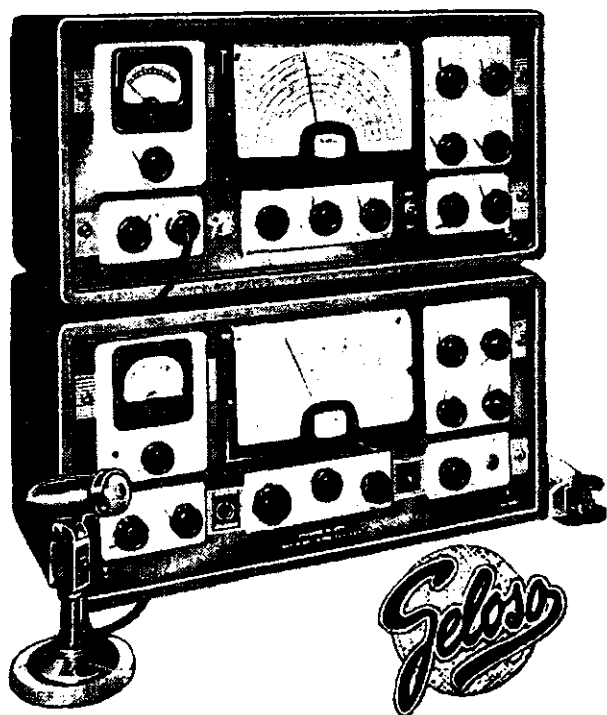
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OCTOBER, 1961

ANNIVERSARY ISSUE

"AR"



28



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Price **£13/17/6** inc. tax.

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3-4 Mc. range **£7**
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5.5 Mc. VIDEO COILS

Contains slug-tuned coil former.

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Editorial



THE TOP FIFTEEN

OUR American contemporaries have been blessed or plagued, depending on how one looks at it, with large increases in their Amateur population over the years and consequently are finding their spectrum space becoming more crowded. There has also been a gradual exodus from c.w. to phone, particularly in view of the relatively new s.s.b. type of emission.

In order to partially solve the problem on 20 metres, the F.C.C. in America, on the 10th March, 1960, expanded the phone band from 14.2-14.3 Mc. to 14.2-14.35 Mc. Before the change, U.S. Amateurs used the low end of the band for a.m. contacts with Canadian and DX stations, and the upper portion of the band for s.s.b. contacts with DX using 14.3-14.35 Mc.

The pressure on the F.C.C. for additional phone space on this band has gradually increased since 1946 and was implemented last year to the new frequencies mentioned previously. This decision was not taken lightly but only after very careful consideration of all the factors involved, including the international effects of such an increase. However, the primary concern of the F.C.C. was for their own domestic situation and this eventually decided the position.

We in Australia are fortunate that the P.M.G.'s. Department has left the internal working of our allocated bands to the judgment of the Amateur himself in how he uses them. We have endeavoured to accommodate operators using various types of emissions by gentlemen's agreements and generally this has proved satisfactory.

The A.R.R.L. has now seen fit itself to adopt similar means with their new phone allocations on 20 metres to assist and encourage DX s.s.b. stations. Their proposal is that DX s.s.b. stations should operate between 14335 and 14350 Kc. and only work U.S. stations on 14335 Kc. or below. When one realises the pressure in the U.S.A. for greater phone frequencies, this is a most generous gesture on their part.

This proposal will only work if you—the Australian s.s.b. operator—makes it work. No self disciplinary scheme will ever be 100%, but if you observe the following three points, you will contribute towards a habitable band as opposed, as an alternative, to a ruthless jungle of QRM.

The three rules for VK s.s.b. operators are:—

1. USE the top 15 Kc. of 20 metres regularly.
2. WHEN calling CQ announce you will only listen for Ws and Ks on some frequency below 14335 Kc.
3. DO NOT work any W or K station on the top 15 Kc.

W.I.A. FEDERAL EXECUTIVE.

VOL. 29, No. 10—ANNUAL EDITION

"A.R."—OCTOBER 1961

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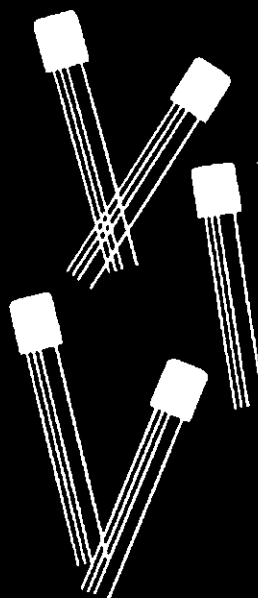
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OC169 - OC170 - OC171

Transistor Type	OC169	OC170	OC171
Collector Voltage (V_{cb} max.)	-20	-20	-20 V
Collector Current (I_c max.)	10	10	10 mA
Max. Dissipation (25° C)	80	80	80 mW
Typical parameters at (measured at $V_{ce} = -6V$, $I_c = 1mA$)	0.45	10	100 Mc/s {common emitter} {common base}
Input Conductance	0.4	2.5	23 mmhos
Input Capacitance	80	65	-6 pF
Feedback Admittance	< 100	100	600 μ mhos
Transfer Admittance	36	32	14 mA/V
Output Conductance	7	60	350 μ mhos
Output Capacitance	7	4.5	2.6 pF
Ideal Unilateralised power gain	61	32	< 10dB



NEW

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D.C. POWER CONVERTER FOR MOBILE

A. L. WEST,* VK5LA

THIS article describes a transistorised d.c. power converter suitable for operating portable or mobile gear from a 12 volt battery supply. It uses a pair of OC28 or OC35 transistors with a saturating core transformer and can deliver a d.c. output power of 70 watts with an efficiency of 82%. At 12.6 volts input this represents a battery drain of 6.8 amps., which compares more than favourably with an equivalent disposals genemotor drag of about 11 or 12 amps. In addition, the transistor device has no astronomical starting current and is only a small fraction of the weight and size of the genemotor.

Most transistor power converters intended to furnish a d.c. output may be classified into two main groups; those which use one transformer and those which use two. The former is the more common and has the great advantages of cheapness and simplicity, while the latter, which incorporates a low powered driver stage, is used where large powers are to be converted or where frequency stability with load variation is desired. The converter described herein uses one transformer only and two power transistors in a common collector push-pull switching circuit.

Of the three basic configurations possible, the common-collector circuit was chosen for two main reasons. Firstly, the transistor base current adds usefully to the primary input, and secondly because the two transistors may be mounted together on a common plate without the need for insulating washers. Because the switching waveform is square, the peak current per transistor is equal to the total average input current from the supply, and the figure of 6.8 amps. mentioned above is clearly beyond the capabilities of transistors of the OC16, 2N301 size. Now available are OC28s and OC35s which, with collector and emitter ratings of 6 and 7.2 amps. respectively, are ideal for the purpose. They are also comparatively cheap. The main difference between them is voltage rating which is not very important in this case, so either will do.

For the transformer there are two possibilities. One is to use a ferrite core and a switching frequency of a few kilocycles; the other is to use an iron core operating at a few hundred cycles. The latter course was chosen as it appears that suitable ferrite cores of adequate volt-ampere rating are not readily available here.

A manufacturer's catalogue was consulted and it was decided to use two C-core loops of 0.004" grain oriented silicon iron strip type HWR 10/8. These have a saturated flux density of 17,000 gauss and an effective cross-sectional area of 0.93 square centimetres for each complete loop.

In designing transformers, the following relation may be used:

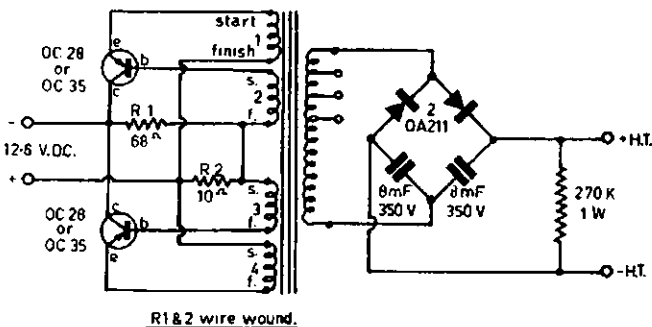
• The writer explains in clear, concise fashion exactly how to make your own transistorised power supply. Must reading for all mobileers.

$$\text{Volts per turn} = 4 k B A f \times 10^{-8}$$

where k = form factor of wave = 1 for square waves.
 B = flux density used (in gauss) (17,000).
 A = total effective core area (in sq. cm.) (2×0.93).
 f = frequency of operation (cycles per second) (400).

If 400 c/s. is chosen as the operating frequency one arrives at the figure of 2 turns per volt.

Assuming a battery supply voltage of 12.5 and allowing 1 volt total for transistor knee voltage and transformer resistance drop, the effective primary voltage becomes 11.5. At 2 turns per volt the primary should have 2×11.5 or 23 turns.



Now for the feedback winding. To maintain a collector current of 6 amps., a base to emitter voltage of up to 1.4 may be required, depending on the individual transistor characteristics. Doubling this to allow a safe margin, it is found that the feedback winding should deliver about 14.3 volts when the primary is energised with 11.5. Thus the number of feedback turns should be about 1.25 times the number of primary turns. Say 29 turns.

The secondary winding will depend on the user's specific requirements and on what type of rectifier system is employed. It is recommended that where possible a full wave voltage doubling circuit be used. This has the advantage of requiring only half as many secondary turns (and silicon diodes) as a bridge system and represents a significant saving in transformer insulation and manual labour requirements. Half wave circuits are unsuitable as they load the transformer unequally on alternate half cycles and result in poor efficiency and uneven load sharing by the two transistors. Because of the square voltage waveform at the secondary, the d.c. output voltage is

an integral multiple of it and if one uses a doubler circuit and 2 turns per volt, then the required number of secondary turns is equal to the desired d.c. output voltage. It is perhaps a good idea to provide a number of taps to allow for different requirements which may arise.

A topic which should be mentioned is overshoot of the switching waveform which increases unnecessarily the all-round voltage stresses and may lead to breakdown. It is greatest at no load and especially with cores which have a poor ratio of permeability to reluctance (e.g. t.v. type ferrite U-cores). The best type of core from this viewpoint is the toroid, but these are rather difficult to wind. With the transformer described overshoot does not present a problem, being 15% at no load and 10% at full load. Bifilar winding techniques are not considered justified in this particular instance.

A word or two about component ratings. With the full wave voltage doubler and square waves the peak inverse voltage experienced by the diodes is twice the transformer voltage, or the

same as the d.c. output voltage. Silicon diodes OA210 are suitable for outputs of 300 volts or so, while for higher voltages up to about 600, OA211s should be used. These figures are somewhat conservative and allow for no-load operation and abnormal battery voltages. Clearly the condenser voltage is half the output voltage.

Some forward bias is necessary to start the device and to maintain correct operation at full load. If it is found that the output voltage falls off and transistor dissipation increases rapidly before the rated power output is achieved, then resistor R1 should be lowered in value to correct the condition. The optimum value may depend somewhat on the individual transistors, and whether or not operation at full load is required.

Incidentally, the supply is self-protecting in that if short-circuited, oscillation ceases, or drops to a low frequency, the input current falling to a non-destructive value.

When operating correctly the transistor dissipation is low and only a small heat sink is required, while the

(Continued on Page 12)

THE ANTENNAMATCH*

Part 2—Construction and Use

F. HICKS-ARNOLD (G6MB)

FOR Amateur use, the original circuit devised by Virgil True has been considerably simplified and is now as shown in Fig. 4, an inspection of which reveals that the complete unit is divided into three screened sections, each being further sub-divided so that all r.f. components actually in series with the transmission line are screened from those components which carry d.c. only. The mechanical layout and construction can be seen in the accompanying photograph.

THE IMPEDANCE DETECTOR COMPONENTS

C2 in the impedance detector section is made up of a 500 pF. ceramic feed-through type condenser with 250 pF. in parallel, making a total of 750 pF. This provides better by-passing and filtering out of r.f. from the line to D2 whilst performing its original function as part of the capacity divider C1-C2.

The 1 ohm resistor R1 is made up of ten 10 ohm one watt composition resistors in parallel mounted on the outside of a paxolin tube 1" in diameter and 1½" long. The 300 pF. condenser (C13) and D1 (CG6E) crystal associated with R1 are mounted inside the paxolin tube with the connection to R2 brought out at right angles to the axis of the tube. The complete assembly is mounted directly between the co-axial input socket CS1 (see the description of the Phase Angle Detector). RFC1 is a standard 2.5 mH. receiving type r.f. choke directly connected between one end of R1 and earth. It provides the d.c. return path from R1, thus completing the bridge circuit.

The galvanometer M1 can be mounted remote from the impedance bridge as it only carries d.c.; it is decoupled by RFC2. C6 and C7. C4 and C9 are of the ceramic feed-through type, serving both as decoupling condensers and as feed-through connections.

All components other than R1, R2, C4, D1 and RFC1 are mounted above the screened compartment.

THE PHASE ANGLE DETECTOR COMPONENTS

Inductances L1 and L2 are, in fact, two brass rods. L1 consists of a ¼" rod 5½" long, suspended between feed-through insulators or bushes at opposite ends of the screening box. The diameter of the rod is not critical, although its size will affect the capacity coupling between L1 and L2. The sampling loop L2 is another brass rod ¼" in diameter bent into a "U" shape, with legs 2½" long and a centre portion 4" long, which is mounted with the two vertical legs through feed-through insulators in the upper side of the screening box. The horizontal portion is placed above and parallel to L1 to provide inductive coupling to the latter. Spacing between the inductances is approximately 1/16".

General considerations underlying aerial matching and the design and use of The Antennamatch were described by the author in Part 1 of this article which was published in the September issue of this journal.

The legs of L2 are threaded where they pass through the chassis feed-through insulators and are held in position by nuts above and below the insulators. By adjusting the position of the nuts, the coupling between L1 and L2 can be varied as necessary. The centre tap connection to L2 is passed through the upper side of the screening box by means of the 500 pF. feed-through condenser C9.

A rather simpler method of constructing L1 and L2 is to use a 6" length of co-axial cable, terminating the outer copper screening about an inch from each end, with the inner polythene insulation extending slightly beyond the outer screen. Connections are then made to the centre conductor, which acts as L1 and is connected directly into the line (as in the case of the ¼" diameter brass rod used in the first method of construction). The outer screening becomes L2. Such construction has all the essentials of the original, i.e. a length of line forming L1 closely coupled to a centre tapped loop L2. Whilst it is not possible to adjust the coupling, the arrangement works well and is certainly far simpler to make.

All other components, including the diodes D3 and D4, are mounted outside the inductance screening box. As they carry d.c. only, their exact arrangement is not critical but a symmetrical layout is desirable.

CG6E crystal rectifiers were selected for use in the phase angle detector because their high value of back-

resistance made it easier to zero the indicating meters. If only lower back-resistance crystals of the 1N34 type are available, it is suggested that each should be shunted by a resistor of about 220,000 ohms as recommended by the General Electric Co. Whichever type of crystals is used, all should have approximately the same back-resistance in order that a zero output at balance may be obtained.

OUTPUT SECTION

The output section consists of an r.f. ammeter, a low loss switch and a dummy aerial of 75 ohms impedance.

The r.f. ammeter should have a full scale deflection of about 2 amps. and be of the type having an external thermocouple which can be placed inside the screening box close to the switch. Placing the thermocouple directly in the line carrying the r.f. current introduces as little disturbance of the impedance of the line as possible and permits the meter to be placed remote from the line.

R.F. VOLTMETER

If such an ammeter with separate thermocouple is not available, an equally useful indication of power output into either artificial load or aerial may be obtained from a simple r.f. voltmeter connected across the line to read the voltage developed. If accurate power readings are not required, the r.f. voltmeter need not be calibrated. Circuit values should be arranged so that power in the artificial aerial, i.e. 75 ohm load, gives about half-scale deflection. Provided the reading when switched to the aerial position is the same, that is all that is required for comparison of power into the dummy load or into the aerial system.

A simple circuit for such an r.f. voltmeter is given in Fig. 5 (g). As large voltages should not be applied to a crystal diode, a resistance network to reduce the applied voltage should be used across the total r.f. voltage in the line. For good linearity of scale deflection when using a 1 mA. meter, the network should be made up of two resistances, the upper one being the line impedance times 100, and the lower being the line impedance times 10, i.e. 7,500 ohms and 750 ohms for a 75 ohm line. This network, together with the crystal diode, r.f. choke and decoupling condensers (1,000 pF.), should be placed as close to the output switch as possible. The lead carrying the d.c. output to the meter can then be of any convenient length without disturbing the impedance of the line or carrying r.f. currents outside the screening box.

AERIAL LOADING SWITCH

The switch for selecting artificial load or aerial proper should be a low loss type capable of carrying an r.f. current of 2 amps., that used in units of the TU5 series being ideal.

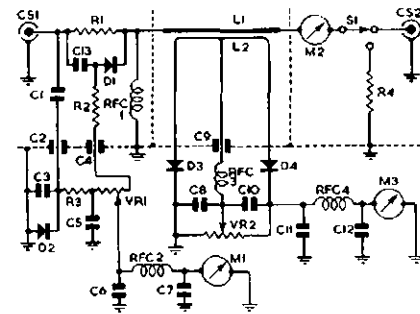


Fig. 4.—Complete circuit diagram of the Antennamatch. C1, 10 pF.; C2, see text; C3, 250 pF.; C4, C9, 500 pF. feed-through type; C5, 500 pF.; C6, C11, 470 pF.; C7, C12, 1,000 pF.; C8, C10, C13, 300 pF.; CS1, input co-axial socket; CS2, output co-axial socket; D1, D2, D3, D4, type CG6E crystal diodes; L1, L2, see text; M1, M3, see text; M2, 0.2 a. r.f. meter; R1, 1 ohm, see text; R2, R3, 33,000 ohms; R4, 75 ohms, Morganite type 701 (see text); RFC1, RFC2, RFC3, RFC4, 2.5 mH.; S1, loading switch (see text); VRI, 50,000 ohms; VR2, 250,000 ohms.

* Reprinted from R.S.G.B. "Bulletin," June, '55.

ARTIFICIAL LOAD

The artificial load must, as far as possible, have only a resistive element capable of dissipating at least 100 watts. The type 701 heavy duty resistors made by the Morgan Crucible Co. Ltd. are suitable for such use in high frequency circuits as they are non-inductive and have a high surge capacity. These resistors are rated at 90 watts for a rise of 200°C. for continuous loading and can be obtained in exact values from 20 to 2,000 ohms direct from the makers for about 20/- each. However, supplies have been, and are believed still to be, available on the surplus market for a value of 80 ohms—near enough to the required 75 ohms to be satisfactory in The Antennamatch.

Such resistors are a homogeneous mixture of conductors and ceramic bonds and are of their stated resistance at full dissipation rating only. The resistance cold is somewhat different from the "hot" value; this point should be borne in mind if any attempt is made to check the values of those obtainable as surplus.

The resistor used in The Antennamatch described in this article is mounted externally to the screening box and between it and the front panel. One end is earthed directly to the box by means of a spring supporting clip, the other end being insulated and connected to the aerial loading switch.

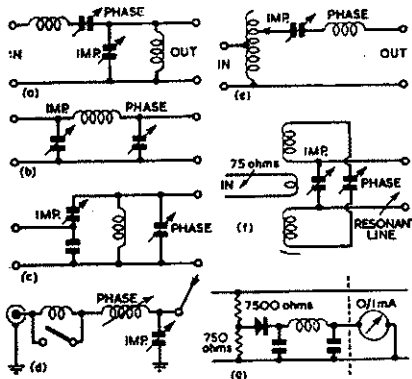


Fig. 5.—Aerial matching networks for independent variation of impedance and phase angle. (a) Cantilever network. (b) Pi-network. (c) Capacitance division. (d) Low-high match. (e) Auto transformer. (f) Link and pi-network for high impedance tuned lines. (g) Simple r.f. voltmeter. The crystal diode should be a type CG6E, the two condensers 1,000 pF., and the R.F.C. 2.5 mH.

INDICATING METERS

Whilst any form of centre zero reading meter of about 100 μ A. full-scale deflection may be used, there are available on the surplus market very suitable meters in the form of the "Left" and "Right" indicators used with R1155 receivers. These meters have a full-scale deflection of around 45 μ A. when all internal shunts have been removed.

The type to be preferred is designated Ref. No. 10Q/2—this has two complete movements with two magnets and balance adjustments on both ends of the moving coil pivots. The built-in series and parallel shunts should be removed and connections from the moving coils made direct to the terminals on the back of the case.

Centre marks should be made on each scale with white ink or paint before

adjusting the pointers to these marks by means of the external zero adjusting screws. When this has been done, the complete movements should be withdrawn from the case and the back hair spring tensions adjusted to balance the pressure exerted on the pointer by the adjustment to the front springs. By repeated adjustments to front and back springs, balance should finally be arrived at such that the pointers remain at the centre scale marks with the meter placed in any position.

No attempt should be made to adjust the front springs with the movement removed from the case, as difficulty may be experienced in locating the zero adjusting screws in reassembly if this is done.

THE SCREENING BOX

The Antennamatch shown in the accompanying photograph is contained in a screening box of 12" overall length, internal screening being provided to form three compartments of 3", 6" and 3" in length, 3" in width and 4" in height. A further compartment extends along the full length of 12" and is approximately 2" in height. The construction can be clearly seen in the illustration and forms a complete and compact unit. The dimensions are not critical but are given as a guide to constructors. The box may be made of 18 s.w.g. aluminium or tinned mild steel.

As can be seen, the unit is mounted on the back of a standard rack panel using stand-off pillars to allow the type 701 dummy load resistor to be held between the panel and screening box. Co-axial connectors are fixed on each end of the box. For ease of component assembly and wiring, the top and back should be covered by removable plates.

USING THE ANTENNAMATCH

Some form of aerial matching unit in which it is possible to vary both the load impedance and the reactance thrown back is essential in order to gain the maximum benefit from all the information provided by The Antennamatch. Various suitable networks which enable both these conditions to be varied are shown in Fig. 5. The circuits

are suitable for both single ended and twin line feeders. All have been used by the writer with success, but particular attention is drawn to network F, which is very suitable for use with all forms of centre fed aerials normally fed with tuned lines. It permits accurate matching with wide variations of feeder lengths and impedances.

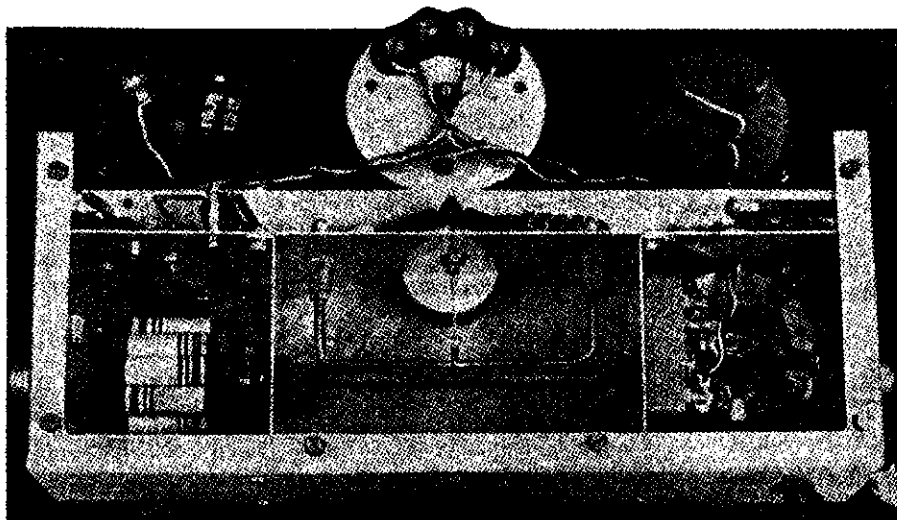
The split coil should be wound on a suitable former with the two halves approximately $\frac{1}{2}$ " apart. The inner ends are taken to the feeders and are across the condenser marked "impedance". This should have a maximum capacity of approximately 250 pF. in order to cover wide variations of impedance and should have a plate to plate spacing great enough to prevent r.f. arc-over at maximum power and voltage. The condenser marked "phase", connected across the outer ends of the split coil, should be of approximately 150 pF. maximum capacity and of sufficient spacing to prevent r.f. arc-over.

Between the two halves of the split coil and on the same former is wound the link coil which is connected to the transmitter by 75 ohm co-axial cable. The Antennamatch should be placed in series with this feeder. For all bands above 3.5 Mc. a one turn link should be sufficient but two turns may be necessary on 3.5 Mc. to give correct impedance and loading at zero reactance. Separate coils should be used for each band; their inductance must be such that it will resonate at the frequency in use with the feeders and aerial connected.

In operation the transmitter should be tuned up with the output switched to the artificial load with the p.a. loaded to the design figure. Both centre zero meters should be correctly zeroed, after which the output can be switched to the aerial proper.

Simultaneous adjustment must then be made to both the impedance and phasing controls until a point is reached where the aerial becomes resonant and takes power from the transmitter. There will be some interaction between the adjustment of these controls as the correct values are approached but with a little practice one adjustment can be

(Continued on Page 12)



Close up view of the interior of the screening box showing the construction of R1 and L1 and L2.



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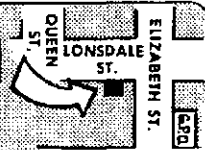
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A REFERENCE SHIFT MODULATOR FOR MOBILES

VIC. COLE,* VK2VL

ONE of the problems in building a mobile rig is the modulation transformer, a good one is very pricey and much too large for a small low-power rig, so with this in mind much time was spent with text books, etc., to find a suitable circuit which did not require a transformer.

One solution was screen-grid modulation, but this method provides a carrier efficiency of only about 30%.

Another was Heising, or choke coupled plate modulation. This is an old and well-tried system where the modulation transformer is replaced by a choke—a common junk box item. However this system has two shortcomings. First, since the maximum plate dissipation occurs with no audio input the permissible modulator plate power is limited to the rated plate dissipation of the tube. Second, the maximum plate current swing is severely limited.

A variation of the Heising, called "class K" modulation looked good, an increasing audio level increases the bias on an audio clamp tube and thus increases the modulator screen voltage.

The modulator tube is operated at zero bias so that a high plate current swing can be obtained, but this system requires an extra "clamp" tube and I did not have the space to spare.

On looking through more magazines, etc., I found some information on Reference Shift Modulation. This appeared to have all the advantages and none of the disadvantages of the above systems.

It does not require a fixed bias supply, no clamp tube is required, and the driver tube requires very little power, so a mobile rig was built in a box 6" x 3½" x 5" and has been giving very good results over the past six months.

Reference shift modulation is, basically, bias shift modulation with positive bias, this might seem queer, but it has no ill effects as the modulator tube is operated as a zero bias triode. It is not a new system of modulation but, surprisingly, it is not referred to in many of the well known text books.

The basic reference shift circuit centres around V2B in the diagram which is the driver tube, the output of the cathode follower driver V2B is an audio voltage impressed on a positive d.c. voltage equal to the peak audio voltage. The average plate current of V3 is therefore proportional to the audio input voltage.

The voltage divider R7-R8 applies a fraction of the cathode voltage to the anode of Cr1, output from Cr1 is filtered by C4 and applied as a positive d.c. reference level to the grid of V2B through R6, the resulting increase in reference voltage increases the average cathode current which, in turn, increases the d.c. cathode level. The d.c. output level of V2B thus increases as its audio output level increases.

The modulator tube V3 is a zero bias triode with positive bias, most pentodes will operate under these conditions. This bias is the d.c. output level of V2B and as this is a function of the audio level, the average plate current of V3 is also a function of the audio level, swinging between cut-off and saturation providing a plate efficiency of 50% or more and operating similar to a "B" class system where the plate current is at a low value when no modulation is applied—a good feature in saving a little drain on the car battery.

Driver tube V2B should have a low plate resistance so that a low source impedance is presented to the grid of V3. Tubes that fulfil this requirement are 6C4, 6S4, 12BH7, 12AU7.

Resistors R7 and R8 are a voltage divider, loaded by a relatively high impedance and should not present an appreciable load to V2B, the total resistance should be 5 to 10 times the load presented by the grid of V3.

You can experiment with the values, but both resistors must be equal in value.

Rectifier Cr1 can be any type of diode that has a maximum rated back voltage higher than the reference voltage at the junction of R6 and C4. In my case the voltage varied between +20 and +60 volts so I used a diode with a back voltage of 100 volts rating.

Do not use diodes in series. Two cost more than one and they cannot be depended on to have equal back resistances.

If you wish to try this system in a home rig of 30 to 50 watts, use a valve rectifier.

I used a 12AU7 for V2B because I wanted 12v. filament and had one in the junk box. A 6C4 would work well and the speech amplifier end can be

varied to suit the particular tubes and microphone you have.

Re microphones, avoid if possible the use of crystal types. They are not rugged enough for mobile use. A car can get mighty hot on a summer day. Dynamic mikes stand up well if you want that little extra quality, but the old carbon types are best for reliability. It is surprising the number of times you will bump the mike on the steering wheel or drop it off the seat onto the floor while talking, changing gear and turning a corner—all at the same time.

As I had plenty of gain in the speech amplifier the cathode by-pass condenser was left out of V2A to save some space.

The 6BW6 was chosen so I could series the filaments with the 6BW6 in the transmitter final.

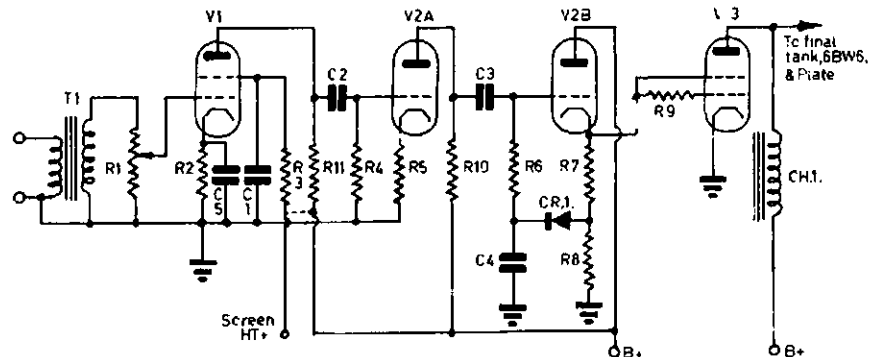
The choke CHI is 6 henries at 80 mA. You can experiment a bit here, the inductance does not appear to be critical as long as the reactance is equal to or higher than the p.a. plate impedance, and the lower its resistance the better.

While it is not claimed that this system is the answer to all modulator problems, it is simple and will give good results in a low power mobile rig.

VK-ZL DX CONTEST, 1961

W.I.A.'s. F.C.C. has received numerous criticisms on the lack of VK and ZL stations taking part in this world-wide Contest. So what about it chaps? Give it all the support you can. It needs it!

The rules of this Contest were published in the August issue. The phone section is from 1000 GMT on Saturday, 30th September, to 1000 GMT on Sunday, 1st October. The c.w. section is from 1000 GMT on Saturday, 7th October, to 1000 GMT on Sunday, 8th Oct.



REFERENCE SHIFT MODULATOR.

C1—0.1 μ F.
C2, C3—0.001 μ F. mica.
C4—0.005 μ F. mica.
C5—25 μ F. 40v.
R1—0.5 meg. potentiometer.
R2—1,000 ohm, 1 watt.
R3—1 megohm, 1 watt.
R4—0.5 megohm, ½ watt.
R5—10,000 ohm, 1 watt.
R6—1 megohm, ½ watt.

R7, R8—47,000 ohm, 1 watt.
R9—20,000 ohm, ½ watt.
R10, R11—0.25 megohm, 1 watt.
T1—Microphone transformer.
CHI—6 H., 80 mA. choke.
CR1—Diode. 1N38A, GEX45, etc.
V1—0AU6.
V2—12AU7.
V3—6BW6.

* 167 Lakemba Street, Lakemba, N.S.W.

V.H.F.—THE PRESENT STATE OF THE ART

JUST recently there has been a great hue and cry about the lack of news from the six metre boys with regard to activities and the like. How can there be news when there is no activity? What has happened to the exclusive six metre operator of the DX season? Has he got cold feet? Or can't he be bothered with the general friendly rag-chew on six metres during the winter?

Of the 60 odd stations I have so far worked on the 6 mx band, I can say almost without contradiction that I have worked 10 or so in the last two months. I heard some of them on—the last VK2-VK4 breakthrough. They came on for an hour and have not been heard since. One of them missed the break, had a local contact to find this out and went off the air after that contact. Why? Aren't the local boys on 6 mx good enough to talk to? Don't they represent a big enough challenge to the powers of your "wonderful" equipment?

Your only fooling yourself. It only takes a watt to work VK4-2, 5, etc., during a breakthrough. Almost anything with a piece of wire sticking out of it will do for the receiver, but you just try and get that watt through to a local station. That is an achievement. Try a consistent contact over 600 miles, winter or summer! There you are achieving something. Those things will prove your equipment.

Do you bother to listen to anything below a so-called S9? Do you just dismiss it as "he hasn't got his beam in my direction"? How about getting up and turning your beam around, or is that just too much hard work? There are, or so I was taught, four main compass points—N, E, S, W. When you call CQ, call it in each direction; if somebody doesn't come back to you there is something definitely wrong. I would suggest you check your equipment in this case, maybe the converter is at fault. Maybe the noise level is running S6-8. It does here, too, but still the majority of metropolitan stations can get a strength report of S8-9 from here, off the side or back of their beams mind you.

When you do eventually come on the air and call CQ, the call is general and is intended for anybody, so by rights you should answer the first person you hear calling you. This clique habit of tuning the band to see if one of your mates is on is a disgusting practice. If you want to talk to your mate, call him and don't make it a general call.

However, if he doesn't come back, how about making the call general, there are other Amateurs around who may like a contact, maybe waiting for somebody to indicate his presence on the band so that they can try out their transmitter, etc.

Those are my opinions on why, on 6 mx, there is lack of interest in 6 mx and consequently lack of news. There are, however, a few other points on these v.h.f. bands which are certainly screwy.

USE OF SIX METRES

We have (had?) four megacycles of band to play around with. On 6 metres we use densely the first 500 kc. The number of stations on 6 mx could quite easily fit in the 500 kc. with tons of room to spare. Other than that there are a dozen stations probably whose crystal frequencies put them above this. Is it any wonder then that the P.M.G. want to take away two megacycles of this band? 3,500 kc. of it is virtually wasted space, we don't use it, so why the great hullaballoo over missing 2,000 kc. of it? After all, we still have 1,500 kc. which will not be used. All right, so it's an International allocation, but at least most of the other countries use it. The P.M.G. is not blind, nor is it independent, it must pick up channel space where it can and what better place than the unused portions of the Amateur bands. It's not activity on the bands that will help us keep them, it's using them. When you get given 4,000 kc., for Pete's sake use it or you soon won't have 4,000 kc.

Much the same goes for 2 mx, but since I don't use this band I won't say anything.

SCRAMBLES

These I am getting fed up with, mainly because after one hour total operating time, in two of these farces I have a total of eight points, and I can hear nearly every station quite a few db. over 9 (my 9). As I said before, there are four points to the compass, how about listening in each direction or better still put up a turnstile. After all, all my DX has been worked using one of these and I've got and given just as good a report as six elements. The use of one of these antennae may well be the difference between that deciding point where somebody didn't bother to turn his beam. Try it anyway, then everybody has a chance of scoring, not just those with S9 (anybody's) signals.

REPORTING

This is another practice which is being abused, typical example being: "If I can hear him and understand him—5 x 9." This does not help the bod at the other end. After all, he was probably 5 x 9 last time but is 6 db. weaker this time. It doesn't cost much to install an S meter in your receiver.

All that is required are a couple of pots (5K and 100K), two resistors (1000 and 100 ohms), and an old aircraft temperature gauge. Connect the 1,000 ohm resistor between HT+ and IF can B+, the two pots in series across HT+ and earth, and connect the meter between the junction of the 1,000 ohm resistor and the IF can B+ and the junction of the two pots. The pot closest to HT+ is the 5K one. The 100 ohm resistor shunts the meter.

To adjust the meter take the particular i.f. tube out and adjust full scale deflection. Put the tube back in, disconnect the aerial and adjust the 5K pot for zero. Decide on your own scale

and stick to it. It at least makes your reports reliable, even if not accurate.

Quality is not an important factor in our transmission, but readability is. There is quite a big difference between the two and also a big difference in the amount of bandspace used, and on the "crowded" v.h.f. bands bandspace is important. Try restricting the top and bottom of the audio range and see if it doesn't make a difference.

Just try a few of these things, that's all I ask. After all, it's what you are allowed on the air for in the first place.

—"One Angry Young Man."



HINTS AND KINKS

PAINLESS MOUNTING OF THE MOBILE ANTENNA

Those keen mobileers who are sometimes dismayed at the thought of drilling holes in the new car, or fitting unsightly brackets at the rear to mount a loaded whip, take heart!

I obtained a 4 ft. 6 in. length of thin walled (1/32 in.) brass tubing, 5/16 in. inside diameter. (Obtainable from Gunnensen Allen.) This size slides smoothly over the standard b.c. antenna. At one end is the usual loading coil and a 4 ft. section of brass tubing completes the antenna on top.

A piece of dural tubing was attached to a block of polythylene drilled in the centre for a snug fit and the lower section of the whip slides through. The other end of the dural is suitably flattened and drilled for attachment to the side mounting bracket on the sun visor and gives rigidity to the antenna.

The antenna loads normally and may be set up or dismantled and stowed in the boot in minutes.

As my rig (converter and tx) is concealed in the glove-box, the XYL and I are now on speaking terms when Sunday driving!—VK3AHG.

AN AID FOR YOUR BEAM

I do not know whether the following idea is original or not, but have found it quite effective and easy to construct. It has been in use at this QTH for over 18 months now. The only maintenance being a drop of oil now and then.

The main item is a ½" breast drill which gives a very slow movement when turned by a motor or handle coupled by a shaft held in the chuck. A coupling (water) is welded on to the centre of the main wheel of the drill, into which is screwed the pipe which eventually supports the beam. The weight of the mast is taken by sitting the underneath section of the drill into a slot cut in the top of a piece of 1" or 1½" pipe which is set in concrete at the base of the tower.

The mast here carries a 6 element 144 Mc. and a 4 element 50 Mc. beam, and rotates fully without any trouble.

—C. Abernathy, W1A-L2211.

THE FRANKLIN OSCILLATOR

ARTHUR J. BOWMAN,* VK2ASB

THE Franklin Oscillator has long been recognised as one of the most stable v.f.o.'s possible to construct without elaborate precautions against drift, either short time drift or warm up drift.

The oscillator about to be described surpassed all the crystal oscillators the writer has built to check the stability. It even surpassed the Bendix frequency meter.

The unit was built on a chassis 9" x 5½" x 2" with a special box 3" x 2" x 9" for the tuned circuits.

The Franklin is claimed to be stable to within a drift of 25 c/s. up to 7 Mc.

but I found silvered mica to be superior. Originally C1 and C2 were 2.2 pF. but it was found that the oscillator tended to drop out of oscillation on parts of the band so C1 was increased to 3.3 pF. and the oscillation continued all over the band.

A 0.001 μF. silvered mica was used for C6 but as this is rather a large physical size, a 0.001 μF. N.P.O. or even Hi K could be used if so desired.

R1 was a selected 1 megohm 10% ½w. This value was selected on a R/C bridge as being exactly 1 megohm, but 10% tolerance is quite adequate. R6 was a

The value of R6 must be kept as low as possible to limit the effects of the 6CB6, particularly when it is removed from the socket.

The filament voltages on V1 and V2 were reduced to 5.0v. and the cans on these valves were covered with asbestos string. This tended to limit the effects of changes of room temperature.

A shield was placed around V1 components, as shown, to prevent feedback. R4 was fed through the shield to the h.t. and decoupling.

The transformer T1 was an old transformer (i.f.) out of a 522 receiver. Capacity was added to bring it from 12 Mc. to 5 Mc. Then a resistor was placed across the primary to dampen the tuned circuit to obtain a broad-band effect.

The leads from the two coupling condensers should be kept as short as possible. All earth points to the chassis were wired with 12 s.w.g. tinned wire and all points were connected with the same type wire.

A small crystal oscillator for band checking was wired in, although this has not been shown in the diagrams. If you have a crystal calibrator on your receiver, as most modern sets have, the crystal will not be necessary.

The power supply must be well regulated with a VR105 or VR150. Hit the VR tube really hard by applying about 210 volts to it, but don't exceed the 30 mA. limit imposed by the tube ratings.

After the VR tube connect about 50 μF. in electrolytics across it and then some if necessary. (A resistor should be placed in series between the VR tube and the high capacity—otherwise the VR tube will "oscillate" or motorboat. —Ed.) Every bit of 50 cycle ripple must be eliminated or the oscillator will tend to be modulated with the 50 cycles.

All other resistor and capacitor values may be normal quality components.

COIL AND TUNING CONDENSER ASSEMBLY

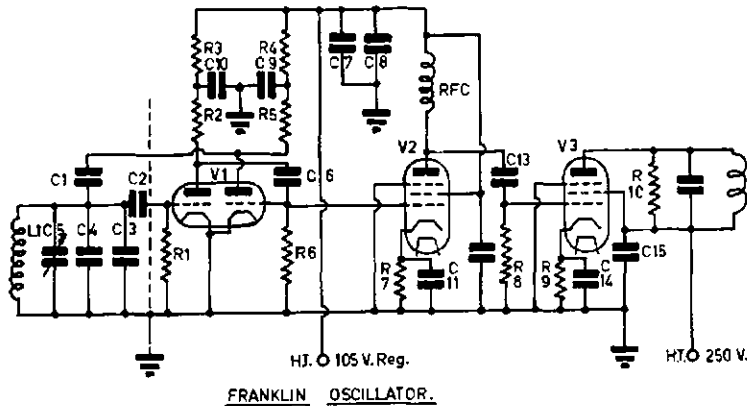
A layer of ¼" asbestos was glued to the inside of the metal box. The coil and condenser was mounted inside, then another layer of ¼" asbestos was glued to the outside of the box for additional heat insulation.

The coil was 8 turns of 14 s.w.g. enamel covered wire on a 1½" ceramic former. The former was taken from the v.f.o. of an AT5. It must be wound very tight and if possible set with goo.

The tuning condenser was a 10-110 pF. ceramic mounted condenser. A 100 pF. and 150 pF. (both 5%, silvered mica) condensers were placed across the tuning condenser. This combination gave 5.0 Mc. to 5.20 Mc.—ample coverage for 7 Mc. and 14 Mc. (on sideband. —Ed.)

Components inside the coil box were wired up using 12 s.w.g. tinned copper wire. The two coupling condensers, C1

(Continued on Page 12)



FRANKLIN OSCILLATOR.

- C1, C2—2.2 pF. silver mica, 5% tolerance.
- C3, C6, C13—100 pF. silver mica.
- C4—150 pF. silver mica.
- C5—150 pF. variable.
- C7, C9, C10, C11, C12, C14, C15—0.01 μF. mica.
- C8—8 μF. electrolytic.
- R1—1 meg., ½ watt.
- R2, R5—30K, 1 watt 1% Hi-stability.

- R3, R4—1.8K 1 watt.
- R6—15 to 25K ½ watt.
- R7, R9—470 ohms 1 watt.
- R8—100K ½ watt.
- R10—15K 1 watt.
- V1—12AT7.
- V2, V3—6CB6.

The one built was stable to within 0 c/s. drift at 5 Mc. for a period of six hours.

The voltages applied to the oscillator itself do not effect the frequency—in theory. The author found this to be untrue. The tubes used in the oscillator and buffer have no effect on the stability—once again a slight distortion of fact.

value selected by trial and error on the oscillator itself.

If, when you construct this oscillator, you find that it is not very stable, try varying the size of R6 from approximately 10K to 25K.

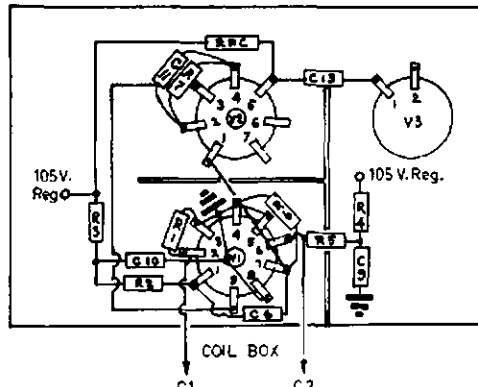
R1 and R6 must be earthed at the same point with very short pigtaills. Single-point earths must be used on the oscillator.

NOTES ON THE COMPONENTS

Anyway, to the construction. The oscillator found to be most suitable was a 12AT7 into a 6CB6 with a 6CB6 following. The output from this combination was found to be approximately 0.1v. at 5 Mc. The valve sockets must be ceramic.

The plate load resistors were 30K 1w. hi stab., decoupled with two 0.01 μF. silver mica condensers and two 1.8K hi stab. resistors. These hi stability resistors were 1% but I don't think the decoupling resistors need be quite so good a quality. I do recommend, however, that the plate load resistors should be very close tolerance.

The decoupling condensers, C1 and C2, must be silvered mica. N.P.B. type condensers are claimed to be adequate



LAYOUT FOR OSCILLATOR SECTION.

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NATIONAL FIELD DAY 1961—A VK6 EFFORT

AS early as June 1960, it was decided at a meeting of the West Australian V.h.f. Group (Inc.) that the club station (VK6VF) would take part in the multi operator section of the then forthcoming Field Day Contest. To this end a committee was formed whose task it was to rustle up the receivers, transmitters, aerials, etc., etc., required. All bands, 3.5 to 144 Mc., were to be catered for.

A major windfall came along when Kevin VK6ZCB decided to build his shack into a caravan. This he offered for the occasion as a complete v.h.f. station with additional space available to accommodate some 80-10 metre gear.

More equipment problems were very nicely solved when Jim VK6RU offered his Collins station (75A4 and 32S1 at reduced power). Similarly, Jack VK6BU obliged with his Collins 75A1 and Gelsolo GL222 (also at reduced power). Thus main equipment requirements were covered.

Antennae became the next problem. Numerous ambitious schemes were suggested but eventually it was agreed that a simple system of dipoles for the h.f. bands, with yagis for the v.h.f.s., be used. The dipoles were planned to be arranged in the form of a "vee" with of course separate feeders for each.

After some rummaging around, a 2k.v.a. alternator, driven by a single cylinder petrol engine, was located. Whilst we are appreciative, the source of this is best left unmentioned!

Finally, a rendezvous was arranged for 9 a.m. on the site (in the Darling Ranges, 1,000 ft. a.s.l.) on 4th February, for the erection of antennae and setting up of gear.

9 a.m. Saturday duly arrived with several energetic persons on hand and ready for work. Kevin's caravan was moved into position and he and Roy VK6ZDS got to work on erecting the v.h.f. beams atop a 50 ft. telescopic mast. The subject of pinched fingers is not popular with Kevin by the way! Meanwhile, the two 30 ft. telescopic masts for the h.f. dipoles were under way, forming, in addition to a convenient gum tree, the three points of the aforementioned "vee". Here Roy VK6RY gained claim to fame with a stone and length of string!

Problems commenced with the unravelling of prefabricated dipoles. It appeared that more attention had been paid to rolling them up than the possibility that they would need unrolling—talk about wire puzzles!

Some little time later a trial run was made on the alternator with satisfactory, but deafening results—an open exhaust system. At first a voltage variation of some 15-30 volts was experienced, but an adjustment to the mixture control corrected this.

As everything seemed to be under control, all agreed it was now time for lunch.

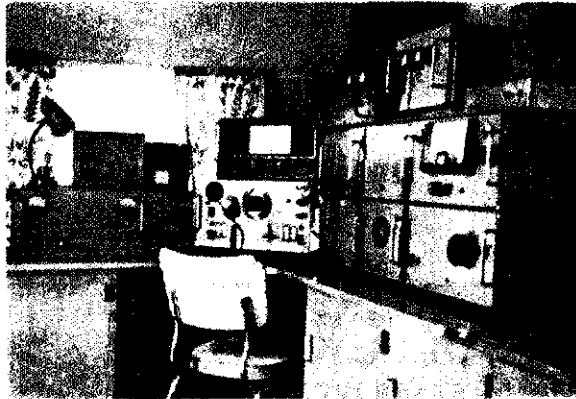
The weather at this stage was very hot and prompted the remark: "... at least this is better weather than the storms experienced by a VK3 team of a previous year..." No sooner were the words spoken than some very black

clouds loomed up, thunder boomed, lightning flashed, and down came the rain in a freak cloudburst!

First thoughts were for the unprotected power plant. A canvas sheet, brought along "just in case of emergency," was hurriedly flung over the unit. Obviously, though, some more permanent shelter would be required so two cars were commandeered to support the sides of the tarpaulin. This was fine until a miniature lake collected in the middle. This further problem was overcome per medium of VK6RY and VK6HK who acted as centre posts for the next half an hour or so until the weather cleared sufficiently for some bush timber supports to be cut.

Everything was now felt to be ready for anything the elements could turn on.

At 3.30 p.m. W.A.S.T., Jim VK6RU and Jack VK6BU arrived with their equipment which was set up and tested in quick time. The alternator had been running sweetly for some time now.



4 p.m. (W.A.S.T.)—Operation got under way with an added snarl from the power supply and much enthusiasm from the operators—but the team had hardly got into stride when at 4.10 p.m. "old faithful" conked out. Diagnosis—ignition trouble.

At least operations did not cease entirely, thanks to the 50 Mc. transistorised walkie/talkie of VK6ZBC and mobile 50 Mc. gear of VK6ZCB. Several contacts were made thereby.

Meanwhile the boys commenced dismantling the engine amidst much helpful advice from onlookers. After the flywheel had been removed it was found that the magneto was in the process of falling apart. This corrected, the plant was deemed ready to start again.

At this point, VK6RU, not one to waste contest time, left the power tent and headed for the controls of his rig. By the time the 250 volts arrived at the transmitter he was ready for the air.

Contacts came but slowly until just before sunset when once again the engine conked. This time flooding was the problem and fuel was found running freely round the open exhaust. This is not recommended practice! Roy VK6RY again dived in and pulled the "carby" down. This time power was

available after only a ten-minute delay. The plant kept running now until closing time, although on several occasions a dash had to be made to make adjustments to prevent a further stoppage. Voltage varied at random during this period between 150-260 volts!

On Sunday, 12th, operation was more routine with contacts on all bands coming slowly but steadily. Even "old faithful" must have kept in mind the saying, "The better the day, the better the deed," as she kept going during the whole of the day's operating period.

Something of a diversion occurred on this Sunday morning. A visiting Amateur remarked, "If you want a contact on another band you had better come and help me put up my 20 metre quad!" So several bodies took him at his word, climbed into a car and off to his home QTH. After much pulling, juggling and twisting, up went the quad, and the promised contacts were later made. This is really working for contacts!

★
Interior of VK6ZCB's caravan, looking to the front. This set-up was used in the National Field Day Contest of 1961.

★
Tension relaxed as time ran out and everyone was still able to smile and joke about the events of the week-end. We certainly found that much enjoyment can be had by a joint effort in the National Field Day Contest and all are looking forward to next time!

As a closing word, the thanks of the V.h.f. Group of W.A. (Inc.) are proffered, not only to those who are mentioned in the text but to the many people who assisted both before and during the event.

★ ROYAL CHARTER FOR RADIO ENGINEERS

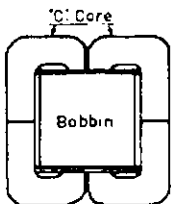
The Council of the British Institution of Radio Engineers has the honour to announce that Her Majesty The Queen has been pleased to approve the grant of a Charter to the Institution. The Order in Council is dated 2nd August, 1961.

The honour conferred on the Institution sets the seal on its achievements during the past 36 years. The Institution was founded in 1925 when radio engineering, as an industry, was in its infancy.

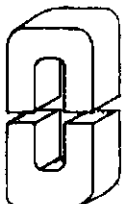
D.C. POWER CONVERTER FOR MOBILE

(Continued from Page 3)

transformer temperature rise should be about the same as a receiver type power transformer. A metal box large enough to house all the components should provide adequate cooling area. It is well to remember that the transistor manufacturers permit operation with an internal junction temperature up to 100°C.



Transformer



Dis-assembled C-Core

Suggested winding details are as follows. The transformer should be wound on a fibre former which may be obtained with the two C-cores and it may help if stout cardboard end plates are made and cemented to the fibre. If modern winding wire with tough, straw-coloured enamel is used (such as Lewmex) there is little need for insulation anywhere in the transformer, but layers of paper or tape should be inserted between windings to provide a flat surface on which to build. If old wire is used then a layer of paper, or empire cloth (if you are a Loyalist) should be interleaved between each layer of the secondary. To ensure

oscillation when switching on for the first time, the start and finish of each primary and feedback winding should be carefully marked and wired up as indicated on the circuit diagram.

Primary 1 and 2: Each 23 turns of 18 to 20 s.w.g.

Feedback 3 and 4: Each 29 turns of 26 s.w.g.

Secondary: See text. Use 26 s.w.g.

None of the wire gauges are particularly critical, but if thicker wire is contemplated consult the wire tables to ensure that it will all fit.

When assembling C-cores, keep the halves in the same relative positions as they were when purchased. This will ensure minimum air gap and lowest exciting voltamps. Each core should be clamped together by twisting a loop of stout wire around it, as the special banding strip supplied is hard to use if the proper tool is not available. To reduce vibration, jam the cores in the coil former by using thin wood shavings and to provide protection against climate it is suggested that the entire transformer be boiled in beeswax or dunked in shellac.

At the time of writing three units have been constructed, two by the author, and one by a fellow VK5 Ham.

Here are some test results obtained using accurate model 8 Avo meters:

1. Input: 12.6 v. at 6.87 a.
Output: 405 v. at 175 mA. = 71 w.
Efficiency: 82%.
2. Input: 12.6 v. at 4.20 a.
Output: 410 v. at 110 mA. = 45 w.
Efficiency: 85%.
3. No load input current = 0.8 amp.
4. Input current with output shorted = 2.4 amp.

THE ANTENNAMATCH

(Continued from Page 5)

worked against the other until a condition is reached where both the phase angle and impedance indicators have zero readings. In this condition, the r.l. power accepted by the aerial should be the same as that into the artificial load. The p.a. loading should also be equal to that when loaded into the dummy aerial.

Transmitter conditions (that is the values of C1, L and C2) should not be altered after being set up on the dummy aerial and all subsequent adjustments to bring about equal conditions must be made entirely with the matching network.

Experience has shown that with fairly large values of impedance and phase angle condensers widely varying conditions can be catered for. However, if reactance cannot be completely eliminated, i.e. phase angle brought to zero, different values of inductances of the split coil should be tried.

Short acquaintance with The Antennamatch as an aid to correct matching and loading of the transmitter to the aerial will serve to prove its very valuable purpose and will make the user realise just how difficult it is to achieve optimum conditions without it.



THE FRANKLIN OSCILLATOR

(Continued from Page 9)

and C2, were wired inside the box also. The pigtailed were cut short to prevent vibration.

Incidentally, all components in the oscillator must be mounted very rigidly. No vibration must be permitted. The gang must have a very smooth action.

CHECKING THE OSCILLATOR

Now a few words on the methods used for checking.

First I beat the v.f.o. with an xtal oscillator just haywired together. There was some drift, about 400 c/s. Next I used a crystal calibrator and for the first hour I found that there was some drift here, too. I was feeling rather disheartened, so I checked it as a last resort on the Bendix BC221.

To my amazement I found that though I had to "correct" the Bendix about every 30 minutes, each time I switched back to "operate" the v.f.o. was zero beat. Several times I checked the v.f.o. to see if it was still operating and sure enough it was.

Then I connected the Bendix output to a c.r.o. and zero beat on the "check" position, watching the pattern on the c.r.o. (a sine wave). When the Bendix was on 5.0 Mc. I zero beat the v.f.o. and once again a sine wave. Whenever I saw a distorted wave form on the c.r.o. I "checked" the Bendix and sure enough the v.f.o. was exactly zero beat.

I allowed the v.f.o. to run into the Bendix for a total of six hours and not once did I have to reset the v.f.o.

This v.f.o. is the ideal v.f.o. for the s.s.b. man. The output is not very high, but for s.s.b. the output is not required to be high.

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AMATEURS TAKE PART IN PROJECT PHOENIX

The recent party of Victorian firemen which visited country centres in Western Australia contained a number of Amateurs. The visit was sponsored by the Westmere Rural Fire Brigades Radio Group at the invitation of the Bush Fires Board of W.A.

Purpose was to discuss and demonstrate fire fighting methods with particular emphasis on the use of radio. Phoenix was the name given to the project when it was found that every member of the party had suffered serious or total loss in the Victorian disasters of the early 1940s.

Leader of the party was John 3AGD, who is President of the Group and operator of the Dunkeld Base Station VL3JF. Associate Hugh O'Rorke, affectionately known to firemen as "Chief," flew over to operate the Group's portable base station under his own call VL3KJ. Hugh first obtained this licence to work with several Amateurs in the early days of fire radio and pioneered the present system of networks.

The Group took their own cars and equipment and operated on the Westmere net frequency of 5265 Kc. Much of the early planning was carried out by the Group Secretary, Tom Kinnersly, VL3KN. Others included Pat 3ADN, the S.W. Zone W.I.C.E.N. Co-ordinator, with XYL Nell, using the call VL3KW; Tony 3WB and XYL Pauline, operating his old call 3KI; Kevin 3AKR, who travelled with John 3AGD, using VL3KK, and Don 3AKN, S.W. Zone Secretary and deputy co-ordinator of S.W. Zone W.I.C.E.N. under the call VL3JA.

Apart from two notable exceptions, the equipment used was home-brew or custom built to network design, much to the surprise of the VL6 boys. The local outfit was found want-

ing and was replaced by a spare outfit complete with antenna.

The gear included a re-built 108 and ATR2C and a neat little home-brew designed by Bert 7BI, then 3BI. This one uses a 6AQ6 xtal osc. to a 5763 modulated by a 5763 Heising fashion, with a two-tube xtal converter to the car radio. The owner-operator, Tom, another Associate member, built and installed the rig which uses the call VL3KN and is the top performer in the network. Ignition interference simply is not by virtue of complete shielding of the whole system. No ignition suppressors are used. Tom is still pondering the problem of the other bloke's interference and those wind driven lighting plants!!

Two sets of Amateur gear were taken, that of 3AKN and of 3AKR. The former was pressed into service on the smoke frequency which somewhat curtailed Amateur activity. The latter, mounted in the car of John 3AGD and using his call, was operated mainly by Kevin 3AKR. Our logs showed a total of some 75 stations contacted or visited; too many to list. However, amongst them were Ses 5GP who is also in the smoke business at Nairn in the Adelaide Hills. At Port Augusta Graham 5GE showed the Group over his f.b. gear. We owe Graham an apology for disturbing his all-too-infrequent rest and our sincere thanks for an insight into the Flying Doctor Network. Our first eyeball QSO in the West was with Tom 6TR and his (square-eyed) monster where the Northam demonstration made the news session. Tony 3WB, with his aristocratic mobile, stole the limelight of course.

Kevin operating as 3AGD/6, distinguished himself by working Tom VK0TC at Wilkes Base on 7 Mc., doing 70 knots or so with the

v.f.o. as front-end injection for the s.s.b. sig. At Bunbury, Les 6WL played host to 3AKR, 3AKN and 3AGD, and managed to inveigle a tape recording from us for 6WI. Wally 6AG brought Skipper 6WS to meet the convoy in Perth. Skipper took a keen interest in the gear and especially the fibre glass whips. He told us how he overcomes the problems encountered by the sightless Amateur and left us somewhat humbled and realising that our own are puny enough. Wally arranged a Hamfest later that evening and those whom we met included George 6GH and XYL Ruth, Jack 6KK, Pat 6PH and Associates Hans and Wolf Frost. John 3AGD lost no time in extending the left hand to Hans who is the River Ranges D.C. of Scouts. Hans, with Pat 6PH, will be organising the VK6 end during the Jamboree-on-the-Air in October. Travelling home on the train we met another D.C., Kojo, from Ghana, who promised to alert the chaps in 9G1, so swing the beam that-away during the week-end you DX men.

The Group visited the P.M.G. monitoring station, VNA, situated just outside Perth. Here the officer-in-charge, ex-6JJ, showed us receivers that would make the sidebar boys green with envy and that would leave the well known AFDR model for dead. The antenna farm left us speechless and the frequency measuring apparatus again was out of this world.

At Merredin on our re-entry stage, Mal 6MU took charge and after seeing the local b.c. station he took all into that wonderful shack the town people built.

Time does not permit mentioning all those whom we met or contacted, but our thanks go to all the VK6 and VK5 boys who gave us and the VL3 boys such a wonderful time, to the VK3 boys who kept us posted with news from home, and especially to Dave 5DS and Len 6LG and Mal 6MU who made sure we got home safe and sound. In saying 73 and CUAGN you may be sure the Net really means it.

HOW CAN THE AMATEUR ASSIST?

Many times we were asked by Amateurs "How can we help in this very important show?"

Three problems face the new operator when his brigade decides to form a network. They are, to obtain suitable equipment, to instal and maintain it in the vehicle or base station, and in the case of mobile, to silence the vehicle noises. In most cases the equipment will be commercially made. However, some may prefer disposals gear which is still available in limited supply and will certainly need some modification well within the average Amateur's capabilities. Or some may want home-built stuff.

Here the Amateur may help by designing and building or helping to build the outfit. There is too the possibility that a group of Amateurs will follow the VK7 boys and build the stuff as a community project. Let it be not forgotten that nearly all the VL3 stuff on Project Phoenix was either home-brew or custom-built to Network design.

Installation is normally the maker's responsibility but distance, coupled with today's habit of changing the vehicle frequently, means the job must more often than not be done locally. Radio vehicles can break down at awkward moments, too, which means no radio unless the outfit can be speedily transferred to another car. Regular checking of the antenna for resonance and the whole outfit for performance will make all the difference between an efficient network and none at all. First aid to the broken-down set when every minute counts may save many acres and even many lives.

However good the equipment is on the bench, its performance won't be worth tuppence unless the ignition, generator, and other noises from the vehicle are eliminated. This is a recurring problem and careful study of this problem and suitable action, again in the field, will repay handsome dividends.

Finally, recognise these VL chaps for what they are, expert firemen and first class operators. Listen to their problems and look for the solution by experiment if no other way. Don't try to teach them operating procedure for their requirements are remote indeed from Amateur procedure and encourage those who would understand the mysteries of radio for they are the future network technicians and a fertile field for recruits to Amateur Radio.

Every Amateur in Project Phoenix started as a smoke-net operator, nearly every one (in VK3 anyway) is an active member of the W.I.A. and the W.I.C.E.N.

—Don VK3AKN.

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Trade Review

NEW B. & K. MODEL 1076

TELEVISION ANALYST

Amalgamated Wireless (Australasia) Ltd. announce an addition to the well known B. & K. range of servicing instruments for which they are sole distributors in Australia. The new instrument is known as Model 1076 "Television Analyst".

The "Analyst" is a t.v. signal generating source used for the rapid location of faults in television receivers. An earlier model (Model 1075) is already widely used in television servicing workshops here. The new model possesses all the features of the earlier type, but has an additional integral unit—a circuit analyser, previously supplied as a separate unit. The result is a single, compact unit, convenient in use and easy to carry.

The "Analyst" is a unique system for rapid fault locating. When familiar with the operation of the instrument a skilled serviceman can locate even the most difficult fault—including intermittents—within a few minutes. Valuable servicing time is thereby greatly reduced, since the greater part of servicing time is usually spent in locating the fault.

"Analyst" has a flying-spot scanner to generate a test pattern which is fed to any stage in the receiver. By narrowing down the points of injection a faulty component can be positively located.

The instrument can be used with no t.v. station on the air, thus reducing the great amount of lost workshop time when stations are not broadcasting.

It can be wired into a workshop system to drive a large number of receivers at a time.

The signal can be applied to any stage in the video, audio, r.f., sync. and sweep sections of the set. No external c.r.o. or waveform analyser is needed—the one instrument does the whole job. The instrument costs £170 plus Sales Tax f.o.b./f.o.r. Australian capital cities.

Further information and photographs (if available) may be obtained from Mr. H. A. Tyrer, Engineering Products Division, Amalgamated Wireless (Australasia) Ltd., postal address: G.P.O. Box 2516, Sydney, or telephone 2-0233, Ext. 348.

VICEROY S.B. TRANSMITTER

Through the courtesy of R. H. Cunningham Pty. Ltd., "A.R." was able to air-test the K.W. Viceroy Sideband Transmitter.

This unit is supplied with full operating instructions, schematic circuits and an optional power supply, if required. It is only necessary to add a microphone (a D104 was used for our tests) and a Morse key plus an aerial change-over relay.

The whole unit is well laid out with good front appearance, rigid cabinet and chassis, and all metal parts are cadmium plated and passivated. Adequate ventilation is provided by suitable screened holes. Wiring is neat and cabled with all parts so placed that little service difficulties would be ex-

perienced in maintaining this unit. There is no evidence of poor quality nor underrated components. Overall, it is a well made, carefully laid out piece of commercial gear.

The Viceroy is a crystal filter type of s.b. transmitter using a 435 kc. xtal oscillator, driving a balanced low impedance modulator comprising crystal diodes into which is fed the audio signal. A half lattice filter rejects the unwanted sideband and the requisite sideband is then heterodyned to the required frequency by means of a v.f.o. and suitable crystals.

The transmitter is wired from a rear connector to a small control box, and the power supply contains a voltage change switch mounted on the panel, so that it is necessary that the power supply be adjacent to the transmitter. The control box contains two switches which are frequently used, thus they could possibly be better placed on the transmitter panel; if you use only one band, then this switching is no problem, however it proved awkward during the "A.R." tests.

The v.f.o. is well situated in the transmitter and has a very smooth Eddystone dial, free from backlash and including an auxiliary 0-100 logging scale, with the main Amateur bands, 10-80 metres, calibrated on the main dial face.

Several hours were spent in setting up the transmitter and checking the various tuning controls, VOX, etc. No difficulty arose but the VOX is a little tricky until one becomes initiated. A dummy aerial was used for all these tests.

On-the-air checks were then made using s.b., a.m. and c.w.; broadly speaking, s.b. and c.w. reports were excellent, but a.m. was only fair, but little time was spent in trying a.m. because the Viceroy is a s.b. rig. Operation was had on the 80, 40 and 20 metre bands only as there was no activity at a convenient time on the higher frequency bands. About 35 s.b. contacts were made, mostly with overseas stations and reports of voice quality and v.f.o. stability were good. One comment is made that no sideband selection is available and the Viceroy transmits upper s.b. on all bands except 80 mx, so that on 40 mx one is expected to do the impossible.

Unwanted sideband and carrier suppression reports were quite satisfactory; controls did not need frequent adjustment.

For those who may use this s.b. transmitter for c.w. operation, it can be said that the keying is excellent.

No reports on t.v.i. would be of value as the rig was tested in an area of very high t.v. field strength, so needless to say no t.v.i. was experienced.

The unit includes a.l.c. but its effectiveness could only be judged by several local contacts, as no c.r.o. was available at the time.

It is considered that the K.W. Viceroy s.b. transmitter is a well designed and constructed unit, providing quality performance for a very reasonable outlay.

For fuller information, write to the local representatives, R. H. Cunningham Pty. Ltd., 8 Bromham Place, Richmond, E.1, Victoria, or the Interstate agents.

GLASS ZENERS IN 400 mW. RATINGS

A brand new line of 400 mW. rated Glass Zener Diodes by International Rectifier Corporation has been announced by Warburton Franki. These feature low voltage values (3.3 to 12 volts), extremely low dynamic impedance (to a 5 ohms at $I_z = 20$ mA.) and low temperature co-efficient (-0.062 to -0.060 %/°C.).

Designated types 1N746, 1N759 and 1N759A, the new devices are available in both 5% and 10% voltage tolerance types and meet J.E.D.E.C. registered values of reverse leakage current measured at 1 volt. The new diodes are process selected to provide exceptionally sharp zener characteristics and high stability and excellent voltage regulation is assured over the temperature range from -55 °C. to $+150$ °C. Extremely small size (0.265" x 0.110" diameter) and glass-to-metal hermetic sealing insure a rugged unit capable of long-term reliability.

Full details are available from Warburton Franki's offices in Brisbane, Sydney, Melbourne and Adelaide.

Warburton Franki also recently introduced 28 subminiature glass zener types rated at 250 mW. in the 3.3-30 volt range.

Book Review

SILICON RECTIFIER HANDBOOK

By Sarkes-Tarzan Inc.

A handy volume which will give either old or new Hams an insight into the operation of semi conductor rectifiers.

There chapters on theory, manufacturing methods, rectifier characteristics, typical rectifier circuits, test circuits, rectifier and filter circuit design, and application techniques.

In addition there is a catalogue section showing characteristics of most of the current range of Sarkes-Tarzan silicon rectifiers.

This book costs only 9/- plus 1/- postage and if it only saves you one 400 p.i.v. rectifier it will have paid for itself.

Our copy from McGills Newsagency, 183-5 Elizabeth Street, Melbourne.

ELECTRONIC TIPS AND TIMESAVERS

By John A. Comstock

Packed full of ingenious, money-saving ideas, this is one of those easily read books which can save you many pounds and valuable hours during your experimenting.

Price 16/- plus 1/- postage. Our copy from McGills Newsagency, 183-5 Elizabeth Street, Melbourne.

SCHOLARS TAKE PART IN QSOS

Benalla High School (Vic.) students took part in a radio broadcast as part of Education Week in New South Wales in August.

Throughout N.S.W. schools spoke to each other over radio stations and Benalla was active from Victoria. This was arranged following a discussion between Ken SKR of Benalla and a teacher at Long's Jetty, near Newcastle.

Members of the Benalla High School Radio Club were active in the broadcast, and Rotary Exchange student, Mary Ellen Rosa, from America, spoke to the other schools over the air. Radio Club members, Frank Dyall and Peter Amor, assisted with the radio side of the contact. —"Benalla Standard," 14/8/61.

Correspondence

Any opinion expressed under this heading is the individual opinion of the writer and does not necessarily coincide with that of the publishers.

GENTLEMEN'S AGREEMENT

Editor "A.R." Dear Sir,

Continuation of the so-called "Gentlemen's Agreement" in allowing c.w. the lower 50 kc. of the 7 and 3.5 Mc. band, as advocated under the Federal Executive notes in August issue of "A.R." does not really represent the views of members, but a minute section who demand exclusive territory for their out-moded form of communication—c.w.

That the Federal Executive should back this minority against the majority is quite beyond human understanding. Research undertaken for the undersigned by a top Australian market research executive (and reported in these columns some few months back) proved beyond all doubt that there was hardly any c.w. activity which was in marked contrast to phone, especially s.s.b.

Whilst appreciating there will be more activity on the lower frequency bands as the sun-spot minima approaches, this means that more and more s.s.b. and a.m. phone will be moving to these bands and naturally will want and demand more room. My advice to them is ignore these so-called "gentlemen's agreements" and operate where and when it suits them.

Instead of dictating policy through notes in "A.R." the Federal Executive (if it has any democratic spirit left in it) would be far better seeking the opinion of the members than trying to perpetuate an agreement which, to most, never existed. May I suggest to all that instead of sitting back and following a suggestion by F.E., that members through their own Divisions urge a postal plebiscite as to whether we should be a party to these "gentlemen's agreements". To cut down expense for another inevitable plebiscite of the future perhaps a second question might be included: "Are you in favour of the abolition of c.w.?" The answers to the latter, like the former, would be quite startling.

—Roth Jones, VK3BG.

SHORT WAVE LISTENING

Editor "A.R." Dear Sir,

When I first started s.w.l'ing a little over 12 months ago there were quite a few things that I wished to know so as the right method could be adopted. Information at that time was not to be obtained locally so I decided to pen my queries to the scribe of the s.w.l. page in "A.R.", who replied telling me of the right procedure necessary for the hobby. Since then I have written once a month, many times we don't agree on certain things. My cards, for instance, he said they were lousy. Well, that's OK by me. I thought they were good as it would not do for us to all have the same type of cards. Such comments create new ideas and another person can see your errors better than you can yourself.

Maurie is straight to the point, has helped me no end, and no doubt that applies not only to myself but many s.w.l's. who write to him from time to time. I look forward to that page in "A.R." each month with interest, and think that he has done an excellent job in keeping it intact. So keep up the good work OM, as I feel sure that all s.w.l's. in VK land appreciate what you are doing for them.

—Chas. Abernathy, WIA-L2211.

R.D. CONTEST OPERATING

Editor "A.R." Dear Sir,

I have just submitted my log for the 1961 R.D. Contest. As usual I did enjoy the Contest, however I do feel that it was marred by several really atrocious signals from all parts of VK.

It is inevitable in a contest of this nature that some signals will be poor. There are several reasons for this state of affairs:

(a) Something has "packed up" in the gear or got out of adjustment during the contest unbeknown to the operator.

(b) Chaps come on for about the only time they put in on the air from year to year without bothering to check out the rig beforehand for any bugs and correct operation.

(c) Some try to get more out of the gear for contest purposes than they would normally, resulting in incorrect loading, improper matching, etc.

(d) Some just plain overmodulate to attract attention and presumably more contacts.

My comments on these four categories are:

(a) Tell the chap when you work him that there's something wrong with his signal. If

he's any sort of a bloke he'll take it the right way, and act on it.

(b) It's nice to see these chaps come on the air. I really think they are in the minority as offenders and we probably just have to tolerate them.

(c) These fellows we can help by teaching them that a clean, well modulated signal, even though lower powered, is more effective than a poor higher powered signal. Those who can could well assist in providing technical information and practical help to aid in getting the offending equipment operating correctly. I might add that I have received much of this type of assistance from other operators around Elizabeth, namely VK5DY and VK5NO.

(d) These are the kind we don't want on the bands until they learn better. They are selfish and as such very hard to counter or reason with. Perhaps they could be penalised by disqualification upon report of monitoring stations appointed by the Advisory Committee in each State.

Lastly, but not least, I must comment upon the subject of operating courtesy. By and large, in a contest of this nature, it is impossible not to QRM other stations from time to time, but this business of sitting on a frequency, calling CQ Contest, occupied by another station obviously being heard by the offender trying to swap numbers, and after having spoiled his attempt, going ahead and exchanging numbers with the station you just lost for him, really gets my goat. Fortunately there only appear to be several of these types in each State, but we can do without them too.

Here in Elizabeth we have one of the highest densities of stations for a given area but we all seem to get on quite well with each other. Look at last year's scores. At least six Elizabeth stations were amongst the State's highest scorers.

Why can't other fellows do likewise as far as transmissions and courtesy are concerned? They will find they get just as much, if not more, fun out of their hobby.

In Elizabeth we just can't afford to have stations with poor transmissions. Isn't the boot on the same foot elsewhere?

Thanks to all good operators who exchanged numbers with me. To the bad ones with incompetent transmissions, the terrors of the Wouff Hong.

—Ian J. Hunt, VK5QX.

LIMITED LICENSEES

Editor "A.R." Dear Sir,

As a comparative newcomer I do more listening than talking (I hope), and a few of the old hands seem to think that one of the reasons the lower frequency bands still have room is because the Z calls are lazy. Yes "lazy" is the word used by them.

Most of our Z calls are young chaps who have the ability to obtain their full license. But why don't they obtain it? Once they get on the air so many seem content to stay a Z. What a boost they could give to the lower frequencies.

Perhaps the young chaps haven't the cash? Is it more fun? I don't know the reason for staying with a limited licence. It has been suggested to me that the limited licence be made current for one year only to ensure that the full licence is taken up.

What do others think?

—Peter W. Brown, VK4PJ.

TEST EQUIPMENT

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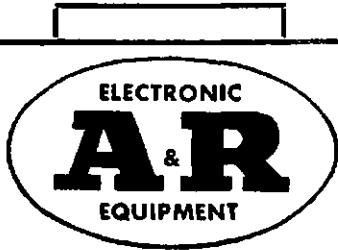
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A good knowledge of import procedures would be an advantage, but not a necessity.

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TYPE PT1870.—Primary: 230 or 240 volts to high, medium or low taps. (Overwound primary.) Suitable for switching with non-shorting contacts.

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TYPE PT1400.—Primary: 200, 220, 230, 240 volts.

Secondary: 565, 500, 425 volts per side of c.t., 250 mA. condenser input filter.

Filaments: 2 x 6.3v. (3a.), 2 x 2.5v. (3a.), 5v. (3a.). Horizontal mounting.

TYPE PT1371.—Primary: 200, 220, 230, 240 volts.

Secondary: 1000, 850, 750, 600, 500 volts per side of c.t. 300-400 mA. choke input filter.

TYPE PT1305.—Primary: 200, 220, 230, 240 volts.

Secondary: 2.5v. c.t. 10a. for 2 x 866/A fil. Max.: D.C. wkg. 3000 volts.

TYPE PT1516.—5 v. at 3 a., 1000 v. D.C. working. For use with h.t. power supply and high-level negative peak clipper filament voltage.

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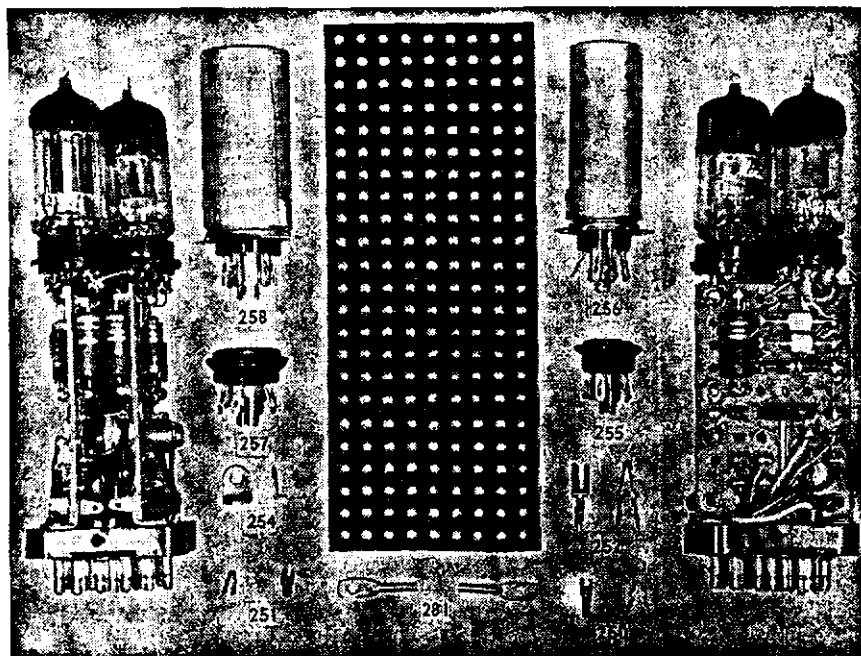
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VHF

David Tanner, VK3AAU
17 Wolseley Street,
Mont Albert, Vic.

Apparently things on the v.h.f. scene have worsened somewhat since last month, as I have very little news to offer. This may be because I left for some holidays the day after the deadline. My apologies to those who sent news which was too late for me to include.

As promised last month, I have a list of achievements for 6 mx. The first column is the number of call areas worked. For example, VK2, VK3, VK4, etc., all count as different call areas. The W.A.S. and A.J.D. are not necessarily confirmed. Once again please send me any omissions or errors.

VK5ZAW	20	A.J.D.
VK5ZDQ	8	
VK5KK	19	A.J.D.
VK5TN	5	
VK5ZCQ	5	
VK5ZK	14	W.A.S.
VK5ZFG	3	
VK5RO	22	A.J.D., VR3
VK5ZPQ	6	W.A.S.
VK5WX	14	
VK5BQ	21	A.J.D., W.A.S.
VK6ZCR	21	A.J.D., W.A.S., KH6
VK5MK	23	A.J.D., W.A.S., KH6, VR2
VK5ZAX	21	A.J.D., W.A.S.
VK7LZ	14	
VK3ALZ	21	XE
VK3CS	19	
VK3ATY	16	KH6
VK3AAU	21	KH6

That is all we have at the moment, but you can now see the sort of information we are after.

Here is some news from South Australia by courtesy of Al 5ZCR. 6 mx was open to VK6 on Sept. 1 during the day, but no contacts were made. Once again the elusive 6RY was heard. This coincides with the 27-day period from the previous opening.

Every night 5ZDR works 3NN on 144 Mc. over a distance of about 180 miles. I believe they have also done it on 50 Mc. too. Mick is further from the Lofty Ranges than anyone else. Al complains that although he himself runs 417As and 1,500 cycle band-pass rx, he can only hear a quarter of the signals that Mick hears. Al is looking for a bigger bottle to replace the 6/40. (I believe there is now a 7/50 on the market.)

John ex-2ZDL is now back in VK5 after a period in Darwin working many JAs. Eric 5ZCQ is having success with a transistorised 50 Mc. converter for mobile, using OC170 and OC171 transistors.

It is very pleasing to note that v.h.f. activity is very much on the improve in VK6. What with the appearance of some new stations and many of the older ones firing up their rigs, signals can be heard on 6 and 2 mx more often. Keep it up chaps and twist a few more arms into stoking up their rigs.

Lance 6ZBK has shifted his QTH again and has lost the advantage of the height of the hills, but we are pleased to see you and Hazel move into your own home. Bob 6BE has just moved into his new home and should soon be back on the air with his 4E27s glowing that lovely colour again. We welcome Alyn 3ZGA back into the fold of VK6 having been transferred over here. Should have some activity stirred up by his presence.

On Friday, 4th August, the Brisbane V.h.f. Group, who seem a pretty live-wire crowd, held a tx hunt from Kangaroo Point at 8 p.m. The hidden tx was located at Moorvale on a tree-clad hill between Rocklea and Moorooka, and access was complicated by a couple parked in "Lovers Lane" and blocking the track. Apparently there were no spoil sports and everyone got by as best they could.

The hunt was organised by 4ZAG and 4ZNS, and among the 24 operators and navigators were 4ZEL, 4ZAX, 4ZBZ, 4ZAA, 4ZDJ, 4ZDA, 4ZDK, 4ZBF, and 4ZDG. Hope I've not missed anyone. 4JO was hampered with car trouble. The evening terminated at the QTH of 4ZNS for tea.

Five 50 Mc. mobiles, 4ZAX, 4ZBH, 4ZBL, 4ZEL and 4ZBZ entered in a car rally to Tambora Mountain and Beaudesert on Sunday, 6th August. A ton of fun was had by all, the highlight of the day being the 40-mile mobile to mobile QSO with 4ZBF and 4ZCT on Mt. Glorious with 5 x 9 signals both ways.

The group separated for home after a barbecue at McLeans Bridge on the Beaudesert Road.

The last meeting of the West Australian V.h.f. Group was well attended and quite lengthy discussions on some matters resulted. We were favoured by a film as our evening wound up and Roy 6RY dished out a cup of coffee.

Remember the next VK6 V.h.f. Group meeting will be on Monday 23rd Oct., and will be held in the Amenities Room at D.C.A. workshops, Guildford Road, Mt. Lawley. Interstate visitors are particularly welcome.

DX on 50 Mc. seems as though it is just around the corner. HLKA has been heard on quite a number of occasions and also those strange signals which are emitted from the Marian Islands.

We must welcome John 6ZAG and Vic 6ZCM to this band. John has been battling with his

4E27 for quite a while now, but is able to report that he can now melt the insulation around his final tank. Vic only received his call sign very recently and was on the air the same night. However, his signal employing frequency modulation was a problem to many.

Regular stations on 50 Mc. are 6ZCK, 8ZDR, 6BV, 6HK, 6ZCB, 6ZBC, 6ZAW, 6VK, 6DI, 6ZAA, 3ZGA, 6ZDS, and 6RY.

Very pleased to hear you on v.f.o. Phil 6ZAW and what about yours, Peter 6ZDR? I believe you only want a few hours to do the job.

144 Mc. is coming to life more now, but still has a long way to go. The best fox hunt was won by Alyn 3ZGA assisted by Len 6ZCS and was located on Green-Mount Hill.

That's all for this time chaps, next month things will be back to normal again we hope. 73, 3AAU.

W.I.A. DXCC MEMBERSHIP

Listed below is the complete membership. Asterisk denotes members whose credits have been increased by the submission of additional confirmations since 1/9/60. The first column after the call sign denotes the certificate number and the next the number of countries confirmed.

PHONE	
*VK6RU	2 256
*VK5AB	45 256
*VK6MK	43 249
*VK3AHO	51 228
*VK4FJ	21 221
VK3WL	14 211
*VK6KW	4 208
VK3ATN	26 204
VK4HR	12 192
*VK4RW	23 184
VK3BZ	3 176
*VK3GB	50 171
VK3EE	10 163
VK9DB	31 161
VK4WF	16 160
*VK4DO	20 156
VK3JD	1 155
VK4KS	9 152
VK3LN	11 141
VK3JE	7 140
*VK2AH	41 135
VK6DN	6 126
VK3RT	42 126
VK3XT	22 124
VK4VJ	17 122
VK3ACN	39 120
VK3TE	37 115
*VK3TG	48 115
VK4JP	8 114
*VK7LZ	36 113
*VK3AXR	53 113
VK5HW	38 111
VK5MS	24 109
VK4CB	28 109
VK3WM	29 109
VK4EL	44 108
VK7RX	32 107
*VK2AIA	52 107
VK4NC	35 105
VK9AU	40 104
VK3HO	25 103
VK2VV	46 103
VK2ADT	13 102
VK2AHA	15 102
VK3QJ	19 101
VK5CE	34 101
VK3IG	5 100
VK3GG	18 100
VK5LC	27 100
VK3AUP	30 100
VK3VQ	33 100
VK2AJO	47 100
*VK2AOU	49 100

C.W.	
*VK3KB	10 292
*VK3CX	26 282
*VK4FJ	29 264
*VK3NC	19 246
*VK3FH	15 226
VK3BZ	6 222
*VK4HR	8 216
*VK3RU	18 215
*VK3XU	48 213
*VK7LZ	17 212
*VK3YL	39 211
*VK3XK	41 204
VK5BY	45 202
*VK5RX	23 195
VK2EO	2 191
*VK4DO	20 191
VK4EL	9 175
*VK4SD	52 172
VK5BO	33 171
*VK3RJ	42 171
*VK3XO	43 168
VK3CN	1 163
*VK4RW	47 162
*VK3ARX	68 158
VK2GW	16 151
VK6SA	28 150
VK3JE	21 148
VK4QL	36 146
*VK2OW	58 146
VK5JT	54 144
VK3VW	4 143
VK3QL	5 142
VK3XK	30 138
VK3DQ	61 136
VK3ZO	65 136
VK5FH	31 134
*VK3AWP	69 133
VK3JI	25 131
*VK2AHH	62 130
VK2XU	64 129
VK3RP	56 128
VK4HF	11 125
VK3HT	37 124
VK3YD	27 123
VK3EK	5 122
VK3UM	12 120
*VK3AX	68 119
VK3PL	38 117
*VK6KW	40 117
VK2OY	44 115
VK7LJ	24 114
VK4DA	7 113
VK2OI	49 108
VK5KU	63 108
*VK3JF	70 108
VK4RC	13 107
VK2AEZ	35 105
VK7CH	55 105
VK3ARV	59 105
VK3AHH	51 104
VK5BS	67 104
VK2YC	34 103
VK4SS	53 103
VK3PG	46 102
VK2AIR	60 102
VK2OA	32 101
VK3APA	14 101
VK3ZA	57 101
VK7RK	22 100
VK3AHM	50 100

OPEN	
*VK2ACX	6 289
*VK6RU	8 271
*VK4FJ	32 267
*VK6MK	74 253
*VK3NC	77 250
*VK3HG	3 236
VK4HF	7 233
VK3BZ	4 230
*VK3AHO	76 230
*VK3JA	43 229
VK3WL	45 225
*VK7LZ	23 223
VK3XU	61 221
*VK6KW	13 220
VK3JE	12 210
VK3ATN	69 210
*VK4DO	15 207
VK2NS	16 195
VK4RW	52 191
VK9DB	59 182
VK4EL	10 175
*VK2AHH	73 173
VK2DI	2 170
VK3KX	1 167
VK4KS	24 167
VK4WF	40 165
*VK3HL	75 160
VK3DQ	71 152
VK5JT	63 150
VK6GW	48 148
VK2XU	79 144
VK3LW	29 144
VK5FL	26 143
VK3HT	41 141
VK3MC	5 139
*VK2APK	82 138
VK3OP	19 137
VK6DX	42 137
VK6DD	22 136
VK2ADE	28 133
VK3JI	33 131
VK4BG	68 130
VK2AHA	9 128
VK3VQ	46 127
VK2AHM	20 125
VK3PG	47 124
VK3YS	57 121
VK3LC	55 118
VK2CC	62 117
VK2ASW	78 116
VK5NO	78 116
VK6PJ	44 115
VK2ADT	14 113
VK7RX	60 111
VK3HO	38 111
VK3MM	49 111
VK4RC	21 110
VK3ZB	34 110
VK2ZC	25 108
VK3KR	56 107
VK3AHH	64 107
VK3ARV	68 107
VK2YL	11 106
VK3AWN	36 105
VK6WT	58 105
VK2VN	18 104
VK4UL	27 104
VK6PW	50 104
VK3ATR	72 104
VK2HZ	17 103
VK7KB	30 103
VK2TI	37 103
VK3ZA	65 103
VK7KA	31 102
VK4TY	35 102
VK2AFA	70 102
*VK3BG	80 102
*VK5NQ	81 102
VK5HI	51 101
VK2TG	39 100
VK1EG	67 100

It will be seen that during the past year additional submissions for D.X.C.C. credit have been received from individual stations as follows: Vic. 18, N.S.W. 6, Qld. 5, S.A. 3, W.A. 3, Tas. 1, N.G. 1.

Members and intending members need have no qualms about the safe transit of cards if they are carefully packed and addressed on the forward journey. They may be forwarded direct to the Awards Manager and registration fee (2/-) included for return if desired.

ALF KISSICK, VK3KB,
Awards Manager,
1 Macfarland St., Brunswick, N.10, Vic.

50 Mc. W.A.S.			
Call	Cer. Add. No. Cntr.	Call	Cer. Add. No. Cntr.
VK2WJ	13 4	VK6DW	3 1
VK3PFM	22 4	VK3RR	6 1
VK4HR	4 3	VK3HT	7 1
VK3GP	5 3	VK2AEZ	10 1
VK2ABC	8 3	VK3XA	11 1
VK2VW	9 3	VK3GM	12 1
VK5GG	19 3	VK3ACL	14 1
VK5ZAX	20 3	VK3ZD	18 1
VK5ZBL	21 3	VK2HO	17 1
VK4RY	2 2	VK3ZEA	18 1
VK5LC	1 1	VK2WH	15 1

ERRATUM

In Diagram 3 of the Narrow Band F.M. article in September "A.R." C11 is shown twice. Please delete one of the C11 by-passes.

S W L

Maurice Cox, WIA-L3055
Flat 1, 37 Boyd Crescent,
Olympic Village, Heidelberg,
N.23, Victoria.

Hi there gang, how are you all? How's DX this month? Now what can I write about in this first part of the notes? Ah, yes, as from the end of this year you will have new scribes to write this page for you all. The two culprits are Robert Young (not the film star) and Ian Woodman.

They will be doing this page for the next twelve months while I go back to school. So hope you will keep writing to them like you have to me and I am sure they will make a success of the s.w.l. page.

The awards have now been re-written by Eric Trebilcock (thank you Eric) and the VK Contest has also been re-written (by me) and submitted to F.E.

In the VK Contest there will be no overall winner as there are seven sections all told. I am pretty sure this contest could be run annually. More about it later.

VK NEWSREEL

The new office-bearers for the VK3 Group, elected on 25/8/61, are as follows: Mac Hilliard, President; David Fraser and Noell Harrison, Vice-Presidents; Robert Young, Secretary; Ian Woodman, Asst. Secretary and S.w.l. Rep. to Council. The organising committee are the office-bearers.

Construction nights are going to start at long last Ray Price, L3054, has offered his services to the boys and not forgetting Ian Woodman. First night will be 13th October, so all you lads who are keen to construct your own receivers, come along (once again on Friday, 13/10/61, at 8 p.m. in the old Victory Publicity Buildings, 262 Queen Street). These nights will be held on the second Friday of each month. So come one, come all!

E.D. WEEK-END

Five of us went to Ray Price's home at Ferntree Gully and quite some large scores were obtained. I think Rob Young headed us all with 500 or 600 pts.—he stayed up all night. Ray was master of ceremonies, fitting here and there and keeping a watchful eye on us.

We were in a sun room on top of a hill overlooking the main road. I think we enjoyed the scenery too much, otherwise bigger scores may have been obtained. Louise, Ray's XYL, looked after us (food) just as if we were at home; she dished up some really beautiful meals. Our very special thanks to you Louise and also you Ray, for allowing us the use of your QTH. We certainly had a wonderful week-end.

I wonder why I haven't any news from VK2 or VK6? Perhaps I could have some for the page in the Nov. issue. How about it?

TASMANIA

Nev. Fisher is the new correspondent officer for the Group and here is the news from the Apple Isle.

Their last meeting was held on 9/8/61 and was quite a success, even though there were only nine present. Miscellaneous bits of gear and junk were taken along and stock-piled ready for their next meeting when they will have a construction night so as to supply their younger (and therefore poorer) members with something to listen to s.w. Some QSL cards were given to members who did not possess any. They are of a pattern issued by the local Tourist Bureau. Twenty minutes of morse practice and chin-wagging filled in the rest of the evening.

There will be a s.w.l. exhibit with the main W.I.A. exhibit at the forthcoming "Hobbies and Careers Exhibition" being held in the city hall by the J.C's. It is also expected that s.w.l.'s will be represented at the Fox Hunt being held by the Building Fund Committee.

Now a little news from the active members. Richard Rogers, YZAN, is active on 1 mx and up until Nev. bought his Command (6-9) Rx, was getting in a lot of c.w. practice. He also s.w.l.'s on v.h.f. with a t.v. set. He is going to Brisbane for a visit shortly. Mike Jenner, L7007/VK72AV, is s.w.l. on 6 mx (hrd. four VK6s) and is having doubler trouble in his

new h.b. 6 mx tx. Ted Beard is having ant. feeder troubles and his Eddystone 640 has some burnt-out coils. (What the hec have you been doing to burn out the coils, Edward?)

David Berry has wrecked his converter/Command rig and is experimenting on 1 and 2 mx; he has made one contact—crossband duplex. John Dawes at present is using a d.w. b.c. set and is planning a converter. Greg Johnson (a non member) (get him in the W.I.A. you guys) has recently purchased a 3-6 Command (the one Nev. wanted) and after a bit of heater voltage trouble is now raking in the DX. Neville has bought a 6-9 Mc. Command (everyone has a Command, they must be good) which will be his rx for during the week when he'll be in Hobart. It will be used mainly for c.w. practice. By now he will have his ground plane up and is using 50 yds. of 50 ohm co-ax to feed it.

Thanks Nev. for all the doings of the VK7 gang. Very interesting, keep up the good work, see you next month.

CORRESPONDENCE

My thanks to the following listeners who have written to me on their doings: L6021, Peter Drew; L5039, Peter Field; BERS195/L3042, Eric Trebilcock; L2211, Chas. Aberneathy; VK4 s.w.l., Charles Thorpe; L3097, Ian McNab; VK4 s.w.l., Bill Jehn; L2022, Don Grantley; VK4/L2136, Afton Westcott; L3065, Ian Thomas; a new VK3 member, L3106, Howard Burger; L5044, J. Kennedy; and the last is Peter Vernon, of Harbord, VK2 land.

By crikey, UA2AO on s.s.b. in Kalingrad is calling his head off, CQ VK, ZL, 5 x 9 and nobody answers him. I am listening to him as I write these notes.



★
Maurie Cox, WIA-L3055
tuning a Collins 51J4
receiver at the High
Park Receiving Centre
at Kilmore, Vic.
★

Peter Drew obtained a nice total in the R.D. Contest—631, very good. Peter listens to s.w. b.c.; he's a monitor for the Voice of Germany, Swiss S.W.S., Radio Japan and the Voice of Free Korea. On medium wave he tells me that a 1200 GMT on 1190 Kc. every night, Radio Peking booms in, and on 1140 Kc. from 1130 to 1630 GMT one can hear the V.O.A. in the Philippines in various languages.

Peter Field has had some new countries confirmed and has also heard quite a lot of DX. Thanks for the letter Peter, see you later.

From Eric Trebilcock, the following: He spent 14½ hours listening and logging in the R.D. Contest; he scored 500 plus points and logged 200 stations. His scores now are 279 heard and QSLs from 271. FQ8HW Tschad Republic gave him QSL 271 and KHGEDY/Kure Is. gave him heard 279. The KH6 is on 14 c.w. most evenings (yes, and he's also on 14 s.s.b.). Kure Is. is one of the more recent countries named a newly by A.R.R.L. In August he received about 40 QSLs up to 15th. Eric's log entries now total 246,083, so he's creeping nearer to the quarter million mark. Stop Press. Eric is now 272 confirmed, AC5PN of Bhutan is his latest.

Charles Aberneathy. His scores for the DX ladder are going up gradually. Chas. spent 24 hrs. on the R.D. Contest for 800 points; should have scored more, but due to one of his rx's breaking down didn't make the grade. Mary, Charlie's XYL, sat up with him until 4.30 a.m. and kept supplying him with coffee and moral support, both of which he says were very acceptable. He's going to make a 10 and 15 mx converter for the Eddystone.

New associate member from VK4, Bill Jehn, sent me down some loggings of DX he's heard. Bill, how about a description of your gear and antennae in use?

Charles Thorpe has at last received his Oceania Contest Certificate after waiting 12 months. He now posses 16 certificates; apparently he wins all the contests, last being the N.F.D. in VK4.

Ian McNabb heard quite a bit of DX on 20 mx around 11 p.m., but doesn't say what he's heard.

Don Grantley has been conspicuous by his absence; has received quite a few interesting QSL cards of late and is at the moment on three weeks' annual leave and is doing quite a bit of listening. Don scored 522 pts. in the R.D. Contest for six hours' listening.

Ian Thomas, university student, nice lad too, is on four weeks' vacation; lucky guy, but he's got to study for exams. All the very best Ian. If he passes his exams, he will graduate with a B.Sc.

Howard Burger, of Hamilton, Vic., a new associate member, wrote me just before the R.D. Contest wanting to know the details of it. Howard, I am sorry if you didn't get it before that week-end. Hope you logged a big score. Howard used to have a No. 19 set, but now hears all the DX on a recently acquired AR7 and by his description it's pretty good; it has a product detector and works very well on s.s.b. The ant. is a Zepp and in his opinion is better than a doublet.

John Kennedy, of Healesville, Vic., another new s.w.l., wrote me re queries on the QSL Bureau and in three months heard 20 new countries with four confirmed. What gear and ant. are you using John? He hopes to do his A.O.C.P. some day.

Brian L5044 (can't think of his surname) wrote me a short note. His rx is a five-tube

hotted up (by 5N0) superhet. and goes like a bomb. His ant. is a window up 10 ft. and it pulls in the DX.

QSL cards received this month: L3055—W8FU, WA2FMC; L3042/BERS195—EQ2AT, W2AYN/EP, HK1QQ, KM6BT, KZ5MQ, LU3HL, O44FM, UA2AG, VU2HS, ZC4PB, FQ8HW, 601MT, EP1AD, MP4BCC and YV1AD (what a guy); L3065—ZL2AAG, W2GKZ, VR6CW and VK6ZCB/P (6 mx); L2022—VS9AAC, VR4CB, KG1CQ and CR5AR; L6021—FK8AU, ZS1KW, VK8AE, W4FQ (7 Mc. phone), W6NZP and KG6AJI; L2211—VK8AE and XE1FB; Bill Jehn—FK8AE and VE5EM; L5039—4S7YL, KH6BPF, TG8BK, 9M2DQ, and G1RY.

DX LADDER

	Countries		Zns.		S.s.b.		S.s.b.	No.
	Conf.	Hrd.	Conf.	Hrd.	Conf.	Hrd.		
E. Trebilcock	272	279	40	57				6950
D. Grantley	81	227	36	20	57			650
A. Westcott	78	157	30	31	92			
M. Hilliard	62	200	26	3	78	172		
M. Cox	32	201	19	3	83	95		
C. Aberneathy	27	56	21			77		
P. Drew	17	163	15	2	57	43		
I. Thomas	16	130	13			36		
T. Heywood	16	90	11			21		
P. Field	13	118	9					
N. Harrison	12	19					159	
D. Jenkin	10	137	7					
N. Fisher	3	36	3			3		
R. Wood	3	3	3			3		
R. Thompson	2	73	2			2		
D. Allen	2	18	2			5		
T. Mills	2	14	2			2		
J. Walker	1	8				1		

So long s.w.l.'s. till next month. Very best of DX, 73 Maurice L3055.

DX

Alan Shawsmith, VK4SS
35 Whynot Street, West End,
Brisbane, Qld.
Phone 4-6526 (7 a.m.-4 p.m.)

As was expected, the bands picked up towards the latter end of this month of August. The 7 Mc. band, after her indifferent display during July, is now really outdoing herself with DX from all continents. For the past week W.A.C. has been easy each twenty-four hours. There is N. and S. America and Asia in the early evenings and Africa and Europe in the mornings.

Twenty metres also has been good but uncertain. During the afternoons the Ws pound in with relentless consistency. As night lengthens the Europeans and Asians begin to show up, in contrast to the emptiness of last month, the band now sounds bright and lively. Although I have not been able to listen at the most opportune times on 21 Mc., reports have it that this band also is starting to let signals through.

The mail bag this month also has been encouraging, so let's get to work.

NEWS AND NOTES

VP4TR shows up on 7 Mc. c.w. around 1030 hrs. GMT.

ZD6RN is working 40 mx also around 2030 GMT. S8/9 sigs here in VK4.

KC6AY from Truk. E.C.I. was on earlier in the month. KC6TM is also reported to be active on 14 Mc. s.s.b.

OY7ML is on s.s.b. 14 Mc. and OY8RJ is also reported active, but no information available as to band or mode.

TUZAL is Lloyd FF4AL with a new prefix. (Can't keep pace with the African scene.)

Cleo EL2V is another now on s.s.b.

K6CQV/K56 is Paul, working in Pago Pago. He is yet another on s.s.b., but I have worked him on c.w. 14 Mc. around 0600 GMT.

9U5DS operates on 21 Mc. a.m./c.w. Has anyone heard or worked him?

FJ3AK is on mostly around 0200 GMT (not very suitable for VK QSOs at this time) on 14 Mc. a.m.

7G1A/TZ was worked by VK5NQ. This is the Mall Rep. Time was 0815 GMT, band 21 Mc. c.w.

FP8BR was also worked on 7 Mc. This time by VK5MY.

I am indebted to Bob K6CQM (Ed. DX'er) for the following notes:

ZD1, Sierra Leone, has now become independent, but it should not affect its DX status. However a new prefix from there is expected shortly.

9G1/Ghana and 7G1/Guinea are now federated.

VSMB, Maldives Is., will be on s.s.b. by the time this reaches your mail box.

CR10AA, Timor. Expedition to this part of the world is definitely off.

TR8 is the new prefix for Gabon.

5U7AH, Niger Rep., should also be heard soon on s.s.b.

MP4TAN, Trucial Oman, should show up here during August and Sept., 7 and 14 Mc. JT, Mongolia. Those who still want this country should keep the ears open for JT1AC on 14 and 21 Mc. c.w., and JT1AF on 21 Mc. s.s.b.

ACTIVITIES

Frank VK2QL starts off the list with the following. 3.5 Mc.: Worked OA4FM and W6; heard KH6 and JA. 7 Mc. c.w. wk'd. on long path: G2LU, G3BKG, G2JQX, and hrd. PA and 3M, CK2AO, VQ2M. 14 Mc. wk'd. OD5CT, SV0WN, FB8XX, HP1IE, VR5RZ; hrd. ZD7SA. Best QSL rec'd. for month was 5N2LKZ.

George VK2QU wk'd. on 14 Mc.: OZ, OK, SP, YU, UC2, PAO, G, F, UA0, W, K, VE, XE, KH6, VP9/P, F88AW, KX6BC, LA7RF/MM (Coral/Sua), JASAM, JASAF, Harola, VK4DO, who is at present rig rebuilding, sends in his list: 7 Mc. c.w. wk'd. KV4CI. 14 Mc. c.w. wk'd.: K, W, KH6, VE, JA, KL7, BV1USA, DJ8LC, DJ7IK, F2N/, H9M9Z, OH2SC, OK1BP, UA0EN, UA1IE, UC2BB, YU3AB. 14 Mc. c.w. hrd.: DL3WY, DL4WQ, DJ1FN, F3KW, G6ZO, H4SKFR, I1FY, LU7AZ, OH30W, OK1QM, SL6BIF, T12WR, UA0KIB, UA0CQ, UA0FD, UA3TY, UA4FE, UA4IE, UA6LI, UB5SS, UC2BW, UP2NM, F2CB/FC. 14 Mc. phone wk'd.: K, W, KH6, JA, KL7EAA, HC4WA, I1ANY, XE3CP. 14 Mc. phone hrd.: LA5HEM, HC1FG, I1AHA.

Yours truly, VK4SS, wk'd. on 7 Mc. c.w.: OH7NF, KR6MF, UA0EW, CO7GH, ZE8MN, VP4TR, ZE1AS, UBSKED, ZD6RN, VQ3HD, KP4AKB, YO9CN, 4X4WF, KZ2TD, YO9CN, UB5ZE.

George VK5RX has given me the following dope on 14 Mc. c.w. Times GMT: 0558 DJ5JB, 1614 DJ5IO, 0603 OK1KS, 0600-0730 G3JQX, G6ZO, G2DC, and 2156 F8VQ. Congrats on receiving the Colonial American Award (No. 171) George.

Ray VK5RK has been inactive most of the month but sends in these few. Time GMT: 14 Mc. only: VE7ZK 0730, W6HWW/4 (Fla.) 0755. QSLs rec'd. EA1GZ, DM3KBM, KA8KW, WA0LC, JZ0PH, and JAS.

Eric BERS195 sends his DX heard: 3.5 Mc. c.w. LA9GG/M. 7 Mc. c.w.: DU7SV, phone VK3LV (mobile), 7 Mc. c.w.: G3RL, G8GM, OH1TN, OH7NF, SL5BH, SM7BEY, UA3LI, UA2AB, SP8HT, VK9GF, VK0TC, W6NKW/MM, YO3AC, 9CN, YU1KI, YU1BK, 14 Mc. c.w.: BV2A, BV1US, DV1SV, FB8XX, FO8AQ (0745Z), HC1JU, HL9KT, HM1AJ, JZ0PH, KC4USV, KH6EDY (Kure), KH6CE, KH6CGA, KX6BC, KX6DF, UC2BL, U8KBA, UP2KBA, UL7KDD, UM8FI, VK9GP, VK8TF (1230Z), VK9RR, VK-0FZ, VK0JB, VK0TC, VK0VQ, VU2NR, ZKI4K, ZKI4R, VR4CV, 5A5TA, JA0WW/MM, VP5BH/MM, LA7RF/M, SM3CAE/MM. 14 Mc. phone: VK9GO, VK9RR, VR4CB, VR1G, XE1GR, VR-2AS. August QSL cards rec'd.: AC5PN, EQ2AT, W2AYN/EP, HC2AC, HK1QJ, KM6BT, KR6LD, KZ5MQ, LU3HL, OA4FN, W80LJ/PK, VU2HS, UA2AG, ZC4PB, VS1DN, ZL3BV, 45TLB, 4X4-HA, 4X4JU, LA6CF/M. With the receipt of AC5PN, Eric now has 272 verifications. Also he informs me that he will soon make his 250,000th log entry. This is staggering, especially when I look at my 6,000 odd QSOs. A mighty effort, Eric, don't slacken now. Make the half million your next in line. Are you sure you've counted the zero digits correctly?

Don L2022 comes up with a good score. 80 mx s.s.b. W0WMA. 40 mx c.w.: DU9WX, JA-1BNX, VP3YG, KH6EPO, VE3CW, KN7NOY, VR2DK. 40 mx s.s.b.: KATMN, K4YFM, WA6-ESW, K8BKC. 20 mx c.w.: UA1CE, DL9PF, KA2AB, UC2BW, YV5AWM, LA6VC, YOSKAA, HM1AJ, UM8KAH, FB8XX. 20 mx s.s.b.: G8PL, KR6QW. 15 mx a.m.: ZS1CD, ZL5, W. 15 mx c.w.: JA31W, VQ8BC, W. Inward QSLs are: VR4CW, ZC4AK, VR2DE, UC2BG, UA0TN, T2ICMF, TP5TP, DU7SV, HP1IE, CN2BK, FK-8AW, VSAAC, KA2CK, VR4CB, KG1CQ, KR6MI.

Jeff VK5NQ comes up with a mighty list including a lot of good ones. 14 Mc. c.w.: UFRN 0314, HK4JC 0326, ZC4WD 0400, UM-8FZ 1408, HC5CN 0411, G16TK 0631, UN1AE 0420, UD6AM 0428, KG1BO 1018, OY7ML 1212, UA2AK 2232, KV4AA 2253, UA1KAE/6 0520, U8KBA 1248, UF8KAF 1400, U8K1A 1450, UP0LA 1218, HS2M 1115, TF3AB 2040, BV2A 1312, UP2KAS 1325, DM6NN 0635, 4X4M 0715, AC5CP 1343, BV3HPT 2358, PJ3AD 0400. 14 Mc. phone: UO5PK* 0523, XE3CP 0538, KA6J1 1545 (Iwo Jima), AW2DR 0655, K6CQV/K56* 0725, G18TK* 0025, HZ1AB* 0525, CT1OR 0650, T12CHV 0620, VR5RZ* 0705, UA2AK 2230, YO-3GK* 0525, VU2PP 1337. 21 Mc. c.w.: ZS5KU 0850, ZS4LC 0804, VU2BK 0930, 7G1A 0842, VQ8BC 0745, KH6EDY 0653 (Kure Is.), 7G1A/TZ 0815 (DX-pedition to Mall Rep.), YA1BW 0420 (QSL via DL8AX). 21 Mc. phone: ZS4PE 0640, T12HK 0310, ZB8JZ 0700, FB9XK 0630, VS9ARC 0700. 7 Mc. c.w.: VK0FZ 0700, OH7NF 1920, VK9GP 0734 (Norfolk Is.), 4X4NJ 1800. Times are GMT. Asterisk denote s.s.b. station. Now Jeff worked a total of 67 countries for the month, and some very good ones. His W.P.X. score is 396 worked and 282 confirmed on c.w.; D.X.C.C. 200 wk'd., 150 confirmed. All these, since Dec. 1959. Nice work Jeff, I'd say you're the busiest DXer in VK at the moment.

Harry VK5MY has been concentrating on 7 Mc. for the past few weeks. He reports wkg. VK0VK, VQ3HD, OH7NF, ZS6BDF, VQ2WR, ZE1AS, ZD6RM, ZB1FA, OA4FM, KV4CI, KP-4AKB, and on Aug. 27 at 1140z he wk'd. W6SOP on 3.5 Mc. The above were all on c.w. (Nice going, Harry, let's have some more next month.—Al.)

John VK5CZ tells me he had a good month on 7 Mc. His best was VP5CH (Grand Turk Is.) on the long path around 0700z.

Bud VK2AQJ writes that he has been busy modifying his BC348 and has not been very active. Nevertheless he hooked a nice one or two in the following: JA7AB 2230, VR5RZ 0410, W1CWV 1125, W2JQZ 1147, W2CSE 1154, VU2NR 1208, HM4AQ 1035, JA8AA 1140. Band 14 Mc. s.s.b. Times are GMT. Bud was second in the world to QSO VR5RZ and the first VK s.s.b. for HM4AQ. QTH of the latter is P.O. Box 3, Irl, South Korea.

Some DX news from the Apple Isle would be appreciated. I hear quite a bit of VK7 activity so how about a line or two on current conditions?

ADDRESSES

VP4TR—Robert Tibbets, 9 New St., Port of Spain, Trinidad.
F2CBIF—Opr. Gilbert. Ajaccio, Corsica.
AC5FN—Via W8PQQ.
EQ2AT—Frank Borsody, USOM/PSD, APO 205, New York.
KZ5MQ—Mike Walsh, Box 1287, Balboa, Canal Zone.
KH6EDY—Via W5QK. (This is a new country, Kure Is.)
ZS7P—P. J. Lamont, C/o. P.O. Mhlambanyati, Swaziland.
PJ3AK—P.O. Box 97, Orangestad, Aruba.
SV0WT—Via I.S.W.L. (This is Crete, a new country).
9U5DS—P.O. Box 1186, Usumbura, Ruanda-Urundi.
ZD7SA—Via W9FJY.
FQ3HK—P.O. Box 108, Brazzaville.
HS2EM—Via K4JEY.
HK2YO—Via W2CTN.
BV2A—Box 101, Taipei.

SUMMARY

Prediction for October. The spring pattern should now be established. This means that 14 Mc. at night should be lively and open to Asia and Europe on the short path. Africa, too, will be heard to better advantage.

On 7 Mc. there will also be an improvement in DX generally, but the summer QRM will soon make the digging out of the weak one impossible.

21 Mc. should begin to play her hand during daylight hours, but it will probably be later before there is much improvement.

The Asian DX Contest is now over for 1961, and as one would imagine the QRM at times rose to unbelievable proportion. Around 1400 hrs. GMT on each night of the big fight the band was open on 7 Mc. to Asia, Europe and North America. These continents, plus VK, were all calling mostly JA. All this cacophony of sound in 85 kc. I wonder how s.s.b. would have made out in the circumstances? There were buzz saw T1, S9ers, and the wall like tremulous notes of a Ham or soul in torment. There were stiff fists of OTs, and the uncertain hand of the novice. There were impossibly slow senders and others unreadably fast. Nevertheless, the QSOs were made and the digits exchanged. My pick for the VK winner is VK5NQ.

So momentous are the political changes in Africa, it is difficult to keep pace with just what is going on. This applies to the new prefix classifications. To help clear the latter up, here is a list, kindly supplied by K6CQM (Ed. of DX'er).

NEW AFRICAN REPUBLICS AND PREFIXES

(Capital City in Parenthesis)	
Mauritania (Nuakchott)	FF7
Senegal (Dakar)	6W8
Mali (Bamako)	FF7 (now 7G1)
Niger (Niamey)	5U7
Tchad (Fort Lamey)	TT8
Somali (Mogadiscio)	6Z1
Ivory Coast (Abidjan)	TU2
Upper Volta (Ouagadougou)	TV8
Togo (Lome)	?? (ex FD4)
Dahomey (Porto Novo)	TD8
Nigeria (Lagos)	5N2
Cameroon (Yaounde)	?? (ex FE8)
Central African Rep. (Bangui)	TL8
Gabon (Libraville)	TR8
Congo (Brazzaville)	TN8
Congo (Leopoldville)	NG5
Madagascar (Tananarive)	5R8
Comoro Is.	PH8
Ruanda-Ruandi (Usumbura)	9U5
Guinea (Conakry)	7G1

Rumour has it that one of the local DX boys, arriving home high-as-a-kite one night recently, knocked over the empty milk bottle and spilt a lot of small change on the porch while fumbling for the door key. He decided to gather it up in the morning. What do you think he found when he opened his door first thing? 27 bottles of milk!

My thanks to all the above contributors, whose efforts make my job a lot easier. Let's hear from a few more of you. 73, Al VK4SS.



VK5RX QUALIFIES FOR CERTIFICATE HUNTERS' CLUB

West Mitcham Radio Amateur, George Luxon, VK5RX, has become the first South Aussie to gain the gold-printed award of the Certificate Hunters' Club. He has spent 33 years qualifying for the award, only to be beaten by a Queenslander by a few weeks from being Australia's first holder. He has made radio contact with 253 countries, but only 230 have been confirmed. George, a P.M.G. technician, still uses Morse when working from his home at Belair Road, West Mitcham—the house with the big radio antenna!

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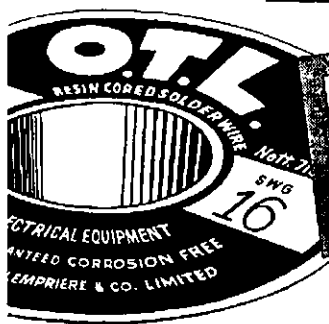


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PREDICTION CHART, OCT. '61

Mc.	E. AUSTRALIA — W. EUROPE S.R.												Mc.
0	2	4	6	8	10	12	14	16	18	20	22	24	24
45	GMT												45
28	-----												28
21	-----												21
14	-----												14
7	-----												7
0	E. AUSTRALIA — W. EUROPE L.R.												0
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28	-----												28
21	-----												21
14	-----												14
7	-----												7
0	E. AUSTRALIA — MEDITERRANEAN												0
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14	-----												14
7	-----												7
0	E. AUSTRALIA — N.W. U.S.A.												0
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14	-----												14
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0	E. AUSTRALIA — N.E. U.S.A. S.R.												0
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0	E. AUSTRALIA — N.E. U.S.A. L.R.												0
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0	E. AUSTRALIA — CENTRAL AMERICA												0
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21	-----												21
14	-----												14
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0	E. AUSTRALIA — S. AFRICA												0
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0	E. AUSTRALIA — FAR EAST												0
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0	W. AUSTRALIA — W. EUROPE												0
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0	W. AUSTRALIA — S. AFRICA												0
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0	W. AUSTRALIA — FAR EAST												0
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NOTES

FEDERAL QSL BUREAU

Bill Hanson, ex-VK0BH, has had his cards printed and these will be distributed to approx. 400 stations during September and October. Bill is now en route to 9M2 for a two-year "spell" with the VK Armed Forces.

Ray LASHEM, operator on the T/T Beaumont, and who met many VK3 Hams at the Collins Exhibition at South Melbourne, was again at Geelong (Sept. 7/8). The ship stayed only 24 hours this trip so Ray was unable to get to Melbourne. He sends his good wishes and thanks to all VK Hams for their kindness to him. It will be his last trip on this vessel.

The T.O.P.S. is staging an 80 metre activity contest from 1200z Dec. 16 to 1200z Dec. 17. This is the last attempt at holding this contest unless more activity is evident. It is open to all Hams.

Heard on 14060 kc. BY1PK giving QTH as Peking and name Liang. Gave QSL address as Box 427, Peking, and only QSOed UA stations.

—Ray Jones, VK3RJ, Manager.

NEW SOUTH WALES

The August general meeting of the Division saw a disappointing attendance, more especially since a most interesting lecture was scheduled for the evening. Mr. Harry Edwards, of the University of N.S.W., gave an absorbing discourse on the many types of antennae which have been designed over the years, giving their characteristics and in many cases their shortcomings. Many questions were asked of the lecturer, indicating the interest taken in his subject. The President, Bill 2YB, called on the Noel, Noel 2AHH, to propose the vote of thanks.

Owing to the lack of a quorum, no business was conducted, but a discussion was held on several subjects of Divisional interest.

The mid-monthly meetings, which the Division has been conducting for some time, for the benefit and instruction of members, are to come to an end. The last of these will have been held in September. It will be realised that the task of arranging such functions as these is an onerous one, and we feel that Harold 2AAH is to be complimented on the fare that he has provided during the past.

TAPED LECTURES

All clubs and groups are requested to avail themselves of this free service, only return postage for the tape is required, and use this fine collection of tapes which Harold has organised for your benefit.

We would bring to mind the following tapes: Remote Control and Supervisory Equipment, Aircraft Navigational Aids, V.h.f. Omni-Range, all made by Peter Griffin, of D.C.A.

If you are doubtful of the nature of these tapes, they are all tapes made as a result of monthly meeting lectures. A line dropped to the Education Officer will describe their contents.

HUNTER BRANCH

Well, how did you enjoy the Convention? Now, after seeing all those nice mobile rigs, haven't you decided to build one for yourself? I have! I've been threatening for many moons to get some mobile gear going and now I'm finally convinced that it must be so for next year's "do". Just watch me. Did I hear someone say, "What about the AT3?" Anyway, I'm sure that all those who did manage to get along enjoyed themselves, and to those who were not there, think what you missed!

The last meeting, by the way, was again very well attended, no doubt because of the draw-card. Yes, our old Duck Talk friend, Leo 2AC was there to describe an improved method of generating s.s.b. It seems to me that Leo admits to knowing a great deal less about maths, and physics than is really the case because some of the zero swapping that filled the board really had us all guessing. Despite all this, the answers always came out correctly. Those who pretend to be exponents of the gentle art of s.s.b. no doubt benefitted greatly from what was said and lectures such as this one do a great deal of good for the

hobby. Congrats. on a job well done, Leo. The night weather on this occasion was hardly any sort of reward, except for real ducks!

Twenty-three members and ten associates were present, among them quite a few faces we have not seen for some time. Special welcome in this department to 2VU, 2ANU, 2AHA, 2AGD, 2ZSC and Kev Woods, our new associate. At the conclusion of the meeting, a certain gent with a broad north country accent found himself unable to distinguish through his rain bespattered spectacles the registration number on a certain Fiat parked at the rear of the building. I might mention it was the only one there, but Shannon, to whom I refer, decided to stand in the rain and bellow, as only he knows how. This mournful note was sufficiently strong to reach the sheltering crew two hundred yards away. Yes, we rescued him.

At long last, those who are in charge of the call sign register have rewarded impatient members Gordon, Ian and David with said call signs. Gordon becomes 2ZSG (you'll notice he's in reverse), Ian is 2AJF (I suppose he should be thankful to get one initial letter and an Anglicised version of the other), and David—you'll never guess, I wrote your call sign on a piece of paper and promptly lost it! Still this is better than getting it wrong, I suppose. David tells me he has been on with borrowed gear; of Gordon I have no news, and Ian has got away to a good start.

I don't think any of these chaps had a shot at the R.D. Contest, but from what I could hear, most of the local boys had a go and Harold 2AHA, as usual, managed to get a good score. I haven't forgotten Chris 2PZ, Geoff 2VU or Lionel 2CS, and there are no doubt quite a few others who I did not hear.

The mystery of the mighty signal reports given by Jim 2AHT is solved. Apparently this man has a two-stage pre-selector in front of the H.R.O. and according to authentic reports it kicks the signal along no end.

Ron 2ASJ has a fine QTH at Stockton with a good view of the ocean and it was the scene of a gathering of some of the boys a few weeks back. Object, to get Ron's 20 mx beam back into working order. Result, object achieved. Harold 2AHA dreamed up this scheme and those there to assist him were Varley 2SF, Harry 2AFA, Norm 2ANA, Stuart 2AYF, Tony, Sid, Wal and yours truly. It would be true to say we all had a good time and our thanks to Mrs. Stuart who dispensed much appreciated refreshments. Never have I seen so much activity in one day. The suggestion was made that the construction crew do the rounds and then we'd all have beams. By the way, have you ever tried to work a foot key? Then go to Ron's some day and have yourself a lesson. It's not so easy as you may think.

By this time you all should know how to improve the performance of your rx and if you want to learn more about what people build and whether or not it works, then come along to the next meeting as well. This will take the form of a "do-it-yourself" night and you are assured of a good time and the chance for a look at some more interesting gear. Don't be superstitious, even though it is Friday 13th. The usual meeting place, Newcastle University College, Tighes Hill, is where to go.

I am not making the admission that I arise early enough to hear them, but I am informed

OBITUARY

TED JENKINS, VK3QK

It is with deep regret that the Federal Executive records the passing of Ted Jenkins, VK3QK, on 9th August, 1961, after a short illness.

Ted, who was particularly well known in DX circles throughout the world, was active as an Amateur for over 20 years from his home in Elwood and also from his holiday home at Churchill Island in Western Port Bay.

As a result of an accident in his teens, his Radio Amateur activity provided that contact with others he was otherwise denied by this misfortune. His cheerful disposition and readiness at any time for a "chin-wag" endeared him to all who knew and visited him.

In the late forties, he served for several years as Federal Contest Manager, and was one of those responsible for formulating the rules of the Remembrance Day Contest and the National Field Day Contest.

He will be sadly missed by his many friends outside of Amateur Radio as well as those he contacted over the air.

Our deepest sympathy is extended to his father and relations and to his life-long companion, Sister Campbell.

that the Goons may now also be heard on 80 in the mornings. So that's what Mr. Rose was doing on that little girl's t.v. Bob 2AQR is a movie mmm as well you know and I have it from a reliable source that he is having a cinemascopic attachment put on the camera. The spy tells me that this is for self portraits. Well, ta ta for now and don't forget the 13th. You'll bring your rabbit's foot, won't you. 73, 2AKX.

BLUE MOUNTAINS SECTION

The August monthly meeting was held at Lawson. Fourteen members attended and visitors (2ZTM and 3AFL) were made welcome.

The date for the Blue Mountains Field Day has been fixed for 5th November at Lawson Swimming Pool. The programme consists of hidden tx hunts, lucky dips and other competitions for all. Look in the Bulletin for details.

Divisional councillor, Tim 2ZTM, dropped in on his way through to Newnes Junction. Tim outlined the latest developments regarding the new Divisional building at Acheson Street, and it is expected to be finished some time in the new year. It appears that there is a lot of disposal equipment in the way of progress, so chaps buy up disposals for tomorrow and make way for today's building. Sid 2AVK and Stan 3AFL picked the right night this time, nice meeting you Stan after hearing so much of you on Sid's rig.

My spies tell me that Jack Ferris is putting up a new antenna, also Noel Walker is building a new rx and Ray Watts from Mt. Druitt is looking for a 2 mx rx. So, with a little more encouragement perhaps we may hear some more QRM. Col 2AQU is on 144 and by the time these notes hit the stands, Col should be receiving on 2 mx. Tx is 522 modified, the xtal coming out at 147 odd, rx is xtal locked converter and an eleven element yagi.

Ken 2AVN, Norm 2QA and yours truly are getting set for 144 and 7 Mc. mobile, for the bush frs and C.D.E. communications. Dave 2NK and Wal 2MZ are already in business and Wal being the ring leader, quite a few nights have been spent at Wal's place for constructional advice. Some 6060s and CG10 xtal diodes were made available to the club and should prove useful around the shack.

Best of luck to Bob 2ASZ, who I heard putting up a big score in the R.D. Contest. It appears that everybody in the club put in the necessary log. Jack 2ADF is going on holidays next month and is now putting his week-ends in on his car and leaving radio behind and heading for the sticks. Dave 2NK is giving a Civil Defence Lecture on Communications shortly and at present a car load of members will be present at Lawson to cheer him on. 73, 2ADA.

CENTRAL COAST ZONE

Preparations are under way to make the November Field Day on Gosford Waterfront another enjoyable outing for Hams from far and wide. Perhaps some of the new 2 mx men will be taking part in the tx hunts this year. John 2ZJT, Chuck 2NI, Major 2RU, Doug 2ASA and Bob 2IN are the active 144 men at present, with the occasional appearance of your scribe 2QN. Two of our members are operating with "two-pint pots" in the co-ax line and so far this appears to cut out t.v.i. The dimensions for this tuned cavity filter are given in a recent "QST". These models are constructed from g.i. downpipe.

Alec 2AAG is investigating the virtues of g.g. operation in 811s with some success. He hopes to have his new house at Kulnura (call 2AAK) completed by December. His home in the mountains is just the place for quiet reception, good DX, orange trees and stray wallabies. Ken 2AFH and Frank 2AFJ will shortly be on two mx. Reg 2AI has made more trips to VK3 than I can keep count of, including visits to Broken Hill, Wangaratta, Albury and Wagga. Gosford members were pleased to hear Ernie 2EH and Phil 5NN recently from Los Angeles via WA6MFY (Martin) on sideband. We should see him back in Gosford soon after a trip to JA land.

Remember Wednesday, 11th October—Gosford High School Science Exhibition, from 6 to 11 p.m. 2AFY, the Gosford Radio Club station, will be operating on 40 and 80 mx. Experiments with a l.c. by the writer have brought forth some interesting results, chiefly on preventing flat-topping and taking up the normal bandwidth for the s.s.b. signal.

S.W.I. GROUP

We missed the press last month owing to a slight error, but here we are again. There are a number of interstate orders to hand for the AR7 manuals, but due to stencil problems there is a slight delay in the production of the second batch, but all orders will be satisfied as soon as possible.

"IAN MACMILLAN" AMATEUR EQUIPMENT

We've been very busy sending out catalogues for our new range of Amateur Transmitters and Kits, and consider the response to be very encouraging.

Further to this, we'd like you to note that everyone who has received a catalogue is on the mailing list for additions, and alterations, and will receive these as a matter of course.

Now to business: here is a price list for some of our present range of equipment:

TX150 Transmitter Kit .. £60/4/6
As above, less VFO £49/8/6
TX75A Transmitter Kit .. £51/3/9
As above, less VFO £40/7/9
TX75B Transmitter Kit .. £53/8/9
As above, less VFO £42/3/2

Complete set sheet metal for TX150/75, including knobs, printed front panel, rubber feet, etc. £15/6/0

Cabinet and Chassis complete, but undrilled £10/2/2

P.A. Cage, suit any final, perforated steel, plated £1/8/10

For full details of these and other equipment, send now for our free descriptive catalogue.

NEW EQUIPMENT— THE "UNIMOD"

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For use with a crystal microphone, the "Unimod" produces constant high level modulation without splatter.

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We would like to draw members' attention to the fact that VK2 s.w.l. numbers are NOT issued at the time of joining the Division, unless a covering letter requesting a number is included with the application.

Next month we hope to devote this space to details of members' gear and activities, if such information is forthcoming from you chaps.—Doug L2215.

BOORAGUL HIGH SCHOOL RADIO CLUB

Good news first, Ian Forrest, a senior member of our club, has received his full call sign, 2AJF. I know he would appreciate a call, so if you hear him please give him a shout.

On Friday, 11th August, Bob 2IN organised an Education Week hook-up in which the school station and several others took part. Those in the net were from Queensland, Victoria and the Capital Territory as well as N.S.W. We were fortunate that conditions were good and we all had a good time. Sue Saunders and Ian McKinnon represented Booragul and the radio club members did the "studio" management.

The club has been promised some more equipment by the W.I.A. Disposals Committee and you may be sure that it will be put to good use. 73, Bruce, for 2ATZ.

ALBURY RADIO CLUB

Recently the club took in several new members, all of whom are exhibiting keen interest in club activities. On June 9 the W.I.A. Correspondence Course was begun under the tutelage of Don 2RS, and the club hopes to prepare these fellows for their licence by early 1962. Morse practice is also available to them each night.

Meetings of the club are at present being held in Don's shack and contacts on the bands are frequently made on meeting nights.

Geoff Amy recently received news of passing the examination for his Limited licence, but no call sign allocated as yet. At the present time Geoff is busily engaged building his rx.

The office-bearers of the club are: President, Herb 2QD; Secretary, Don 2RS; Treasurer, Alf Bullock.

VICTORIA

Because the Radio Theatre is not available during term vacations, the September meeting was held a week earlier than usual. Perhaps this may be the reason for the poor attendance, however those who did come heard a very informative lecture by Jack 3VZ on the art, science and trickery of 80 mx tx hunting. After covering the technical and practical aspects of loop construction, sense indication, "sniffers" and rx requirements, Jack, with the assistance of the other huntsmen present, reminisced about some of the outstanding hunts of recent years. There was the baby in the pram trick, the bend in the river near Warandayte flasco, and many others culminating in the microwatt tx swindle perpetrated by the lecturer himself at the last outing.

Pieces of equipment on display were described by their proud owners. David 3ADW, Alf 3IE, Michael 3ZCZ, Michael 3ZEC, Keith 3YQ and Jack himself. Syd 3ASC drew the maps with unsuspected skill. Judging by the questions asked and the notes taken, there will be some new starters in future. Jack pointed out that this sport does not require a licence except for the one who hides the tx, therefore associate members may take part. It is not necessary to have a tx or expensive gear. If you have a car, an 80 mx rx, such as a converter for the car radio, or a Command rx and the normal amount of Ham ingenuity, you can enjoy a phase of Amateur Radio which is quite different from the usual activities and take the family for a social outing as well. This talk was interesting and not a little amusing. Thanks Jack and all who helped.

The President welcomed Rolf Haggblom, an ex-OH who is now living at Altona and operates mainly on 7 Mc. c.w. with the call 3AOF.

At the next meeting on the first Wednesday in October, George 3AHN will give a talk with the intriguing title "The Other Side of Photography." He will also screen two films, one concerning the use of high speed photography to study rapid movement such as relay contact bounce and picture tube implosions, and the other about lens manufacture. Many Amateurs are also involved in photography or astronomy these days so come along to the Radio Theatre, Royal Melbourne Institute of Technology to hear George's lecture. It will be good.—3AEL.

SOUTH WESTERN ZONE

Conditions have been in and out over the last few weeks; having received no notes, the doings recorded are only local. One strange signal heard on 7 Mc. band signing 3NA in

QSO with 3FX, also heard Dr. later giving the c.w. a go, not so long ago Dr. was telling me he was too busy—things must be easing up a bit. John 3AGD and Kevin 3AKR have been over to VK6 for a conference on Bush Fire Radio. They had portables but have not heard how they went.

This looks like stealing David's thunder, but could anybody tell me why the 2 mx stations in the scrambles come on at 1945 and disappear at 2015? It sounds as if the Iron Curtain rises at 1945 and comes down as soon as the scramble is over. Plenty of sigs during the scramble, but before and after silence reigns supreme—and how!

Six mx is very lively here with two new stations on the band—Wally 3UT and Lindsay 3ZKL, a new Ham. Welcome to the ranks Lindsay, your modulation really shows some of the older chaps how it is done. 3UT, the triode king, after telling us all about the wasted power by using screens in a tube, tells all and sundry he is using a 7C5 as the final, running 10 watts, as the final in the 6 mx rig. Wally, what a waste of power, why not try a 7193 and leave the wasteful tube to the no-hopers.

Congrats. go to Bill 3ZFG who will have lost the Z with a brand new call he is waiting for. T.v.i. just about conquered here with the 2 mx rig, 80w., get that 8 Mc. rock off the fundamental and make it overtone—easy when you know how. All I want now is a few beams south west.—73, 3ANQ.

MOORABBIN AND DISTRICT RADIO CLUB

Since last writing notes for "A.R." final arrangements have been made for the Club to operate portable under their call sign of 3APC/P on the week-end of October 21 and 22 at Clifford Park, near Croydon, Vic., in connection with the Scouts Jamboree-on-the-Air.

20, 40 and 80 mx as well as 2 mx operation will be attempted and we would be very grateful to as many Amateurs as possible throughout Australia to contact us on that week-end. Twenty and 80 mx will be operated back to back in a marquee near the scene of most of the Scout activities, and will be manned by Bob 3NZ, Arthur 3AWO, Ken 3ACS and other members. Forty and 2 mx operation is envisaged from a high knoll in the grounds where the arch was erected for the late World Jamboree a little farther away from general activities, and will be manned by Alf 3LC, Harold 3AFQ, Peter 3APD and other members. It will be interesting to see how we get out on 2 mx and I must urge the v.h.f. boys to keep their beams pointed towards Croydon. Operation will commence on Saturday morning and go through until Sunday afternoon, that is, Sat. Oct. 21 and Sunday Oct. 22.

As well as the Jamboree-on-the-Air, this gathering at Clifford Park, where there will be some 500 senior Scouts camped, is designated "The Melbourne Gathering" and is a yearly affair. The Scouts compete among themselves and are taught many interesting Scouting phenomena such as canoeing, archery, rock climbing, first aid, and this year a special obstacle event is being staged. Look out for 3APC/Portable boys! 73, 3LC.

QUEENSLAND

How did you get on in the R.D. Contest? I hope you forwarded your qualifying log to do the right thing for your Division. The most interesting item I have to report is that on Friday, 11th August, we had a full Council of 12 members meeting at my QTH for the usual monthly meeting. Quite a lot of business was handled and one of these days I'll be able to report that all business was completed. Secretary Bill 4WS has a growing pile of correspondence (we have obtained for him a nice new satchel), which would have taken most of the night to read completely and which was dealt with. Treasurer Keith 4DG had his eagle eye roving about, but nobody was game to show any money. Keith is going to be the tightest treasurer I've known for some time.

Council approved "Ionospheric Predictions and Theory" for our October meeting and "Radio Propagation and Recent Research" for November, so arrangements will be completed for that as soon as possible.

There is a proposal afoot to dispose of equipment that is not earning its keep in order to buy equipment that could be used by country branches. This will not be done overnight, so don't start rushing. Discussion took place on "QTC" and by now you will have seen some of the results. Our main aim is to save postage but further improvements may result. In its new form, "QTC" has been accepted for bulk postage registration by the P.M.G. Some of Evan's prospects came good. Tubes should be moving out soon. A quotation for QSL

cards should shortly be accepted by the Tourist Bureau and they should be available before long.

Bill 4WX took ill after this meeting and his doctor took the aforementioned satchel away for nearly a week which gives point to my request in last month's notes for young help for older shoulders. Bill had one of the winter "wogs" and was set back some weeks. But, you know, you can't keep a good man down. The August general meeting at our Elizabeth Street Rooms was held on Friday, 25th, with a final attendance of about 30 members and associates, with 4PR in the chair. We were pleased to have Jim 4HZ and associate Bon Bryant from Central Queensland with us. General business included a formal motion to include the cost of "QTC" in our annual fees. We have to show a charge to get registration. This is only a book entry like "A.R." There were no reports, but a letter was read from the O.I.C. Amberley, inviting members to visit the station on Saturday, October 7, at 2 p.m. (Members will be shown the radio and radar installations. This should be a most interesting afternoon so advise the Secretary 4WX that you are coming.)

The main business of the evening was on how to save someone else's life and, frankly, I'm a bit disappointed that more were not interested. This part of the meeting was in the hands of the State Superintendent of Surf Life Saving Clubs, Mr. J. Dearlove, who had Mr. Doig and Mr. Campbell with him. One of our associates, Paul Rodukoff, gave a commentary on a film he helped make (we had no magnetic sound head) and assisted in other ways. David 4DP was called upon many times to give his opinion. The demonstration was extremely well organised by Mr. Dearlove and was so interesting that many thought the clock had jumped an hour. Discussion had to be brought to a halt at about 9.30 so that members could practice on the four manikins provided. After most of those present had competed, several had been trained previously, a short comedy was shown, and it was time for supper.

David 4DP, in thanking the visitors, as a medical man, complimented them highly on their efficiency and sound training. While supper was on, Bob 4RB and Des Lane watched Nich, Vinee's first harmonic, draw folded paper pellets from a container to decide disposal items. 4VM had a run of luck to get three items.

Readers will be pleased to hear that Steve 4EB has returned to Bundaberg. "Pop" 4SA helped look after him in Brisbane and will have had a northern "holiday" by the time this gets in print. Tom 4PD is assisting Mrs. R. Roberts in disposing of ex-4PN's gear. Ex-Treasurer of the Division, Charles 4NC, sent along some stamps to keep him posted with his QSLs. We remember the good work Charlie did for the Division and also the work done by his daughter Claire, who carried on the position of Outward QSL Officer at the same time.

4JF renewed acquaintance with another ex-VK4 Council member at the Royal Show in the person of Jack Farrel, of 4WJ. Jack was President of the Division some years ago before he left for Quilpie. Congrats. to Al 4SS on his efforts as Editor of the DX notes in this journal. Al is one who keeps the inward and outward QSL Bureau busy handling his cards. This month's unclaimed QSL cards: 4LJ, 4LK, 4MA, 4MD, 4NV, 4MM, 4MV, 4MW.

I'm pleased to report that the T.v.i. Hand-books have been kept in spotless condition. Up to now, not one has been borrowed. Who wanted them? Don't become disheartened if your "CQ" is late—June and July issues are just to hand. "QST" is running on time.

Harry 4HA, who is close enough to seventy, has been on the air since 1895 and in the last two years has worked over 150 countries. Rig is Geloso v.f.o. for 10, 15, 20, 40 mx with 80% in final pi-coupling. Modulator 617, 617 and 42 driver to a pair of 6L6s. Antenna is a Cubical Quad for 10, 15 and 20 mx. For 40 mx Harry uses 33 ft. of wire, end-fed Zepp.

Did VK4 sub-editor work his first s.s.b. contact the "wrong way" round when he contacted 4VJ last month on 14 Mc.?

The Northern Command Radio Club, 4CS, held their regular meeting on 7th August with Brian 4UW in the chair. It was reported that the new concrete base for the mast was ready and perhaps by now the antenna will be up. Members have been kept busy on special courses lately. This club forwards a very interesting newsletter each month. 73, 4PJ.

TOWNSVILLE

R.D. Contest has come and gone and I must say that on the Saturday evening never heard the 14 Mc. band so crowded. As in former years this band at that time has been a wash-out. Claude 4UX did not do so well as last year, while 4BQ and 4PS were heard running up a fair total of QSOs.

August did not bring much of an opening for DX, although it was open towards the West Indies and to Europe, but signals were not too strong. The Ws were in every day but hardly any VE heard.

Apparently most of the locals are still re-building in preparation against t.v.i.; not heard some of them on the band for quite a while. Understand that Bert 4LB sold his rig in preparation to installing a new one; has been seen devouring the adverts. In "A.R." May settle for one of those new tx's that are being advertised in our paper. Very pleasing to again see the manufacturing of Amateur gear in Australia. Hope they keep it up. While Arthur 4FE has healthy sig on 7 Mc. while skip did not favour the Cairns crowd, Claude 4ZY still enjoys a ragchew while Basil 4ZW reports two new members have obtained their tickets and another sits for Morse in October.

When conditions are open it would be a pleasure if some Amateurs on phone would remember the gentlemen's agreement and vacate the c.w. portion of the band.

On August 17 had a short opening on 50 Mc. to Japan and worked nine stations in 35 mins., the band was open. The s.w.'s. informed me it opened the following week but no one was available to take advantage of it. Have for sale, no cost, one unwanted gremlin who bobs up occasionally while I am on 14 Mc., causing my modulation to appear about 100 kc. lower in freq. and is distorted; sounds like an s.s.b. sig but the chaps that check cannot beat a signal against it. Disappears again to bob up weeks after. No visual indication on my meters. 73, 4RW.

SOUTH COAST

The outstanding occurrence of the month was R.D. Contest and participation therein must have been enjoyed by all. During a session of the Kingfishers, a pirate, using the call sign 4WW, flew in. On being requested for his QTH, no more was heard of him for that session—but he re-appeared that evening. Another visit has been paid to 4R's QTH. Stan led the troops and when more of Dell's equipment is unpacked, the rig should be ready to go. At present r.f. has been fed to the final stage. Phil 2TX, portable, was at Coolangatta early in the month on his way to Brisbane, north, west and to the centre of Australia. At time of writing, Phil is at Mt. Isa. Also this way was Kev 2UH and Frances. Meeting them was most enjoyable, even though it was breakfast time—10.30 a.m. A brief visit was paid by Herb 4KM. Here's hoping, Herb, that the next visit will be longer and under more pleasant circumstances.

WIDE BAY AND BURNETT

The branch meeting was held at Torquay on 26th August, where there were quite a few members present. The weather was perfect in the morning, but the wind nearby blew the XYLs off the beach in the afternoon. The meeting was quite a lengthy one, mainly branch matters, and it was climaxed with a sale of equipment brought down by Jim 4HZ and Hughie 4RE. Hughie brought down and disposed of a tx covering 14, 28, 50, 144 Mc.—what a nice job Hughie had made of it too. The club has now its own call sign—4WQ. This is operated at the moment by Eric 4XR for our Saturday afternoon hook-up at 2 p.m. on 7125 kc. Everyone is invited to join, whether a member of the W.B. & B. or not, so how about it fellows? Let's hear you on Saturdays on the hook-up.

Mac 4HD now on s.s.b. using a G5RU antenna for the tx, not for the rx—seeing its a Rascal. Ken Chiverton busy studying for his ticket and building a super-duper rx with an Eddystone dial. Col 4TW was off the air for a while during the drought—as they have no feed out that way, the cows were eating his feed line (ribbon type). Bill Tomlinson still travels to Gympie for his lessons and is re-building 522. Barry 4LN broke down and cried when he found his SX101 and Viking II standing in water in the shack after recent storm. Harry 4Gillim now has a call sign—4ZHG. Congrats. Harry, Bill 4SW now ready for his holidays with mobile and all the antenna silver plated; he's not game to meet any of the boys in case it does a "Ned Kelly". There are five new call signs in Maryborough, but we don't know them as yet; one of the boys up there sent for his call sign but did not enclose the necessary 1 db.—must think they give them away, or was he just keen?

CENTRAL QUEENSLAND

When my news bird was over Central Qld. last month he found out that the membership of the branch was increasing, two new members joined at the July meeting and three were to join at the August meeting when Frank 4ZM was to be guest.

The branch arranged a day out for Sat., 30th July, when four mobiles set out in different

directions to work into base, 4NC. Joe 4LC and Frank 4PN had gear trouble, so just listened to the gang, but all agreed that it was a good day and another was arranged for 5th Aug., when there were a lot of "duck eggs".

4SC is very active on the bands. 4NG still very active on 50 Mc. and can be heard on 9 Mc. over week-ends. 4FN (Funny Noises to you) is active on 3.5, 7 and 14 Mc. and will soon be on 14, 21 and 50 Mc. Frank has a 20w. mobile covering 3.5, 7, and 14 Mc. in his new Holden. Secretary Harold 4DO was recently bitten by a mobile bug, but didn't scratch his Command outfit, which is going well carrying out mobile duty. 4MT has a good mobile covering 7-21 and 50 Mc. 4ER is another with his mobile working well.

CAIRNS

Congrats. to Rick Lake and Bill Gielis on obtaining their Limited certificates. Also congrats. to Basil 4ZW who coached them. David 2ZDK was in Cairns during August for a few days and initiated the local lads into the mysteries of 6 mx. David had his 6 mx mobile and convinced Basil 4ZW that his 4 el. beam was OK. Basil received David from departure until he went onto the range at Kuranda. The Atherton gang are keen on 6 mx. Charlie 4GR and John 4ZAV have got their gear going well but can't get into Cairns at time of writing. Charlie has a T35 going for higher power and by now will have made efforts to bounce a signal into Basil's aerial. 4GR and 4ZAV propose going up to "General Annie," not a beautiful blonde, a 4,000 ft. high peak near Millan Millan, to make sure their signal doesn't get side tracked.

ASHGROVE BOY SCOUTS RADIO CLUB

Heard the club, 4AH, piling up a score in the recent R.D. Contest on phone and c.w. Official op. Bob 4RB, reports that five members of the senior troop are swotting hard to get call signs of their own and have set a target date—six months hence—to capture the coveted "ticket".

Quite a few old-timer Hams have passed through this particular Scout group which, incidentally, is one of the oldest in VK land having been formed in 1908—just one year after Baden Powell founded the movement in England. The lads, however, seem even more proud of the fact that their group is the only one, as yet, in VK to have a Ham station of its own. They are endeavouring to interest other groups in Amateur Radio and see in the annual Jamboree-on-the-Air an excellent medium of achieving this object.

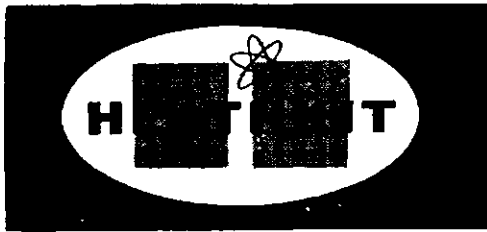
We certainly need more young blood in the game and this is where YOU, fellow-Ham, can help. Remember the Jamboree-on-the-Air week-end, 21st-22nd October, and do your "good deed" on both of those days by taking part in it and inviting a few Scouts from your nearest group to share the mike (or the key) for the occasion.

The official station of the Boy Scouts International Bureau, VEJAM, at Ottawa, will be operating at full blast during the Jamboree-on-the-Air with several tx's (phone and c.w.) on all Ham bands, so keep an ear open for him on 3750, 7210, 14195, 21195 and 28490 kc. The general call will be "CQ Jamboree". If you don't know where the local Scout den is located, just get in touch with 4AH or 4RB, tell them the measurements of your shack—or how many Scouts it will hold, and they will do the rest. If you can't contact over the air you can ring Bob on 38-3923 (home) or 20-8663 (business) or drop a note to his QTH at 2 Garden Gr., Dorrington, W.6, Brisbane.

SOUTH AUSTRALIA

The monthly general meeting of the VK5 Division was held in the clubrooms to the usual capacity roll-up, and took the form of a display of members' home-constructed gear. Some excellent gear was exhibited, in fact some of it looked more like professional gear, and the whole display once again demonstrated just how far Amateur Radio has come over the last few years. This type of night has always attracted both members and exhibitors, the main reason being that all of us like to see just how the other chap builds his gear, besides which such a display stimulates ideas and creates the incentive to go ahead with that half-formed new idea for the piece of equipment to end all equipment.

Council, with its usual sagacity, decided to get the business section of the meeting out of the way before the display commenced, thus catching on the hop those who usually find good reasons to fade away at the end of a lecture or a display, and at the same time dodge the somewhat boring (to them) intricate details of what makes the Division tick. Nothing



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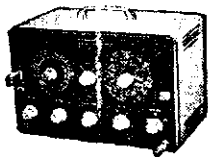
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O-12

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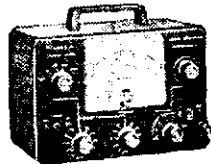
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TS4A

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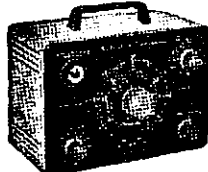
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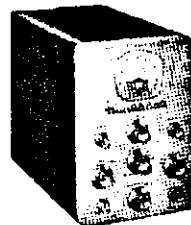
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of any great importance came out of either Federal or general business, although a couple of volunteers were roped in to the Disposals Committee, in the persons of Gil 5GX and Tubby 5NO. QSL cards were then distributed by George 5RX, who reminded those who heard him above the din of conversation that a number of the Z boys who have recently received their full calls should let him know their new call signs as he was holding quite a number of cards for these chaps because he was unaware of their new calls.

"Smoko" was then announced and this gave everybody an opportunity to examine more closely the array of exhibits on the table at the foot of the podium, rostrum, stage, or to be exact, at the feet of the chairman, John 5JC. I have to slip him in somehow, must keep sweet with the boss of Council, a friend at court is not to be sneered at. Some of the things they say about me at Council meetings don't bear repeating. During this closer examination of the gear on display, the inevitable knob spinner and dial twister came into his own and only restrained in his efforts by a suggestion that he cut it out, or else, and from then on a number of these addicts walked around with their hands behind their backs with a look of offended innocence on their own dials.

At this point members returned to their seats (those who were quick enough to find them) and a panel of judges was appointed to make the awards, after each exhibitor had described his own particular piece of gear and dazzled his listeners with science. The afore-mentioned panel of judges (who must remain nameless for their own safety) finally decided on the award winners who were as follows: The Listeners' section was won by Frank Forgie with a rx for mobile use; the Full Member section went to Cyril 5DY for a communications rx, and the V.h.f. section went to Bob 5ZFC for a 50 Mc. tx. To the winners, and the losers, go the congratulations of the Division for a jolly good combined effort toward making the monthly general meeting such a successful and entertaining evening.

Sat across the aisle from Leith 5LG at the meeting and he was having the time of his life carrying on an argument with himself about whichever matter was before the chair. He leaned over to me once and said, "These meetings are not like the old-time ones Pansy, when we used to dodge the chairs flying through the air." Whilst I cannot remember having to dodge any chairs, I must admit that the meetings today are much quieter than some of the old-time ones. In fact I cannot remember being openly insulted for some years!

Our general Secretary, Pat 5US, brought down the house when he announced that among some P.M.G. disposal gear for tender was a public telephone booth which could make a splendid shack for someone. I waited in anticipation for him to suggest that my svelte figure was what he had in mind, but although he has only been on Council for a couple of months he has already absorbed their technique, and simply leered at me.

However John 5JC unconsciously paid me a compliment when he told members that the conditions for future buy and sell nights would be altered, and the auctioneer would stand in a narrow opening on the stage and handle the bids. Get it?—stand in a NARROW opening. I told you earlier it pays to have a friend at court. I'll bet he is tearing up brown paper in a frenzy of rage at his unconscious slip. I thank you, OM, and if my father were here, he would thank you also. Excuse my girlish ripple!

The VK5 Division has two means of announcing the week-end duty roster for all keen and interested W.I.C.E.N. members, the 5WI session handled by Keith 5WI and the local paper column handled by yours truly. Keith and I are tremendously impressed by the painstaking manner that all W.I.C.E.N. members are reading and listening to the said rosters, in fact we would be overcome with our importance to the Division if we had not discovered that we have both been out of step with our rosters. Keith announcing a totally different roster to that which I have been printing in the paper for the past seven weeks. The fact that no turmoil or confusion has been reported as to members being on duty in excess of those required each week-end, speaks volumes for the sagacity and keen attention to duty of all members, to say nothing of the relief to Keith and myself. Ho hum!

A newcomer to the 5WI call-back session recently was Bert 5EQ of Port Pirie. An extra good signal, so much so that all who heard it were commenting on the fact, and Bert was made to feel more than welcome and all will be looking forward to his weekly participation in the call-back.

Talking of the call-back, a number of the regulars were intrigued to hear Len 6LG bob

up the other Sunday and exchange greetings. Nice to hear you OM, and your signal when you first called was extra good although you had taken a bit of a dive when you eventually took your turn. Encore, encore.

Reg 5RR hits the news this month for two reasons. Firstly, because of the many appreciative reports being received from the country centres regarding his 80 mx Sunday morning re-broadcast of 5WI, and secondly, for the fact that he became a grandpappy for the first time. Reg was not allowed visitors for 14 days, mainly out of consideration for the visitors' ears I am told, but he is up and about now, and if you see him first, take off, because if you don't, you will find the conversation being tactfully led round to his grandson Peter. Congratulations Reg, although you can't take all the credit.

Talking about the 5WI re-broadcasting, I see that Tom 5AQ is handling the 14 Mc. side of this excellent set-up for the outlying members. Have heard him faintly at times, but as he is using, more often than not, the gospel according to Comps 5EF, I pass him by with only the barest nod of recognition!

Lance 5XL has apparently given his set-up an injection of monkey glands or something, judging by the signals being received in various places. It is getting monotonous to hear the comments from all that hear him. What's the secret Lance? Buck 5DA, Roy to you, bobbed up again on the 5WI call-back and sounded in good form, although he admitted that he is still taking things easy. Nice to hear you, Buck, good signal, too.

Had my usual sticky beak session this week into the weekly sked between Rex 5DO and Bas. 3ABT and was surprised to hear Doris wheel what sounded like a barrow load of concrete into the shack and dump it on the shack table. Hurriedly grabbing my pencil in anticipation of the best statement ever made by Rex, I was completely deflexed to hear him say, "Thank you for the cup of tea sweetness! Just goes to show, noises over microphones never sound as they seem. Oh, by the way, that XYL who refused to talk to one of her OM's contacts because "that horrid old Pansy might be listening," will be pleased to know that I was. Also I am not old! (Only in experience.—Ed.)

Bernie 5WC heard the other Sunday morning in contact with Keith 5WI giving what was apparently the local weather report. According to him it was "blowing like blithering blazes," although it did not seem to be affecting his signal in any way. Did a good job in the R.D. Contest Bernie? No doubt about you. Brian 5EM stung to action by my recent description of the "Admiral's" maritime standards is about to embark on boat building in a big way. I feel it my duty to point out that before any type of naval uniform can be worn, it must first pass the critical eye of the "Admiral." Jack 5JS heard, but not seen, frantically calling for assistance on 288 Mc. to extricate his car which was down to the axles in mud. Despite a road block to prevent any help, somebody eventually got through, and all is well.

Was walking down Pirie Street the other morning and my sympathy was severely strained to see Rex 5KY pushing a wheelchair in which was seated a bent-up, mis-shapen form of humanity, which to me appeared to be on the brink of leaving this world. Imagine my surprise, however, just as they almost came level with me, to see the afore-mentioned living death jump sprightly from the wheelchair, thank Rex for the ride, and then dash madly up the street at a speed which would have won him a gold medal in any company. Dear oh dear, what some people won't do to get a mention in this column.

Gil 5GX is a new Council member for VK5, replacing George 5GG who resigned owing to pressure of business. Gil, so I am informed, is a school teacher, a very keen v.h.f. man, plus being active on the "square" bands, and is also very interested in the Divisional activities. All of this naturally adds up to the fact that he appears to be good Council material, although of course his name automatically goes in my black book alongside all the other Council names. Joking aside, Gil, welcome to the executive side of Amateur Radio, may your light burn long and bright.

Carl 5SS, Frank 5MZ and their mate Skipper called on the Baronial Hall of Luke 5LL the other day, and many and varied were the topics of conversation. Having seen the speed at which Frank dashed inside at the mere mention of the words "cup of tea," I can well see now just why he breaks legs and arms, etc., etc., with reckless abandon. If there had been anybody in the road he would have gone right through them. Tweet, tweet.

My espionage agent from the S.E. of VK5 came to light this month with some notes on the doings of the local lads, but he apparently took his role of spy so seriously that in an

endeavour to keep the whole matter secret and hush hush, he forgot to sign his name. However, I think that I know who it was, and my thanks go out to him.

Claude 5CH has his new tx on the air at last and is very happy with the results. It has been a long time but worth it, although I will reserve my personal opinion until I have heard it. What about it Claude? Stuart 5MS has built a new modulator and has been having hum trouble. No doubt ere these notes are printed all will be well, and the hum will have departed into the limbo of forgotten things. Blime! Did I write that, I am becoming lyrical. Erg 5KU has been cashing in on the prevailing DX on 40 mx with his well-known brand of c.w. Unless my memory serves me wrong the gliding season is in the offing and Amateur Radio should begin to ease off. Am I right, Erg?

Leo 5GT according to reliable reports is in the process of hotting up an AR7 with much success. Ron 5VH is in the land of the missing at the moment of writing, but should bob up again at any time eager for the fray. The South East is one of the areas that report appreciatively on the reception of the 80 mx 5WI re-broadcast. Take a bow again Grandpa. Dave 5AW at Penola is considerably active on 7 Mc. and according to information received has his gear in working order from 80 mx right up to 1 mx, including his mobile. As a matter of fact, any time that I listen on 40 mx and cannot hear his signal at some time or other, I suspect my rx at once.

Col 5JF has been keeping his schedules with Pete 5CM, but apart from this can be almost classed in the inactive group. Settled down OK in the new job, Col? At least I can always say that I knew you when! Graeme 5XV and Col 5XY heard in nightly schedules on the 7 Mc. band this month. Col was portable somewhere in the Flinders Ranges, and Graeme was at his home QTH, judging by the strength of his signals. Two-way copy was perfect and speaks well for the portable rig of Col's in the crowded 7 Mc. band. Bob 5NW heard in contact with 3AGD mobile near Renmark and Morgan. Gather from the various contacts of 3AGD for a day or so, that a gang of VK3s were on their way to a gathering of E.F.S. somewhere in VK6. Don't know if they passed through our fair city or not, but I went for cover, a party of VK3s loose in our city of churches would be too much for me! David 5AW heard on 7 Mc. mobile out near the Mount Gambler aerodrome. He was on his way to Penola and judging by the stations calling him at various times, his mobile signals cover a large area of VK. I myself heard a VK6, a VK7, a VK4, and a VK3 calling him, to say nothing of sundry VK5s.

No further information on the forthcoming Elizabeth Radio Club participation in the Elizabeth birthday celebrations. However, I have it on good authority that at the moment of writing Ron 5FY is on a visit to the wilds of VK2 and upon his return a waiting world will hear all the important details.

Had my annual contact in the R.D. Contest with Alan 4PS and I seemed to detect a shade less embarrassment in his voice as he called me "Pansy." Probably by 1982, as I contact him from my wheelchair, he will have completely recovered from the awful shock to his system that he received on the fateful day that he came back to the call from 5PS!

Bill 5WW heard on 7 Mc. in contact with a VK3. It's a long time since I have heard William on the air, although it is a long time since he first came on the air. Extra good signal OM. I picked your voice as soon as I heard you, no call sign was necessary, which, if I might be pardoned for saying so, is a little unusual these days.

It is not often that I must confess to being mystified, with my army of spies and agents I can usually get the answer to most things in the world of Amateur Radio, but I am beaten this time. Will someone come to my rescue? What has become of Arch 5XK? The last I heard of him he was fighting a losing fight with the house painters and had just come up for the second time. Arch, please break the silence, all is forgiven, the paint is dry, a light will be burning in the window to welcome you home!

In closing the notes for this month, I must refer, with a touch of bitterness, to the statement heard first on 6 mx, and then repeated with gusto by Keith 5WI over the Sunday broadcast, to the effect that the voice heard from 5PS in the R.D. Contest was not mine, but that I was standing behind the scenes wielding a Simon Legree whip. Cut to the quick by the knowledge that I have been nursing a serpent in my bosom (no coarse remarks please), I can only say in reply, "Tread not upon the corns of Pansy, for fear of the disclosure of the full facts of the forgotten lightning arrester!" 73, 5PS (Pansy to you).

WESTERN AUSTRALIA

Well the most important month of the year has passed and much activity was listened to in the R.D. Contest. What a crowded section of the spectrum during the 24-hour period and what a pity a little more of the same activity is not heard at other times. However, considering the conditions on the high frequency bands, both before and since, Amateurs were certainly fortunate with the excellent openings on all bands between VK6 and the other siders. Now we patiently wait for results and post mortems.

The monthly meeting was held on 15th Aug. at the usual place and was well attended. Heard one of our regular visitors telling a metropolitan member he should put his name in the visitor's column. Nice going Herbie. After business was concluded, 6AG gave his long-postponed lecture on "Glass and its hows and whys. It was well worth waiting for Wally and many of us were much wiser when you finished. The meeting concluded with an auction sale of equipment belonging to 6WH. This was ably conducted by 6JK and bidding was quite animated although some members hesitated too long and lost the race. However, with the help of 6KW, most members carried something home.

Activity on 40 mx was enlivened during the month by the invasion of VK6 by some ten VK3s who prowled around the country with mobile gear, no doubt trying to learn the secret of the S9 plus signals heard in VK3 from 6AG, 6CL, 6KJ, 6LG and others. By the way, since he has become a gentleman of leisure, Len 6LG is heard on the lower bands giving much helpful advice to new members in his own whimsical way.

6RG is gradually overcoming his t.v.l. problems and also DXing very successfully on the higher bands. Heard Bob and 6AG having a discussion one night on t.v.l. It would have made a good tape for the benefit of others, especially with comments from 6WL added. These boys certainly have their problems.

Many strange noises are heard here on the h.f. bands as more operators become interested in s.s.b. However, most of them are not hard to resolve even on my over-worked AR8. Perhaps I should get busy with a tx and start something to fill the bands myself. There are seldom more than the same five or six on 80 mx at night, although there are plenty of contacts with Eastern States and ZLs to be had at present. However, with so many new call signs due on the bands, it may improve.

We are somewhat unfortunate in VK6 in regard to t.v.l. Some of our most consistent operators are between a hundred and two hundred miles from Perth and this is considered a suitable area for t.v. viewers. The only direction there are no t.v.l. problems at present is due west. 6WL at Bunbury is one call sign missing on 80 mx, as he is at Bunbury, approximately 150 miles south of the t.v. tx. Of course any interference must be caused by his being on the air. I wonder if 2ZL could give him any hints?

Well chaps, enough for this month as we must leave some space for 5PS with his entertaining screed and also for the VK3 comments on their VK6 tour.—73, 6ZCK per 6LS.

TASMANIA

The R.D. Contest is over for this year, bar the shouting and the checking of logs. Some observations can be made at this stage however. First, there were fewer VK7 stations taking part this year, probably about 46 to the best of my knowledge. Secondly, the average of the six highest logs from this State will be not as high as formerly. Thirdly, and this is a good point, the c.w. section was very well patronised by our members. Fourthly, congratulations to David 7MS for his fine effort. Fifthly, in my opinion, VK2 is the State to issue a real challenge to us, their effort was considerable. Sixthly, 5NO absolutely astounded us with his great effort. Seventhly, the effort from VK3 appeared to be most disappointing this year, particularly on the c.w. side of the Contest. We would like to see more participation from that Division, even though they are only one point per contact for us. Congrats. to 7EB, ex-7ZAU. Ted obtained

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his full licence early in August and has been heard, particularly on the 40 mx band.

Although I am writing this before the Hobbies Exhibition has taken place, I want to thank all the helpers for their invaluable assistance in getting the exhibit established and operating. Although I cannot mention every one who took part, yet I want to thank publicly, not necessarily in order of merit, Michael 7ZAV who spent his holidays to wait upon the exhibit throughout the duration of the exhibition, to Terry 7CT for the loan of his tx, to Brian 7ZBE for the loan of his h.f. rig, to Ken 7KA for the loan of his National tx, and to many others I cannot name, for instance for the loan of antenna masts, etc.

Jack 7JB is at present constructing a "small" rig, with an 807 in the final, to run about 60w. Jack describes this rig as a semi-portable, and it is designed for operation during the Jamboree-on-the-Air on 21st and 22nd October. Jack intends to use this rig upon completion while he reconstructs his big rig and t.v.l. proofs same.

While on the subject of the Jamboree, remember to take part by having Scouts at your station, give the boys the chance to talk to others of their way of thinking—it is great fun. Also, remember the social function at Linsfield, beginning at 2000 hours on Friday, 6th Oct., admission £1 per head, profits to go to the fund raising committee for our projected club rooms.

Bob 7OM is on the air to a much greater extent these days. He tells me things have eased off a bit at work, so it is good to hear you again Bob. An unusual call sign was heard about the middle of August, namely, 7JD, with ample speech clipping. How about repeating the dose Tiny? 73, 7ZZ.

NORTH WESTERN ZONE

News is rather scarce this month with the usual sporadic activity. Our September Zone meeting was fairly well attended. A second helping of a lecture on s.s.b. was given by Ken 7AI, who certainly knows his subject. Like myself, many were afraid to ask questions, for fear that we said something silly, but I feel sure we gained some real knowledge in a highly mysterious subject. 7XL again showed a fine turn of skill in the role of auctioneer and some classic examples of junk changed hands.

Spent a couple of interesting evenings with 7KS last month. Quite an experience to work familiar voices from a new rig. It's happened at last—David 7MS contracted talker's throat and the rig had to be shut down during the recuperation period. There is a lesson to be learned somewhere here. Saw a couple of the boys in the "game" gleefully discussing a sudden windstorm that swept across us the other night. They were rubbing their hands, counting the number of t.v. aeriels blown down. Wonder why!! Sam 7SM is still collecting rare DX. I must ask him how many countries? I am sure it would be rather surprising.

This Zone has been asked to support a Hobbies Exhibition at Devonport in November with a working exhibit. Looks like a chance to show off our paces, so rally round chaps. Associate Bob Simpson sold us the idea. He doesn't know what it is going to cost him though.

Athol 7LR, a call sign familiar pre-war, is talking of making a come-back to the bands—more QRM. There is much competition in this area in 80 mx signal reports from ZL. Have been forced to instal a secret weapon to maintain prestige. Even got to stage where competitors believe I have told them all the answers; hi. Has anybody a recipe for bringing a Tasmanian tiger out of hibernation. If so we will give 7TT the treatment. T.v. has done some horrible things to Ham Radio. Everywhere one sees Hams busy selling them, repairing them, building them or watching them with the excuse that t.v.l. offers no alternative. And it's happened here—n pity.

Finally, it's a small world. Met XYL 3KU in southern corner of Tassie the other day. Often heard and finally seen. So off and clear until next month. 73, 7MX.

NORTHERN ZONE

During a recent visit to Hobart I was asked if the Northern Zone was still alive, so maybe a few notes would not be amiss and would let the rest of the gang know what we are doing. Twelve members and one prospective member attended the August meeting, which was held at the QTH of yours truly (7ZRJ) at 11 Mayne St., Launceston. The usual business was attended to and members were requested to have a go in the R.D. Contest. Den 7DK has power troubles and is operating on 8w. at present (still seems to get out OKI). Col 7LZ brought along a transistor tape re-

order for our inspection and it replayed a portion of the meeting with Max 7CA at the controls. Very nice but the 50 db. is a bit high for most of us. After the meeting all adjourned to the shack to inspect the partially completed 2 mx rig that I hope to get on the air shortly. Later members were shown some color slides taken on a recent visit to Hobart. The evening concluded with supper as usual.

Last month there was a fair amount of activity on 144 Mc. with 7ZBE and 7ZAI, who were located at Kelso, Northern Tas., on regular skeds with L'ion. Also Peter 7PF contacted 2 mx using a 5 l. beam at Evandale contacted 7ZAO at Lenah Valley, Hobart, and was heard at S8 for about 30 mins. and has received QSL card confirmation. 73, 7ZRJ.

HAMADS

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is the official journal of the Wireless Institute of Australia and was first issued on 1st October, 1933, by authority of the Council of the Victorian Division, the present publishers.

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EDITORIAL



MORSE CODE AND THE LIMITED LICENCE

From time to time the same question comes up: "Why do we have a Morse Code requirement in these days of advanced techniques?"

Ignoring the pros and cons, the Regulations laid down by the International Telecommunication and Radio Conferences are quite clear in this regard concerning stations in the Amateur Service. Regulation 1003 3 (1) states "Any person operating the apparatus in an amateur station must have proved that he is able to transmit, and to receive by ear, texts in Morse Code signals. Administrations concerned may, however, waive this requirement in the case of stations making use exclusively of frequencies above 1,000 (one thousand) Mc." Our authorities, in their wisdom, varied the requirement in respect to 1,000 Mc., in the conditions laid down for our Limited Licence, by making 144 Mc. the frequency limit.

Regulation 1006 5 (1) under Article 42 is also significant. It reads "All the general rules of the Convention and of the present Regulations shall apply to Amateur Stations . . ." Read this in conjunction with Article 45 1: "Radio stations shall be obliged to accept, with absolute priority, distress calls and messages regardless of their origin, to reply in the same manner to such messages, and immediately to take such action in regard thereto as may be required", and we have one logical reason for the Morse Code requirement.

When war commenced in 1939, the Amateur's ability as an operator was very quickly recognised by the various Armed Forces. In the early months of the war, the loading of traffic increased much more rapidly than the facilities to train operators. It was during this time that Amateurs literally came to the rescue and manned watches with the minimum of training required to make them familiar with procedure. They were manning circuits where in most cases, the operator at the other end had passed a course of intensive training where the requirements were much higher than the Amateur Operator's Certificate of Proficiency. He did the job because he had not been content to rest on his laurels after getting his ticket. He lived up to the traditions of the Amateur Service: A service of self training, inter-communications and technical investigations carried on by Amateurs, that is, by duly authorised persons interested in radio technique solely with a personal aim and without pecuniary interest.

Although many sound reasons could be advanced for eliminating the present Morse Code requirement, while existing regulations are in force we are required to abide by them. At the same time, newcomers to our ranks, by maintaining this tradition and becoming fully conversant with all the techniques, will get far greater satisfaction from participating in the Amateur Service and meeting other members on common ground.

W.I.A. FEDERAL EXECUTIVE.

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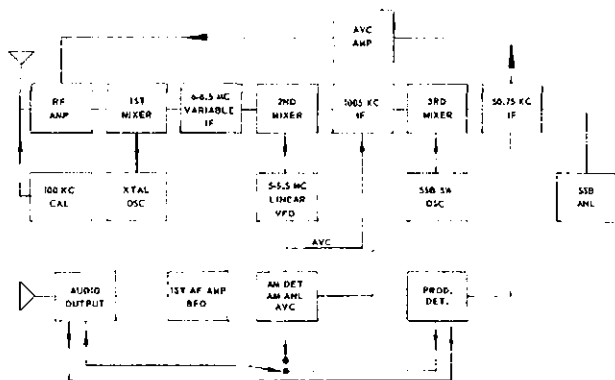
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P.M.G. ANNOUNCES GOVERNMENT AGREEMENT TO R.F.A.R.C. RECOMMENDATIONS

The recommendations of the Radio Frequency Allocation Review Committee have been presented to and accepted in their entirety by the Government, the Postmaster-General, Hon. C. W. Davidson, O.B.E., announced on Thursday, 12th October, 1961.

The Radio Frequency Allocation Review Committee (R.F.A.R.C.) was an Ad Hoc Committee formed in August 1960 by the Postmaster-General to review the allocation of frequency channels for all Australian transmitting services in the light of the results of the Geneva 1959 Conference of the International Telecommunications Union.

Chaired by Professor L. G. Huxley, Professor of Physics, National University, Canberra, the Committee represented the major frequency users, its terms of reference entailing a complete examination of the existing proposed frequency table arising from and prior to the Geneva 1959 Conference of the I.T.U., and the manner by which any further distribution of frequencies could be made in the National interest whilst at the same time endeavouring to meet the requests of all frequency users.

The report of the R.F.A.R.C. was the culmination of twelve months arduous work from August 1960 until its final meeting in May 1961.

Representatives of all the major frequency users, including the Wireless Institute of Australia, enjoyed full rights on the Committee and during the period it sat the Committee overlooked no one and set about providing the best for everyone. As far as the Wireless Institute is concerned, it commends the fine effort put up by this group of people who operated in the National interest, backed by the technical know-how and experience from all sections of the communications services of the Commonwealth of Australia.

Undoubtedly there will always be some who are not satisfied with the outcome of this committee's findings, but these few must be reminded that every Service lost some ground at the expense of the many new Services which appeared as an outcome of Geneva and the injection of these Services brought many new requirements into portions of the frequency spectrum. Every Amateur in Australia can rest assured that the Amateur representative had an equal say with all the other Services, and the Wireless Institute of Australia was very fortunate to have a member of the calibre of Mr. Arthur Tinkler, VK3ZV, on the committee.

The frequency spectrum from 10 Kc. to 40 Gc. was examined and many changes were made throughout these frequencies from those that had been agreed at Geneva. It is not proposed to delve into the report in detail except where it affects the Amateur Service in Australia. The frequencies of the Amateur Service in Australia are shown in the Table in three sections—the frequencies applying in Australia after Atlantic City (1947), the frequencies

agreed for Australia in Geneva (1959), and the recommended frequencies from the findings of the R.F.A.R.C. Footnotes have been appended at the foot of the Table giving more detail on any special conditions applying to a particular frequency band.

As there are several references in the Table to the Amateur Service being a Secondary Service in certain bands, it should be clearly understood what this term implies. Stations in a Secondary Service shall not cause harmful interference to stations of the Primary Service to which frequencies have already been assigned or may be assigned in the future; they cannot claim protection from harmful interference from stations of the Primary Service, but can claim protection from other stations in another Secondary Service who may be assigned the same frequencies.

TABLE OF PROPOSED FREQUENCIES ON NEXT PAGE

In addition to examining the frequency spectrum from 10 Kc. to 40 Gc., the committee made other recommendations to the Minister as an outcome of their deliberations. Two of these additional proposals are of particular interest to the Amateur Service in Australia.

- The first relates to the protection of frequency users in marginal receptional areas. The committee noted that there have been instances where users of properly assigned and used frequencies have been required to change frequency or close down to protect t.v. reception of low signal strength and therefore recommended that the assigning authority be directed to support any user who conforms to the official requirements for his service and placed the onus of satisfactory reception of signals on the individual receiver.
- The second, and more important, recommendation affecting the Amateurs was in relation to the setting up of a similar committee to the R.F.A.R.C. Ad Hoc Committee, to be convened as directed by the P.M.G. to act in the National interest and work in concert with the assigning authority on frequency matters assigned to it by the P.M.G. This new committee was proposed to meet before and after I.T.U. Conferences and to deal with any other matters referred by the Minister.

The position may be summarised as follows. The Amateur Service has gained a few extra frequencies over those allocated at Geneva, and have in addition, saved other frequencies which would not have been international allocations for Amateurs, e.g. the 52-54 Mc. band and the 144-148 Mc. band, which would have moved some time

in the future. As previously mentioned, some frequencies have been lost but the Amateur is not alone in this regard and we are now better off in certain frequencies, e.g. the 7 Mc. band, than our European contemporaries.

There has been some speculation about the compulsory use of single sideband phone techniques by Amateur Stations in their bands after 1970. Let it be said that this committee made no such recommendation in relation to the Amateur Service. They did, however, make a recommendation on the use of single sideband transmissions on frequencies between 1605 Kc. and 30 Mc., but this was an extension of the Geneva recommendation aimed at the Fixed and Maritime Mobile Services which now use or were proposing to use double sideband transmissions. It seems very likely, in any case, that the Amateur Service, by January 1970, for its own convenience, may be primarily using this type of emission.

There are several points which have not been enumerated in the above explanation, but these points will all be covered in detail in the Geneva Story which will be printed and issued to every Australian Amateur.

It must be repeated that although the Government has accepted the proposals of the R.F.A.R.C., the present allocation of frequencies will apply until official notification is received from the Postmaster-General's Department.

W.I.A. FEDERAL EXECUTIVE.

W.I.A. D.X.C.C.

Listed below are the highest twelve members in each section. New members and those whose totals have been amended will also be shown.

PHONE

Call	Cer. C't-	Call	Cer. C't-
	No. ries		No. ries
VK6RU ..	2 256	VK6KW ..	4 206
VK5AB ..	45 256	VK3ATN ..	26 204
VK6MK ..	43 250	VK4HR ..	12 192
VK3AHO ..	51 230	VK4RW ..	23 184
VK4FJ ..	21 221	VK3BZ ..	3 176
VK3WL ..	14 211	VK3GB ..	50 171

New Member:

VK3BM .. 54 101

C.W.

Call	Cer. C't-	Call	Cer. C't-
	No. ries		No. ries
VK3KB ..	10 292	VK4HR ..	8 218
VK3CX ..	26 282	VK6RU ..	18 215
VK4FJ ..	29 264	VK3XU ..	48 213
VK3NC ..	19 246	VK7LZ ..	17 212
VK3FH ..	15 226	VK3YL ..	39 211
VK3BZ ..	6 222	VK9XK ..	41 204

Amendment:

VK3ARX 66 163

OPEN

Call	Cer. C't-	Call	Cer. C't-
	No. ries		No. ries
VK3ACK ..	6 289	VK4HR ..	7 233
VK6RU ..	8 271	VK3AHO ..	76 232
VK4FJ ..	32 267	VK3BZ ..	4 231
VK6MK ..	74 254	VK3JA ..	43 229
VK3NC ..	77 250	VK3WL ..	45 225
VK3HG ..	3 241	VK7LZ ..	23 223

THE VARNEY (G5RV) MULTIBAND ANTENNA

January issue of "A.R."—page 7—carried a brief description of the above antenna which has been in use by quite a number of stations since.

The design is essentially for 14 Mc., being $3/2$ wavelengths at that frequency with the 34 ft. stub acting as a matching section.

Close examination will show that it is not a "multiband" antenna, even though it can be made to accept power on the 80, 40, 15, and 10 metre bands as well as 20, in varying amounts and with widely varying s.w.r.

So that, maybe, a simpler form of the antenna for 80 and 40 metres only, could be evolved, and one which would dispense with an a.t.u., some correspondence with G5RV has produced an alternative design which has not yet been tried in practice.

It seems that an a.t.u. is again necessary for proper functioning of this version also.

It is becoming apparent that an antenna of this nature will operate correctly only on or about the frequency which shows a proper match (s.w.r. near unity) for the co-ax line and in the case of the original G5RV, that frequency is in the 14 Mc. range.

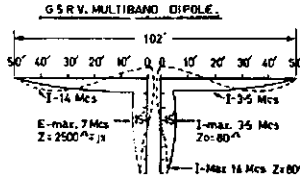


Fig.1. Current distribution on dipole for 35 & 14 Mcs.

Reports on the amended design, published herewith, will be interesting if s.w.r. measurements can be supplied for 3.5 and 7 Mc.

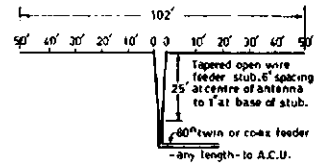
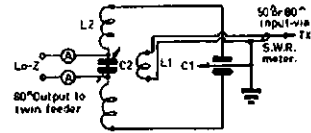


Fig.2. Suggested arrangement for 3.5 & 7 Mcs version.

Two things emerge from these considerations:

- The use of a reflectometer, such as "Monimatch" or "Mickymatch" is essential if one wishes to do any work on any kind of antenna.
- The most useful and probably most efficient wire antenna for multiband operation in restricted space is a dipole centre fed and of not less than quarter wavelength at the lowest frequency, fed by an open-wire line through an a.t.u. In other words, the system should be resonant at the frequency in use.



L1. Switching link-3 turns.
L2. Split coil - 3.5 or 7 Mcs.
C1. 250 pf per section split stator
C2. 250 pf - parallel.
Note: C2 varies output impedance. C1 tunes circuit to resonance. Adjust C1 & C2 for minimum S.W.R. in co-ax line to transmitter.
Fig.3. A.C.U. in use at - G5RV.

For those of us who cannot erect two poles for a flat-top, and still have feeders in the proper place and of correct length, the solution is a single pole and "inverted vee." Even with the ends at fence height, there seems to be no deterioration of performance!

OFFICIAL V.H.F. RECORDS IN AUSTRALIA

50 Mc.—	Date	Miles
VK3ALZ to XE1FU	1/5/59	8,419
VK5KL to W7ACS/KH6	26/8/57	5,355
VK2RU to JA1ANO	—	4,854
VK4NG to JA1AHS	22/1/56	4,145
144 Mc.—		
VK5GL to VK6BO	30/12/51	1,321
VK5QR to VK6BO	9/2/52	1,321
VK3ZCW to VK7LZ	—	512
288 Mc.—		
VK3ALZ to VK7LZ	10/1/60	284
VK5MT/5 to VK5RO/5	13/4/52	109
576 Mc.—		
VK3ANW to VK3AKE	11/12/49	82
2,300 Mc.—		
VK3XA to VK3ANW	18/2/50	9.1

All the above distances have been checked for correctness. Any other Amateurs who have comparable or better figures and wish them to be listed, should send the following details to the Federal Secretary of the W.I.A.
Latitude and longitude of location of both stations at time of contact plus height above sea levels if band used above 300 Mc. Proof of contact in the form of QSL cards or signed declaration.
N.B.—If latitude and longitude not known, sufficient information should be given in some convenient form to enable location to be fixed with an accuracy consistent with the distance worked.

TABLE OF PROPOSED AMATEUR FREQUENCY ALLOCATIONS

Serial	Band Mc.	Australian Table under Atlantic City (1947)	Geneva 1959	R.F.A.R.C. Proposed Australian Table
1	1.8	1.84-1.86*	1.8-2.0 A, F, M, RN	1.8-1.86 RN, a
2	3.5	3.5-3.8 A, F, M	3.5-3.9 A, F, M	3.5-3.7 A
3	7.0	7.0-7.1 A	7.0-7.1 A	7.0-7.1 A
4	14	7.10-7.15 A, B	14.0-14.35 A	7.1-7.15 B, a
5	21	14.0-14.35 A	14.0-14.35 A	14.0-14.35 A
6	27	21.0-21.45 A	21.0-21.45 A	21.0 21.45 A
7	28	26.96-27.23 A, ISM	26.96-27.23 A, ISM	26.96-27.23 A, ISM, F, M
8	50	28.0-30.0 A	28.0-29.7 A	28.0-29.7 A
9	144	50-54 changed to 56-60 A	56-58 A	52-54 A
10	288	144-148 A	144-148 till June '63 then 146-150 A	144.148 A
11	420	288-296 A (tempor.)	No allocation	288-296 A till June 1963
12	576	Not allotted to A	420-450 RL, F, a	420-450 RL, a
13	1215	576-585 A (tempor.)	No allocation	576-585 A
14	2300	1215-1300 A	1215-1300 RL, a	1215-1300 RL, a
15	3300	2300-2450 A	2300-2450 RL, a, f, m	2300-2450 RL, a
16	5650	Not allotted to A	3300-3500 RL, a	3300-3500 RL, a
17	10,000	5650-5850 A	5650-5850 RL, a	5650-5850 RL, a
18	21 Gc.	10-10.5 Gc. A	10-10.5 Gc. RL, a	10-10.5 Gc. RL, a
		21-22 A (tempor'y)	21-22 A	21-22 A

Symbols: Letters in the Table above shown in capital letters mean the Primary Service, while lower case letters mean the Secondary Service.

A means Amateur Service, B means Broadcasting Service, F means Fixed Service, M means Mobile Service, ISM means Industrial, Scientific and Medical Services, RL means the Radiolocation Service, and RN means Radionavigation Service.

The above Table has been shown only to imply what is proposed or exists in Australia unless otherwise noted, and is not intended to infer these conditions apply elsewhere.

Notes: Serial 1—* This was allotted and available for emergency purposes only. Normal Amateur activities were not permitted on this band. Loran RN operates between 1820-1875 Kc. and no harmful interference may be caused to that Service.

Serial 2—The Geneva frequencies here relate to other Region 2 and 3 countries.

Serial 7—The actual world-wide frequencies from Atlantic City were 28-29.7 Mc.

Serial 8—The temporary allocation of 50-52 Mc. will probably be retained until required by the Broadcasting (TV) Service.

Serial 12—This is only an allocation until required by the eventual Service—Broadcasting.

ROSS HULL MEMORIAL V.H.F. CONTEST, 1961-62

The Federal Contest Committee of the Wireless Institute of Australia invites all Australian and Overseas Amateurs and Short Wave Listeners to participate in this annual contest which is held to perpetuate the memory of the late Ross Hull whose interest in v.h.f. did much to advance the art.

A handsome Perpetual Trophy is awarded annually for competition between members of the W.I.A. in Australia and its Territories inscribed with the name and life work of the man whom it honours. The name of the winning member of the W.I.A. each year is also inscribed on the Trophy. In addition, this member will receive a suitably inscribed, framed photograph of the Trophy.

Objects: Amateurs in each VK Call Area will endeavour to contact Amateurs in other Australian Call Areas and Overseas.

Date of Contest: 16th December, 1961, to 14th January, 1962.

Duration: From 0001 hours E.A.S.T. (1401 hours G.M.T.) on 16/12/61 and 15/12/61 respectively, to 2359 hours (1359 G.M.T.) on 14/1/62.

RULES

1. There shall be three main sections to the Contest:

- (a) Transmitting, Open, 50 Mc. and higher.
- (b) Transmitting, Phone, 50 Mc. and higher.
- (c) Receiving, Open, all bands, 50 Mc. and higher.

2. All Australian and Overseas Amateurs may enter for the Contest whether their stations are fixed, portable or mobile.

3. All Amateur v.h.f. bands may be used, but no cross-band operating is permitted, with the exception that the 50-54 Mc. and 56-60 Mc. bands will be considered to be the same band for contacts.

4. Amateurs may enter for any one of the transmitting sections. All contacts must be consecutively numbered in the one number sequence to facilitate checking.

5. Only one contact per band per station is allowed each calendar day.

6. Only one licensed Amateur is permitted to operate any one station under the owner's call sign. Should two or more operate any particular station, each will be considered a contestant and must submit a separate log under his own call sign.

7. Entrants must operate within the terms of their licences.

8. **Cyphers:** Before points may be claimed for a contact, serial numbers must be exchanged and acknowledged. The serial number of 5 or 6 figures will be made up of the RS (telephony) or RST (c.w.) report plus three figures commencing from 001 for the first contact and will increase in value by one for each successive contact. If any contestant reaches 999 he will start again with 001.

9. **Entrants** must be set out as shown in the example, using only one side of the paper. Entries must be postmarked not later than one month after the Contest (i.e. not later than 14/2/62) and addressed to the Federal Contest Committee, W.I.A., Box 851J, G.P.O., Hobart, Tasmania.

10. **Scoring** for all sections will be based on the attached table. Contestants will have to agree between themselves as to the distance between their stations. Such distances must be shown in their log entry in the column usually used for remarks or bonus points.

11. **Logs:** All logs shall be set out as in the example and in addition will carry a front sheet showing the following information:

Name.....Call Sign.....
Address.....Section.....
.....Claimed Score.....

Declaration: I hereby certify that I have operated in accordance with the Rules and Spirit of the Contest.

Signed.....
Date.....

Note: Entries on the front sheet must be clearly shown in block letters.

12. The right is reserved to disqualify any entrant who, during the Contest, has not observed the regulations or who has consistently departed from the accepted code of operating ethics.

13. The ruling of the Federal Contest Committee of the W.I.A. will be final. No dispute will be entered into.

14. **Awards:** Certificates will be awarded to the winners of each section in each VK and Overseas Call Area. The VK contestant who returns the highest score in the transmitting sections and who is a financial member of the W.I.A. will hold the Trophy until the next Ross Hull Contest is decided, and in addition will receive an appropriately inscribed photograph of the Trophy.

GENERAL

A new method of scoring has been evolved from suggestions made by the majority of VK Divisions. Comments on the operation of this new method will be appreciated by the F.C.C. It is suggested that contestants obtain a large scale map of Australia and of their State and mark on these maps the radial distances from their location in accordance with the scoring table.

RECEIVING SECTION

1. Short Wave Listeners in Australia and Overseas may enter for the Contest, but no transmitting station may enter.

2. Contest times and logging of stations on each band are as for the transmitting sections.

3. To count for points, logs will take the same form as for transmitting sections but will omit the serial number received. Logs must show the call sign of the station heard (not the station worked), the serial number sent by it, and the call sign of the station being worked.

Scoring will be on the same basis as for transmitting stations. It is not sufficient to log a station calling CQ.

4. A station heard may be logged only once per calendar day on each band for scoring purposes, but additional reports will be of value to the F.C.C.

5. **Awards:** Certificates will be awarded to the highest scorer in each VK and Overseas Call Area.

SCORING TABLE

Distances Between Stations	50 Mc.	144 Mc.	288 Mc.	576 Mc.	Higher
	Up to 10 miles	1	1	1	1	5
Over 10 and up to 25 miles	1	1	1	2	10
Over 25 and up to 50 miles	1	1	2	10	30
Over 50 and up to 100 miles	4	2	6	20	60
Over 100 and up to 200 miles	10	4	10	30	80
Over 200 and up to 300 miles	20	10	16	40	
Over 300 and up to 500 miles	10	16	30		
Over 500 and up to 1,000 miles ..	2	30	40		
Over 1,000 and up to 5,000 miles ..	10	40			
Greater than 5,000 miles	20	50			

EXAMPLE OF TRANSMITTING LOG

Date/Time	Band	Emission	Call Sign	RST/NR. Sent	RST/NR. Rcvd.	Distance	Points Claim.	Blank

NOTE.—State whether Time is E.A.S.T. or G.M.T.

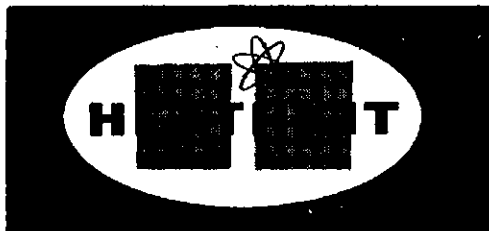
EXAMPLE OF RECEIVING LOG

Date/Time	Band	Station Heard	RST/NR. Sent	Station Called	Points Claim.	Blank

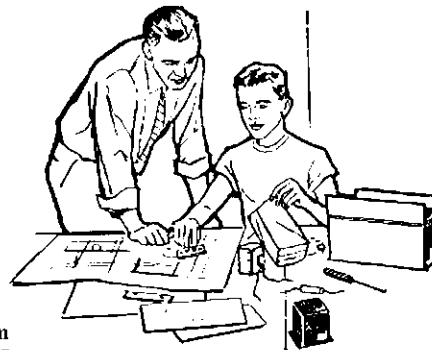
NOTE.—State whether Time is E.A.S.T. or G.M.T.

The present with a future . . .

Give
him
a



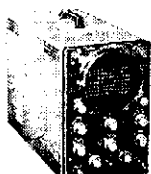
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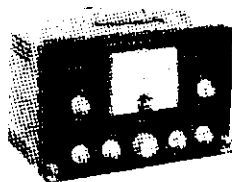
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O-12



GD-1B



HD-1

HIGH PERFORMANCE 5" OSCILLOSCOPE KIT (O-12U). Gives laboratory performance at less than utility 'scope price. Vertical frequency response 3 c/s.-5 Mc/s. Exceptional sweep circuit range of 10 c/s.-500 kc/s. in five steps. £61/8/-.

GENERAL PURPOSE 5" OSCILLOSCOPE KIT (OM-3). Exceptional value for a 'scope at this price. Features wide vertical amplifier frequency response. Sweep generator multioclerator 20 c/s. to over 150 kc/s. Vertical frequency response plus or minus 3 db. 4 c/s.-1.2 Mc/s. Plus or minus 6 db. 3 c/s.-2 Mc/s. £41/12/-.

RADIO DIRECTION FINDER KIT (DF-3). A de luxe 3-band navigation aid. Sense antenna eliminates 180° ambiguity in bearings. Uses 6 flashlight batteries. 200 Kc/s.-3.4 Mc/s. coverage. Illuminated dial & tuning meter. £121/2/-.

GRID DIP METER KIT (GD-1B). Serves either as an oscillator or absorption wave meter. Align I.F. stages, adjust traps, filters and tuned circuits, and use this handy instrument for coil winding applications. £24/13/-.

HARMONIC DISTORTION METER KIT (HD-1). Checks audio distortion accurately. Used with audio generator, the HD-1 will measure harmonic distortion at any frequency between 20 and 20,000 c/s. £55/6/-.

ELECTRONIC IGNITION ANALYZER KIT (1A-1A). Checks all ignition parts while they are in action. Switch selection of primary or secondary circuit patterns. £72/16/-.

DEPTH SOUNDER KIT (M1-10). Shows depth, type of bottom, submerged objects. All transistor, flashlight cell operated. Dial calibrated 0-100, rotating neon indication. £60/10/-.

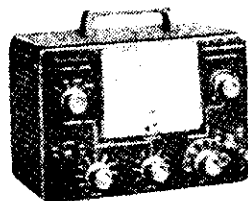
AUDIO GENERATOR (AG-9A). Produces near-perfect sine waves for audio testing. 10 c/s.-100 Kc/s. Accuracy plus or minus 5%. Distortion less than 0.1 of 1%. £50/1/-.

SINE, SQUARE WAVE GENERATOR KIT (AG-10). Both Sine and Square Wave outputs may be used at the same time. Frequency 20 c.p.s.-1 Mc. Frequency response plus or minus 1.5 db. £55/17/-.

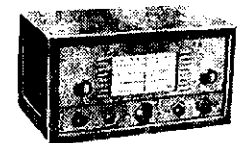
COMMUNICATIONS RECEIVER KIT (AR-3). Low cost Amateur and Short Wave Receiver. Modern superhet. circuit with high sensitivity. 550 Kc.-30 Mc. £43/15/-.

AUDIO V.T.V.M. KIT (AV-3). Designed for accurate measurement of critical a.c. voltages. Frequency response plus or minus 1 db., 10 c.p.s.-400 Kc. Features large 4 1/2 inch meter. £36/12/-.

RESISTANCE-CAPACITANCE BRIDGE KIT (C3-U). Portable a.c. powered, measures a wide range of capacitance 0.00001-1,000 µF. Power factor and leakage. Resistance 100 ohms to 5 megohms. £23.



AG-9A



AR3



S88

HI-FI STEREO AMPLIFIER KIT (S-88). 8 watts per channel 1% distortion at 6 watts per channel. u.L. push-pull output, gauged controls, push-button selection. Inputs for Stereo, Mono, Gram Radio and Tape Recorder. £72/2/-.

V.T.V.M. KIT (V-7A). The V-7A measures A.C. volts to 1,500 volts. R.M.S. 4,000 volts A.C., peak to peak. D.C. volts to 1500 volts. Resistance .1 ohms to 1000 megohms. Input resistance 11 megohms. £32/8/-.

TUBE CHECKER KIT (TC-3). This Tube Checker will test all tube types encountered in everyday radio TV work. Features versatile element switching, 9-tube sockets, easy-roll chart, checks emission and leakage. £41/12/-.

VISUAL-AURAL SIGNAL TRACER KIT (T4). Pinpoints receiver faults quickly and economically by tracing signals audibly through its speaker or visually through its "eye" tube. Also locates "noisy" and intermittent components. £22/6/-.

IMPEDANCE BRIDGE KIT (1B-2A). A Wheatstone Bridge, Capacity Comparison Bridge, Maxwell Bridge and Hay Bridge are combined for precision test facilities. Built in 1000 c/s. generator for A.C. tests. 1/2% decade resistors used. £66/13/6.

AUDIO ANALYZER KIT (AA-1) Here in one instrument is provided an A.C. V.T.V.M. audio wattmeter, and a complete intermodulation distortion analyzer. Measures noise, frequency response, output, gain and power supply ripple on V.T.V.M. Wattmeter allows measurement of power output with either internal or external loads. £55/17/-.



MAIL ORDERS are delivered FREE in the metropolitan areas of Adelaide, Brisbane, Melbourne, Sydney and Perth. Send your cheque or M.O. to your nearest W.F. office.

CATALOGUE describes the big range of Heathkits for testing, amateur radio, stereo, auto and marine available on request.

PERTH: Tough Instrument Service Co., 993 Hay St. BA 7615. (Prices slightly higher in W.A.)
SYDNEY: 307 Kent Street. 29-1111.

ADELAIDE: 204 Flinders St. W 1211.
BRISBANE: 13 Chester St., Fortitude Valley. 61-5121.
MELBOURNE: 359 Lonsdale St. 67-8351.

VK-ZL DX CONTEST, 1960, RESULTS

Many thanks for your support in the 1960 VK-ZL DX Contest. Conditions on all bands were bad, especially during the phone week-end with the result that activity was not as high as usual. Nevertheless, the keener DX operators persisted and produced some excellent scores—made possible only by your support. Happy operating, good DX and 73,

Jock White, ZL2GX,
Contest Manager, N.Z.A.R.T.

NEW ZEALAND

C.W.—					
Call	40	20	15	10	Total
ZLIAH	1550	5530	4155	2300	13535
1AIX	—	5865	3335	2505	11705
1AJU	380	3280	4750	2830	11240
1APM	—	5410	3985	1565	10960
1HS	—	5110	1305	3950	10365
1NG	160	4195	400	1625	6380
1AFW	—	3080	1140	1025	5245
1HY	550	—	990	55	1595
ZL2AWJ	*1445	5410	2060	1360	10275
2GS	905	4880	1670	2230	9685
2PM	670	3870	1020	—	5560
2AYJ	—	5165	—	—	5165
2GX	—	1295	2290	—	3585
ZL3US	—	2830	2710	—	5540
3OB	—	3465	660	1215	5440
ZL4GA	†1170	4570	1260	680	7680
4JF	—	450	—	—	450

Check Logs: ZLICK, ZLIAMM, ZL3IS.
* Includes 55 on 80 metres.
† Includes 150 on 80 metres.

PHONE—

Call	40	20	15	10	Total
ZLIAIX	490	5200	2945	3120	11755
1KG	155	4390	1725	2270	8540
1HA	—	2920	2275	1155	6350
1HY	—	220	55	—	275
ZL2GX	—	220	—	—	220
ZL3RT	—	210	495	—	705
ZL4JF	—	55	—	—	55

Check Log: ZLIAMM.

RECEIVING—

Call	Points
RA2834—W. L. B. Douglas	3430
ZL-259—L. I. Davies	1110
ZL-408—A. Petrie	Check

OVERSEAS

C.W.—			North America		
W1GYE	485 pts.	K6CQM	3990 pts.	DL1FF	2054 pts.
W1WY	Check	W6IPH	420	DL6EN	1750
K1KPS	Check	K6FCB	126	DL1DX	1200
W2EQS	2639 pts.	W7MA	2730	DL7AA	1200
K2UTC	1	W7KGP	280	DL7BA	720
W3RNY	45	W7BTH	24	DL1YA	49
W4FJ	3535	K7HID	Check	EASCY	72
W4KXV	1365	W8JIN	4176 pts.	F2MA	221
W4BJ	1079	W9WNV	3344	F8TM	85
K4PVD	550	K8WTS	270	G4CF	54
K4JLD	230	K8CUY	160	G5RF	1176
W4QVJ	42	W0BMM	336	G3WP	9
W9KC	4104	W0MCX	108	HB9MO	392
K5KBB	2573	W0CTW	50	HBTT	276
W5BUK	1102	KL7ALZ	792	HB9DX	80
K5UYF	1100	VE3BWY	778	IT1AGA	32
W5EJT	612	KP4CC	390	OE1RZ	768
W5ARJ	516	T12CMF	96	OE3WB	126
W6LDD	5120	XE1PJ	424	OZ7OMR	40
				OK1LM	624

South America			Asia		
HK7ZT	176 pts.	CE1BD	160 pts.	JA1VX	4824 pts.
HI1FF	60	YV3AS	240	JA2JW	3665
CE3AG	1575			JA3JM	943
				JA2WB	793
				JA1CJN	728
				JA7AD	340
				JA1BTH	168
				JA1EM	102
				JA3AA	63
				JA1DUH	48

AUSTRALIA

C.W.—					
Call	40	20	15	10	Total
VK1JE	55	2475	220	—	2750
VK2GW	1675	5745	2305	2770	12495
2ADE	—	4215	3135	2140	9490
2APK	—	2765	1095	655	4515
2HV	—	480	—	—	480
VK3DQ	1295	3410	2360	1350	8415
3MR	—	5275	—	—	5275
3YD	—	4170	—	—	4170
3JF	—	3970	—	—	3970
3ARX	—	3850	—	—	3850
3XB	1300	—	—	—	1300
3TL	—	155	—	—	155
VK4SN	55	1615	1940	740	4350
4XJ	—	—	—	3045	3045
4SS	—	2035	—	—	2035
4SD	—	750	—	—	750
VK5NO	1410	5935	4210	1490	14045
5RX	—	3275	—	—	3275
5JE	1705	—	—	—	1705
5NQ	—	55	790	55	900
5JT	—	340	55	430	825
5LD	—	390	—	—	390
5RK	—	380	—	—	380
5LZ	—	—	165	110	275
VK6WT	955	1995	—	—	2950
VK7SM	285	3530	1110	1600	6505
7KA	—	2740	1140	900	4780
7RY	—	270	135	—	405
VK9XK	950	3500	3825	1540	9815

PHONE—

Call	40	20	15	10	Total
VK2AKF	—	1620	760	950	3330
2WC	—	2730	—	—	2730
2AKV	—	—	1000	490	1490
VK3GE	—	165	1155	—	1320
3ADN	—	110	—	—	110
VK5MS	—	6935	4480	2475	13790
5NQ	—	4375	1360	1715	7450
5LZ	—	275	55	—	330
VK7WA	—	1450	770	740	3345
VK9NT	—	3480	400	—	3880
9XK	—	—	1290	155	1445

Check Log: VK2ADE.

RECEIVING—

Call	Points
BERS-195—E. W. Trebilcock	5360
WIA-L2022—D. M. Grantley	5125
WIA-L5031—C. Hutcheson	4155
WIA-L3065—I. D. Thomas	3665
WIA-L6003—F. H. Price	2640
WIA-L6005—D. S. Pratt	2105
WIA-L2033—D. W. Shephard	1555
RA2945—M. Cadzow	985
—Miss O. J. Martin	575

Europe

OK3KGW	54 pts.
OK2KZZ	9
OK1KCI	1
PA0TAU	108
PA0LOU	98
PA0WAC	35
OH5RU	152
OH1FN	112
OH2FS	108
OH2QO	70
ON4LX	6
LA8GF	352
SP6FZ	15
SP9KJ	640
SP9ZU	180
SM5LL	1
SM5CCE	1000
SM5ATK	45
SM5BEU	20
SV0WZ	2
UB5KAB	9
UR2BU	9
UR2KAE	4

Oceania

FK8AH	1675 pts.	ZK1AR	838 pts.
W0SLD/KW6	5670	KH6DMW	616
VR1B	4294	KH6DGL	220

Africa

FA8RJ .. 210 pts.

PHONE—

North America			
WIWY	15 pts.	W8JIN	480 pts.
K2UTC	1	K8CFU	180
W4SIB	162	W8MCC	3
W4EEO	18	K9ECE	96
K5KBB	2176	K9JEL	Check
K5MDX	1738	VE3DDI	96 pts.
K5GOE	544	VE8TF	15
K5ZIT	228	VE8LN	1
K5UYF	88	TG8CP	560
K6RTC	520	TG5HC	406
W6JZG	1	T12CMF	10

South America

YV1EE	126 pts.	YV5AKU	1 pts.
YV5AKP	1		

Europe

DL3LL	611 pts.	OH5SM	230 pts.
EASJE	250	PA0JPC	1
EASCY	40	SM5ACC	90
G5HZ	128	UR2BU	112
CTIEY	216	UR2KAE	6
OE1RZ	55		

Oceania

KH6DLD	611 pts.	ZK1AR	630 pts.
K0SLD/KW6	1200		

Africa

ELA .. 1 pts. ZS6NE .. 338 pts.

Asia

JA3AA	72 pts.	BVIUS	184 pts.
JA2JW	42	OD5CT	84
JA5GS	30	9M2DQ	2250
JA1BNK	1	UA0KIA	28

RECEIVING—

M. Schoenherr	704 pts.
DL8497—F. W. Kradepohl	284
S. Papko	55
DL8847—H. Stupka	9
BE12333	Check
OES-314—B. Christian	27 pts.
HE9EZG—J. Kundig	24
SM5-2735—K. Nystrom	310
SM6-3144—H. Hjelmsstrom	72
SM7-3123—I. Svensson	45
SM4-2825—R. Johansson	28
SM6-E82—S. Nyman	28
SM3-SWL—B. Berling	Check
YO2-476—A. Ciurea	363 pts.
OK2-4207—K. Holik	200
BR5-6604—E. H. Sherlock	276
K2-7079—B. Adams	24
P. Hayton	4
JA1-1578—K. Watanabe	1653
JA1-1362—K. Tsukahara	969
JA3-1794—S. Okuno	532
JA6-1124—T. Ushijima	451
UA0-21213—Zaikin	490

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BOOK REVIEW

"THE SURPLUS HANDBOOK"

A 94-page quarto size book dealing with various military surplus radio equipment, much of which is available on the Australian market. Each piece of gear is provided with an identifying photograph and the circuit.

It is a well-prepared book and contains much information of value to local Amateurs, for instance the R.A.X. receivers are featured, along with 46 other circuits. This book would repay its cost by providing details on much locally available gear, which to date has not had circuit details available. For any one owning BC312, BC348, Super Pro, MN26, T.C.S. gear, etc., this is an excellent book.

Local price 35/6; our copy from McGill's Agency, Elizabeth St., Melbourne.

"VHF FOR THE RADIO AMATEUR"

This 208-page book comprises an excellent volume for anyone interested in v.h.f. Nine chapters cover the major aspects of v.h.f. gear and comprise: propagation, antennae, transmitters, modulation, power supplies, converters, i.f. systems, pre-amplifiers and test equipment.

The author of the book is recognised as one of the leading v.h.f. experimenters of today and in this book he has provided a comprehensive survey of modern practices including parametric amplifiers and gear for 1296 Mc. A book you will repeatedly refer to and learn from after many readings; a must for all serious v.h.f. men.

Local price 41/6; our copy from Technical Book Company, Swanston St., Melbourne.

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SIXTH ELIZABETH BIRTHDAY CELEBRATIONS

In November 1955 the town of Elizabeth was officially begun. Named after Her Majesty Queen Elizabeth the 2nd, the town of Elizabeth has grown to become the largest town in South Australia, outside the metropolitan area, with a population of 25,000. Of this population at least one person in every 1,000 is a licensed Amateur.

On the anniversary of the foundation of the town each year the Elizabeth Birthday Celebrations have been held and have become a week of festivities, attracting widespread local, State and even Interstate interest. From the start individual Amateurs have co-operated in establishing a station at the Saturday Fair, however with the advent of the Elizabeth Amateur Radio Club this has now become a club event.

This year the Fair will be held on Saturday, 25th November, and it is anticipated that in the region of 20,000 people will attend. The E.A.R.C. station, VK5LZ, will operate from 10 a.m. until 10.30 p.m. from this location.

In an endeavour to provide good solid contacts for demonstration to the public, the club station will operate on the 80 and 40 metre bands only.

An appeal is hereby made to the other Amateurs of Australia to assist us in this effort.

An interesting feature of the club's activities is the Elizabethan Award issued for contact with stations in the town. The rules of this award are appended herewith.

If you are interested in either assisting in displaying Amateur Radio to the public or the award, or both, here is your chance.

Procedure for contact with the club station on 25th November will be carried out as follows: Throughout the day other stations within Elizabeth will be rostered to act as control stations. Calls should be made to the control station who will direct any stations calling to transmit to the official club station on the club station frequency as required. By this method we hope to avoid stations causing QRM to each other and to contacts being held with VK5LZ and thus create a good impression for the public.

We request all Amateurs wherever possible to assist us by providing contacts, adhering

to the above simple rule and by keeping a watch out on the band before transmitting so as to avoid causing QRM.

In this way we feel that most benefit can be brought to all, particularly the aspect of public relations with those who may wonder at our hobby.

So keep a watch out for VK5LZ Elizabeth on 40 and 80 metres on Saturday, 25th November. You can help us and also make contacts for our award.

Call signs of some of the Elizabeth stations are as follows: VK5 5LZ (club station), 5DI, 5DY, 5EJ, 5EU, 5FY, 5HA, 5HB, 5KD, 5NO, 5NQ, 5TM, 5QL and 5XQ.

—Ian J. Hunt, VK5QX,
Communications Officer E.A.R.C.,
Birthday Celebrations Committee.

"SPEAKING OF THE PAST"

The Key Section of the Victorian Division, Wireless Institute of Australia, sent out the following circular to Amateurs, dated 8th January, 1934:

"It has been decided to hold a week-end camp at Mornington on A.N.A. week-end, 27th to 29th January, 1934. Several transmitters will be in operation in the camp and it is proposed to play inter-section cricket matches to enable a representative team to be picked for the annual match against the R.I's.

"To discuss the arrangements to be made, a meeting of those who intend to be present, either for the duration of the camp or for one day only, will be held on Wednesday night next, 10th January, in the Institute rooms.

"Now here's a first class chance to have a really good week-end, with swimming, cricket, radio and any other hobby you care to name.

"The cost of the camp will be extremely cheap, so if you are interested please don't forget to come along on Wednesday night, 10th January, 1934, at 8 o'clock.—J. H. Winton, Hon. Secretary."

THE ELIZABETHAN AWARD

The Elizabeth Amateur Radio Club made the award available during 1960, and it has been fairly popular. Some 83 have been issued so far.

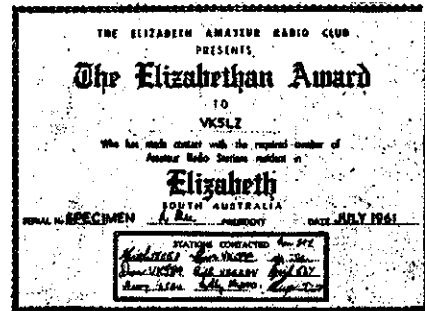
The award is approximately 10 x 7 1/2 inches in size and has black printing on a quality white card. In order to make the award something different, it is personally signed by the Amateurs who have been claimed by the applicant. It is also available to Short Wave Listeners.

The awards are serially numbered, and the date of issue is that date on which the application was received.

Due to the award being signed personally, it takes a little while before it is ready for despatch, but it will arrive in due course!

Return postage or two International Reply Coupons are requested to save the club's resources!

If anyone is interested in the award, then remember the Elizabeth Amateur Club Station VK5LZ will be operating during the Elizabeth Sixth Birthday Celebrations on November 25. Many other Elizabeth Amateurs will be on also, so maybe that elusive "last one" will turn up for you!



The club station will be looking for good contacts and plenty of them on 25th November in order to provide quality signals for the general public to hear at the shack.

The requirements for the award have been amended to include members of the Elizabeth Amateur Radio Club as well as those resident in Elizabeth and Salisbury districts.

To qualify for the award, the following conditions apply:—

1. DX stations require six points (VK0 and VK0 included).
2. VKs 1 to 8 require eight points.
3. Contact with an Amateur resident in Elizabeth and Salisbury districts, OR a member of the Elizabeth Amateur Radio Club, count 1 point.
4. Contact with the official club station, VK5LZ, count two points.
5. Any contact on v.h.f. (50 Mc. and up) count two points.
6. S.W. Listeners must include call of station being worked by the Elizabeth Amateur.
7. All contacts after 1st January, 1960.
8. Enclose return postage or two I.R.C.

Send log details (call, date, time, band) to: The Award Manager, Elizabeth Amateur Radio Club, P.O. Box 8, Elizabeth, South Australia.

Calls of Amateurs resident in the district, or members of the club at present, are: VK5 5DS, 5DY, 5EJ, 5EU, 5FY, 5HA, 5HB, 5HU, 5HY, 5JO, 5KD, 5NO, 5NQ, 5PE, 5PF, 5QL, 5QX, 5RS, 5TM, 5ZAK, 5ZBR, 5ZCA, 5ZDA, 5ZDV, 5ZJM, 5ZMA, 5ZMK.

50 Mc. W.A.S.

Call	Cer. Add. No. Cntr.	Call	Cer. Add. No. Cntr.
VK2WJ	13 4	VK6DW	3 1
VK3ZF	22 4	VK3RR	6 1
VK4HR	4 3	VK3HT	7 1
VK3GP	5 3	VK2AEZ	10 1
VK2ABC	8 3	VK3XA	11 1
VK2VW	9 3	VK3GM	12 1
VK5GG	19 3	VK3ACL	14 1
VK5ZAX	20 3	VK3ZD	16 1
VK5ZBL	21 3	VK2HO	17 1
VK4RY	2 2	VK3EA	18 1
VK5LC	1 1	VK2WH	15

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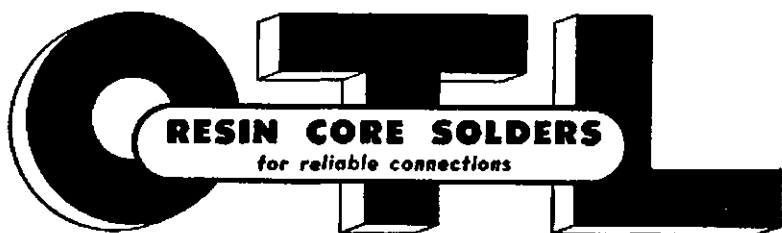


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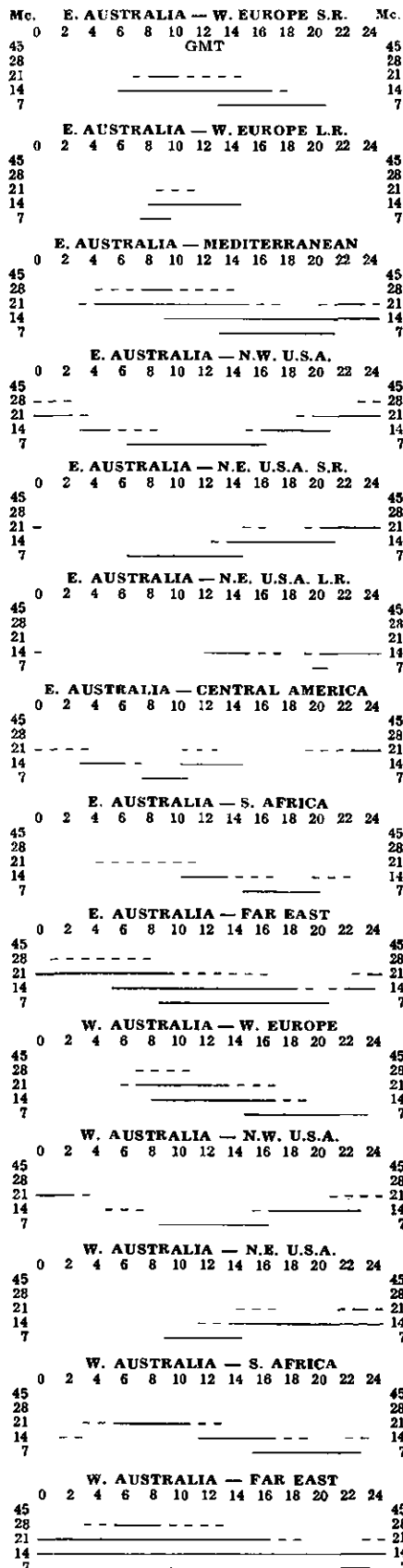
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PREDICTION CHART, NOV. '61



DX

Alan Shawsmith, VK4SS
35 Whynot Street, West End,
Brisbane, Qld.
Phone 4-6526 (7 a.m.-4 p.m.)

Well, chaps, how did you find DX this past month? I haven't been listening much, but conditions on all bands seemed only mediocre. On 7 Mc., it has been possible to work all continents, with Africa and Europe now fairly regular in the mornings. 14 Mc. has been poor in the afternoons to the East, but better to the West in the evenings, although patchy, and as the night progresses, the signals slowly die, until around 1700 hrs. GMT there is only the QRN left. 21 Mc. shows some activity around noon, our time, but the signals are weak and mostly from North and South America.

Overall, I would say that the conditions have been below those of previous years, for this past month of September. This, however, is to be expected, with the present sunspot cycle. 7 Mc. would be much better if more of the rarer countries were active. Sometimes, the band is wide open to Africa or South America, there may be only one S9 signal from a particular area.

NEWS AND NOTES

KH6EDY is on both 7 and 14 Mc. and fairly regular around 0700 hrs. GMT. You should know by now, he is on Kure Is. and is classed as a new country. OH7NF is a 7 Mc. regular (usually about 2000 hrs. GMT at low end) and seems to be able to hear and work VK better than most Europeans at this hour.

Eric 4X4WF is another heard often on 7 Mc. c.w., at 2000 hrs. GMT. He also seems to work well into VK.

VQ4DT has a real S9 local signal here on 7 Mc. in the mornings, and Fete VQ2W is another easy 7 Mc. c.w. QSO.

JAEJB will be on Marcus Is. (new country) until December, so keep listening.

Martin OY7ML is on 14 Mc. s.s.b. (no time available). Operation is from Faroe Is.

UA0BP is also s.s.b. and in Zone 18. Times 2300 hrs. and 0800 hrs. GMT.

ZD6PR and ZD6GA, in Nyasaland, share a s.s.b. rig and should be active by now.

HVICN. If you did work the Vatican some months ago and still haven't a card, try W2VZC. He has all the logs.

9US, Ruanda-Urundi, has no QSL bureau or club, but if you have any cards for the following, you can try sending them to 9USDS, De Schriffer Odilon, P.O. Box 1188, Usumbara, Ruanda-Urundi. 9U5TT, 9U5MC, 9U5NC, 9U5PD, and 9U5BH.

Due to circumstances outside my control, my overseas schedules for notes fell through this month, so this section is a little light on. But more next month.

ACTIVITIES

Bud VK2AQJ sends in the following: 14 Mc. s.s.b.: W1UOP 1125z, VE3BWB 1220z, KASXT 1125z, KAZVO 1200z, VE1ALE 0638z, VE1CV 0705z, KG6IJ 0855z, KH6DJV 1050z, KH6FAF 1053z, SM3BIZ 1120z, DUISA 1210z, SM5BLA 1225z. 14 Mc. c.w.: K8VTC 0810, JA4ZS 0935, W8BHW/6 0945, UL7KAA 1050, UA0KJA 1100, OH5QA 1115, UA3TY 1142, JA1ACA 1152. (I'll be glad to QSO you on c.w., Bud, and please can you send your notes two or three days earlier.)

Bruce VK3BM lists the following: 3.77 Mc. s.s.b.: WOAIH/P, VE3, VE3BQP. 3.798 Mc. s.s.b.: ZL2GA/P3 Chatham is. 3.798 Mc. s.s.b.: W5IYJ, W5HAJ, K5IPY, K5JAA, WOPBL, W6TSG, K5GUZ, K8CZW, W5DML, W6JUK. 14 Mc. Dozens of Gs, W/K, VEs, lots of DJ, DL, DM, LA, KG, KR, KA, KL, KLE, YV, SM, ON, F, I. All U.S.A. States but 3 (all on s.s.b.): E14R, G13JM, LK1DE, G16TK, GW2DUR, P2AF, CO8JK, EA2EL (a.m.), BV1US (a.m.), HL8KS (a.m.), K66J, KX8BC, KX8BR, 9M2DQ (a.m.), HM4AQ, HK2YO, OA4KU, OA4L, H5SOSQ, XZ2AD, YU3U, VR5RZ, UA1CY, UR2AR, QD5CW, GM3CF, HM1AE (a.m.), UR5FG, AP2MR (a.m.), UM8KA (a.m.), 9M2AD (a.m.), CT1SK (a.m.), G3LXX, OZ7JV, UA0KO (a.m.), CN2BK (a.m.), UR1KAT (a.m.), UA1DZ, HB9WT, VP5BL. Where worked (a.m.) shown. 21 Mc. s.s.b.: K25SW, K6GJK, KG-6IJ, W/K, KH6, etc., JA, KB6R, KZ5JD (a.m.). (Welcome, Bruce, to the column. Yours is a mighty fine list, especially 3.5 Mc.)

Hal VK4DO shows up with a list that proves he has had his ear on the job this month. He worked 14 Mc. c.w.: W, K, KH6, KL7, JA, VE, DL1XZ, DL4CJ, DJ5VG, DM3BJO, DJ2ZG, DL1MF, DL4VO, F3YR, G2DC, G3FVN, G2KMA, HA5KB, HB9YN, I1BVP, I1TEB, I1TGP, I1ZL, LA5VN, OA4FM, OH2CU, ON4FU, OK2QR, SP-3AK, SP8JA, UA0EW, UA0JB, UA0KIB, UA3DA, UP2KNE, UR2AR, VR1M, YU2BJK, YV5BKA, KH6EDY (Kure Is.), VE0MC, etc. Heard on 14 Mc. were: CT1DJ, CT1DN, DL9KP, DL1NS, DJ2YH, DL4NAC, DJ6EN, EA7CL, F2FQ, F8WN, F8VN, FA8RJ, F08AK, HASBI, HB-4FD, HC2BC, HH2CE, HK7ZT, HP1IE, I1BVZ, I1CMG, I1ISZE, I1LF, J1KAA, KX6BC, LA-3DF, LU7AZ, LZ1KPZ, LZ1KSV, OA4HW, OESPY, OK1NK, OK2KU, OK2BCA, ON4HC, ON4IX, S5SWI, SM68R, SP4JF, SP6ADL, SP6IR, SP7HX, SP8HT, SP9NH, SP9DT, SV0VE, UA8KU, UA3DU, UA3DV, UA3KED, UA3KBN, UA3TY, UA4UJ, UA4VJ, UA4KA, UA3CN, UB5ED, UB5ZV, UB5KJ, UB5KAN, UB5KAA, UQ2AK, UR2AT, VR1M, V1SIF, XZ2TH, Y03RI, Y06XI, Y08IF, YU3ZV, YV3AS, ZC4TX. 14 Mc. a.m. worked: W, K, KH6, VE, VK1G, R4CB: 14 Mc. phone heard: BV1US, CE3BQ/SU, HC1FG, HM4AQ, OA4EX, T12HK, YV-5AWK. 21 Mc. c.w. worked: JA, W, K, KH6, DL1DC, DL1EE, DJ3EN, DL6EW, F2MF, F8LH, F2MA, G5MD, GW3AHN, HA1K, SA, HB9KO, CE3GP, CH2BC, OH2SC, OK1ZL, OK1ACT, ON4CK, ON4NC, ON4WI, ON4GP, UA1KAS, UA9SKO, VR1M, YU1AG. 21 Mc. c.w. heard: W, K, KH6, JA, DL1ES, DL0FT, DL1OF, DL-3PO, DJ2ZG, DJ3KR, DJ3SW, DL3OK, DJ6SL, DL7JA, DL4NAC, DM2ABL, G4BRK, G4CM, G3JKZ, HB9EU, ON4FU, OH3PS, PAOFF, PA-0WDG, SM5AAS, SP9RF, UA0SK, UA1MA, UA2KAA, UA4KEA, VU2SO. 21 Mc. phone worked: VS1FE, 45TYL. 21 Mc. phone heard: K, W, JA, CR8AN, DL1VX, DU1EH, BV1US, G2CDI, I1ZM, UC2OM, 9M2DQ, 9M2EF. (Hal is now a QRP man like myself. 40 watts to 807. Nice work OM.)

Don L2022 says he has been busy this month so his list is a little light on. He reports hearing the following: 7 Mc. c.w., OK3AL, OH7NF, HA-1KSA, UT6GL, YU3CAW, W4CVA/KH6, JA8AE, VR2DK, KW6DF, W7EWU, KL7BJW. 14 Mc. c.w.: I1TGP, YU2AKL, SP6FZ, UQ2AX, LZ-1KPZ, F08AK, EA2GN, Y02BB, KH1HV, VR-5RZ, VR3L, UA2BD, SV0WR, KP4APY, FB8XK, F3YR, DL9RK, KH6EDY, VU2ZR, UR2AR, 5N2KHK, 45TLB. 14 Mc. a.m.: T12HK, G3FWB, OA4EY, ON4OC, VR4BC, EA3NG, VU2TN, LU1TM. 14 Mc. s.s.b.: OA4CV, G5DV, HB9SI, OA4DI, KW6DB, KL7EJC, VU2NR, YV5QP. 21 Mc. c.w.: VR1M, JA6PY, KH6DSW. QSLs were received from 5N2KHA via W2CTN, OA-4EY, VR1M via WIHGT, UB8KAB, UA9WC, 4X4BG, ON4TX, HA7PZ. (Don's score is now 229/89. Keep up the good work, OB.)

Eric BERS-195 has logged the following: 3.5 Mc.: VK and ZL. 7 Mc.: FK8AZ, HA3K, 6KVB, OH7NF, SP9RF, UA4HC, UB2TZ, UO5AA, VQ-4DT, JA6AHY/MM. 14 Mc. phone: FK8AU, VR4BC. 14 Mc. c.w.: BV1US, BV2A, E1BY, FK8AH, JZ0PH, KH6EDY (Kure), KJ4G, KJ-6BV, KP4ANS, KW6DG, KX6CG, KZSLC, LU-1ZL, ZL1Z, UH8KAA, U18KA, VKOCH, NL, JB, RT, VK, VR1M, VR3L, V56EM, VU2LZ, XE1HH, ZK1AK, ZSI0U, 4MG, KV4C/MM. QSLs received: FB8XK, HC8JZ, HK7ZT, JZ-0PH, KJ6BV, UC2KAG, U18KBA, UQ2AX, VR-4CB, ZD6RM, VE0MC, W2MAK/MM. (Eric says that this is his 35th year as an active s.w.l. Nice work, Old Man.)

George VK2QU reports having a good month and QSOed the following: 14 Mc. c.w.: SM-6BER, SM5QN, SML5F, SMTGP, SP2BA, SP-8HT, F7BL, F9AH, I1SZE, I1TEB, Y03RD, G3ECC, G3HGD, G3ASG, G5BJ, HA5BI, HA-2MJ, OE3FS, OK2YF, OK2KAU, OK1NK, OK-2QR, OH2RW, UA1KB, UA1KAN, UA1KFJ, UA0MK, UA0LD, UA3DV, UA4CH, UB3KAG, UB3KFF, UP2KN, UR2KA, DF5FZ, DJ5IM, DL1IW, DJ2FE, DJ2XP/CHC, DJ2GD, DL3RK, DL3SZ, DM3VL, DL3MI, DL4RK, DL4ZB, DL-6TR, DJ3TAO, JAD5AA, JATAGU, JA6AS, JA-7AQ, LA2AJ, ZBAAD, ON4MS, VR5RZ, KG-6AIG, HP1IE, K17BR, KX6CG, CE1DN. 14 Mc. c.w. heard: VP7CC, KC6BD/KX6, LU6MI, YV-5BZ, C5CEK, GC1DE. (Will be pleased to get any 7 Mc. news from you, George. Sorry OM, but no news arrived here from you last month.)

Your humble servant was not very active this month as I said earlier, but did manage to get my 40 watts into all continents on 7 Mc. The best OSOs were VQ4DT 2020 GMT, VQ2W 2*30, UW0FB 1900, SM5BLA 1528 and UA0EM and other UAs.

Harry VK5MY reports working a few nice ones on 7 Mc. They are 5N2LKZ, WACAA/KW6, CR7IZ, ZE1AS, YV2BJ, KX6AJ, Y09CN, VP5BL/5, and Kure Is. on 21 Mc., namely, KH6EDY. All on c.w.

ADDRESSES

KW6DG, KW6DF—Box 68, Wake Island.
JZ6PO—Decca Navigator Co. Ltd., Merauke, Netherlands New Guinea.

OZ1MR—(YL op.) Mrs. M. Rasmussen, Aurl-kevej, 8 St., T.V., Valby, Copenhagen, Denmark.

You may have had a QSO with some of the following stations. If so, the QSL goes via W2CTN, Amityville, N.Y., who is their manager: ZD2DCP, VP2KH, VQ3CF, JZ0HA, VR-2DA, VR2DK, VK9NT, KW6CU, 9G1BQ, FK-8AW, FK8AJ, FM7WP, Z5TM, CR4AV, VQ4AQ, T12WD, OC3RH, HR2FG, VQ2EW, VQ3HH, ZB1L, VP6CJ, KW6CP, CR4AX, YSARA, CR-4AH, CN2BK, FG7XF, OX3DL, FM7WU, and TG9AL.

5N2RSB—Op.: R. S. Briggs, 1 Brigade Signal Troop, Kaduna, Nigeria.
VQ2CZ—Op.: W. E. Rymer, Box 332, Kitwe, North Rhodesia.

FB8CX—Op.: Chas Danbler, B.P. 83, Antsirabe, Madagascar.

LU1ZL—Ellsworth Land, QSL via W9DHQ.

Ex-VK9XK—Via VK3 Bureau.

VR1M—Tarawa, QSL via WIHGT.

W2MAK/MM—G. W. Dumont, 26W 130 St., New York 37, N.Y.

OA4EY—Box 3772, Lima, Peru.

VS9AAC—J/T A. R. W. Cake, Block 1, Bottom West, R.A.F. Khormaksar, B.F.P.O. 69, Aden.

VP2LO—QSL via W6NJU, Gary Stilwell, 434 N. Laurel Ave., Los Angeles 48, Calif.

SUMMARY

The month of November, in this area anyway, brings nature's QRN to the bands 3.5 and 7, and to a lesser extent, 14 Mc. are restricted in their use until the end of January next, during our period of the understorm activity here in S Queensland. These conditions produce literally a headache rather than DX on 7 Mc. However, 21 Mc. is showing signs of promise already, and it is certainly easier to work DX on this band than on 7 Mc., where the QRN problem perpetually exists. Many of the boys stick yearly to the higher frequencies and a report or two now on conditions would be helpful.

Those who have written this column before me will know better than most, that it is not possible to cover all the bands well enough to get a picture of what goes on or of conditions generally. I find I can really only cover a couple of the bands in any sense of continuance. So please chaps, how about some more mail to this address. There is always a need for QTHs. They are a valuable help to us all, and a line or two on conditions in your area is always needed.

The term "73"—The Ws tell me the sending of the figures "73" as a sign off procedure was originated by railroad telegraphers in the frontier days of U.S. history. During this time it was said that a man needed, among other things, a Winchester 73 to survive. This was a highly accurate superlative rifle. So if you wished him 73, you therefore wished him the best. (By courtesy of K6CQM.)

Finally, I would like to say thanks again to those who try to help all they can with the DX news. Without you I doubt if this column would survive. 73 (but remember, never leave it loaded). AI VK4SS.

Wireless Institute of Australia Victorian Division A.O.C.P. CLASS

commences

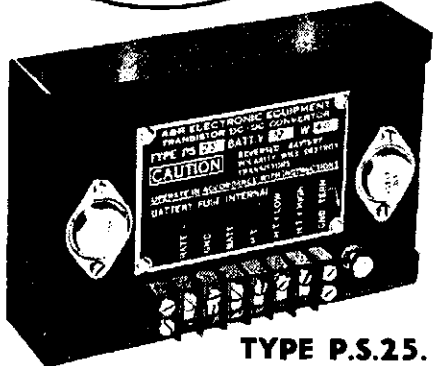
THURSDAY, 9th NOV., '61

Theory is held on Monday evenings, and Morse and Regulations on Thursday evenings from 8 to 10 p.m.

Persons desirous of being enrolled should communicate with—
Secretary W.I.A., Victorian Division, P.O. Box 36, East Melbourne (Phone: 67-3084, 10 a.m. to 3 p.m.), or the Class Manager on either of the above evenings.



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Output Voltage: 13 volts in, 300 and 150 volts simultaneously.
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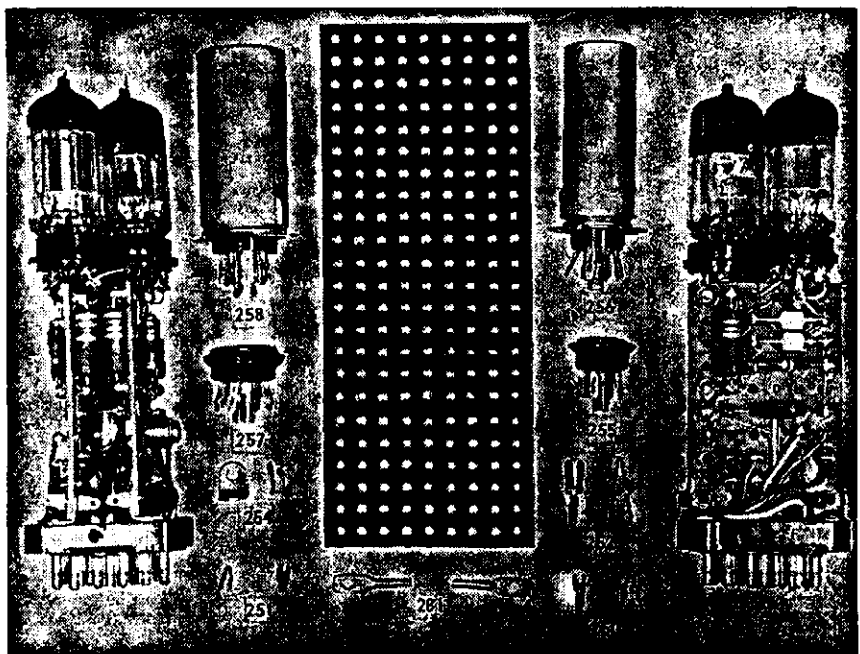
Maximum Operating Temperature: 150°F. (approx. 65°C.).
(i.e. ambient air temp. at point of installation.)
Filtering: "HT plus High"—50 mV. or 0.02% ripple.
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VHF

David Tanner, VK3AAU
17 Wolseley Street,
Mont Albert, Vic.

Things are starting to look up again on the v.h.f. score after a few months of being in the doldrums. DX is once again appearing on 6 mx and some increased activity on 2 mx in the southern States seems to indicate that a few records will be broken this season if conditions are at all reasonable. At least three of the old timers on 2 mx are being spurred into life again in an endeavour to stop the newcomers from getting too much of a start on them.

Since last month I have made a tour of some of the v.h.f. installations in the VK3-VK5 area. I was quite impressed with some of the efforts of the country stations, especially in the way of antennae. The almost universal use of long yagis together with low-loss open-wire feed-line in an endeavour to get the most effective power radiated was noticed particularly.

All the stations visited seemed to be using either 829B or QEQ06/40 finals and the old 6J6 converter seemed quite popular. Set-ups included 5AW on 144.64 with a 6ES8 converter and 24 ft. yagi, 3ZFM on 144.16 with a 6J6 converter and 24 ft. yagi, 3NN on 144.41 with a pair of stacked 30 ft. yagis, 3ZCW on 144.18 with four stacked 12 ft. yagis, 3ZEA on 144.16 with a 5 over 5, 5BC with a 16 element phased array. Other active stations in the area are 3ATN on 144.42 with four stacked 30 ft. yagis, 5ZAI on 144.3 with 12 ft. yagi, and 5ZCD.

Also included were 5ZDR on 144.15 with a 12 ft. yagi and 6/40, 5ZCR and 5KK, both with 24 ft. yagis, the last three being in Adelaide.

Some of the boys are playing with 6CW4 nuvistors for their converters and I also observed a few QEB/300's which were to be fired up also. Two metres seems to be the premier band at the moment, so we can start with that for a change.

From 29th to 23rd Sept. there was a long tropospheric opening between Adelaide and Western Victoria. 5ZDR, 5ZCR, 5TN, 5RO, 5MT, 5ZMK, 5ZK and others worked 3NN, 3ATN, 3AGV, 3ZCW, 3ZFM, 3ZEA and 5AW. 5ZCR was the first station on the eastern side of Adelaide to work into VK3. AI and most of the others worked 3AGV in Colac and 5ZDR and 5ZMK both heard, and were heard by 3ZLT in Melbourne. Mick 5ZDR is still keeping skeds fairly successfully with 3NN. Mick now has a permanent QTH and has his 40 ft. tower up. At about the same time as the VK3-VK3 opening was on, 3ATN and 2WH were conducting skeds and Hugo worked Ray and also I believe 3ZCW.

Of interest to the chaps who are trying to work into VK6 is the news that the beacon on 144.00 is now operating. Anyone in the west, interested in making skeds with the eastern States should contact Rod 6ZDS or Roy 6RY. The Channel 7 and 9 Adelaide t.v. has once again been received in Albany, on a Channel 2 yagi pointing to Perth, so it looks as though a 2 mx contact is not far off again.

7ZAO reports that there is an ex-VK6 Z call somewhere in Tasmania who intends operating on 2 mx from Tarraleah, about 60 miles N.W. from Hobart. 7DK at Poatina, 40 miles S.E. from Launceston, is also in the process of building 2 mx gear.

In Adelaide, 5ZFG is building a 2 mx mobile, while Gilbert 5GZ occasionally works portable from Mt. Lofy, so keep an eye out for him. Now to add to the confusion, here are the notes on 6 mx activity. The only real news of any note comes from Max 4HD who worked JAI, 2, 3 and 9 on Sept. 30. The scatter stations were also coming through strongly at times. On the same day, 2ZDM was heard by VK7 at around 2155 hrs., but no contact was made. 7ZAV was being heard on f.m. station around 48.5 Mc. peaking east, rather frequently but I don't know what it is.

I had rather a long contact with Bill ZL3QK on 20 mx last week and he passed on some news about activity in ZL. Their t.v. is using Channel 1 which has f.m. sound on 50.75 Mc. and this should be a good pointer to band openings. Programs run from 4 p.m. to 6 p.m. E.A.S.T. on Sundays and 4.30 p.m. to 8.30 p.m. on other days. Some of the boys over their have t.v.i., but Bill reckons they should be able to fix it and get on the air when the band is open.

I also have some good news for those who still need a VK8 contact. There is a good chance

Correspondence

Any opinion expressed under this heading is the individual opinion of the writer and does not necessarily coincide with that of the publishers.

GENTLEMEN'S AGREEMENT

Editor "A.R.," Dear Sir,

Let's have more of these letters from VK3BG. They're the funniest thing in "A.R.," exceeding 5PS's notes in absurdity and zany humour.

May I suggest that as a token of our gratitude to Mr. Jones, a statue of Samuel B. Morse be erected at his home and cost borne by the W.I.A. Alternatively, that he be financed on a DX-pedition to Willis Island with a c.w. transmitter.

—Jeff Vale, VK5NQ.

Editor "A.R.," Dear Sir,

Re the abolition of c.w. by Roth Jones. I fail to see that there is any sound reason for entertaining such thoughts. Simply because c.w. is now a minority group, it does not follow from this that code should be wiped from the band. What does Mr. Jones mean by primitive? In the hands of those skilled in the art, it is a fast, easy, mistake-proof means of communication and will maintain a circuit in poor conditions better than either s.s.b. or a.m. When working in very QRM conditions, it is certainly superior to a.m.

C.w. is a requirement of the A.O.C.P. The Ws, with over 100 times the number of Hams, manage to combine the three modes successfully. No other country as yet has abolished c.w. To accuse F.E. of dictatorial attitudes is ridiculous. C.w. may eventually be superseded but the time is not yet, and when it does happen, it is to be hoped, for the sake of Amateur Radio, it is relinquished by agreement, and not taken by force, as Roth Jones advocates.

—Al Shawsmith, VK4SS.

Editor "A.R.," Dear Sir,

The correspondence published in relation to the "Gentlemen's Agreement" prompts me to write the first letter I have ever sent to the press.

that 3AAU will be going to Batchelor, about 50 odd miles south of Darwin for at least a couple of years. Operation should commence toward the end of November on s.s.b. or c.w. on 50.03 Mc. Call sign used will probably be VK3AU. It will be appreciated if stations on a.m. refrain from using the first 100 kc. of the band. Details of probable operating times will be given later.

The VK6 gang held a fox hunt on 144 Mc. on Sept. 17 with Cedric 6ZBC the winner. Their November fox hunt will be on 50 Mc. so what about shaking up some gear and coming along. Don't bring your eight element yagi.

A fox hunt conducted both on 80 and 2 mx on Sept. 23 was held with 7ZAO as the fox on v.h.f. types but 7ZAK was the only hound to score. The fox must be getting too crafty, a change seems called for next time.

The last meeting of the West Australian V.h.f. Group Inc. was very well attended and an interesting lecture on klystrons and magnetrons was given. This should fire up the embers of enthusiasm of a lot of chaps for u.h.f. work.

The Sept. meeting of the Hobart group visited the airport at Liankerne, 16 members travelled to the drome and struggled back at 0030 the following morning. They had quite an interesting evening inspecting various aspects of the instrument landing system, the control tower and all that goes with—both h.f. and v.h.f.

News of 288 Mc. activity is very short at the moment. 5GF is one of the few stations active with xtal controlled gear in VK3. 5AW and 3NN carry out cross band contacts as well as two-way on 1 mx using xtal controlled gear. Kevin 6ZCB and Stan 6ZAS are going down to Cape Naturaliste just after Xmas in an effort to make the grade back into Perth on 288, 144 and 50 Mc. Keep them in mind so that you have your gear really working then.

For those who haven't a new Call Book, the following information will be of interest. All Australian t.v. channels have been allocated with the exception of Channel 0, 45 to 52 Mc. and Channel 11 215 to 222 Mc. In addition, there is now a Channel 5A on 137 to 144 Mc. which is to be used in Illawarra in VK2. In view of these allocations, I feel confident that we will have our two and six metre bands on a much surer footing than we did a year or so ago.—3AAU.

During the week-end I, as usual, spent some time listening around the bands and in one spot in the 7 Mc. "c.w. section" I heard two chaps operating phone (incidentally, it was good a.m. too). Into the middle of their QSO there came, in not so good Morse, "Get in fone band," which was repeated over and over. The "gentleman" on the key did not distress his listeners by revealing his identity.

I am not taking sides in the controversy over the division of our bands, but I would suggest that the best way to get the other fellow to act as a gentleman is to be a gentleman yourself.

Once upon a time we spoke of the "Spirit" of Amateur Radio," but I am afraid that spirit is moribund and shortly we will be able to say "requiescat".

—Fred Carruthers, VK2PF.

P.S.—The "gentleman" of whom I write is also, I would point out, in breach of the regulations.

RE PAGE EIGHT, OCT. "A.R."

Editor "A.R.," Dear Sir,

"One Angry Young Man" has only himself to blame if no one will speak to him on 6 metres. The majority of 6 metre stations are probably a wake up to him.

People who, when Amateur Radio is struggling to justify its existence, openly advocate the use of lower power and omni-directional antennae should be excommunicated. I openly discriminate against low power stations.

Low power is an affront to the chap you are trying to work and with the disposals market as it has been for the last 15 years, there is no excuse for running less than 50 home-brewed watts on 6 metres. (I refer to stations served with a.c. power, of course.)

"One Angry Young Man" is probably one of that type who proclaims you loud and clear on 144 Mc. and then gets niggley because you can't hear his 15 watts to a 52Z.

The Institute would do Amateur Radio a service if it were to ban the use of the SCR522.

You don't have to work many JAs on 6 before the whole grisly story comes into perspective. At first I wondered why the JAs gave me 10 and 20 db. over 8 when they were barely audible here. Then the QSLs started coming in—2 watts, 5 watts, 7½ watts. Good-night!!

Owing to the use of effective receiver bandwidths, we find it unwise to tune faster than 500 kc. per minute when looking for weak signals.

What a spectacle we have on 144 Mc! I call "CQ 2 Metres" from Mt. Gambier and have to tune 1,200 kc. to be sure of hearing all replies. (Ballarat gang 1?1 are above 145 Mc.)

By the time you tune a selective receiver over one megacycle, the answering station could have put it by half a dozen times.

One well known South West Victorian station used to give me a 2 x 2 call on 144.7 and then wonder why I didn't come back.

Only the boys who fly armchairs suggest using "the full 4000 kc." of our v.h.f. bands.

Every thinking operator wants ALL the activity in the first 900 kc.

—A. C. RECHNER, VK5ZCR/T.

LIMITED LICENSEES

Editor "A.R.," Dear Sir,

In reply to Peter Brown, Oct. "A.R.," I must say that his opening remark of being a comparative newcomer sounds quite right, and that he waits a few more years, gets a decent converter, a better rx or move his QTH to the VK2 capital, and instead of listening to the old hands hear for himself just what the Z calls are really doing. The majority have had their Limited ticket for some years now, and find there is a greater field in v.h.f. and u.h.f. for experimenting.

Try listening on those frequencies, and not to the old armchair operators.

—Chas. Abernathy, WIA-L2211.

N.S.W. CENTRAL COAST SECT.



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Reg Brook, VK2AI, Secretary.

S W L

Maurice Cox, W1A-L3055
Flat 1, 37 Boyd Crescent,
Olympic Village, Heidelberg,
N.23, Victoria.

Here is more from that man again, with news of the S.w.l.'s. of VK land. Just to keep you up with the Awards and VK Contest news, I've heard naught so far from the Federal Executive, so keep watching this page. Has anyone any queries? Just write and ask and we will do our best to help you.

Through this page I would like to thank Bill VK3AWS for passing on some not-so-old American Call Books for our use. These are as late as 1959, one of 1959 and three of 1960s. I think they will be used for prizes in forthcoming VK3 Contests. Thank you very much Bill. If at any time you want any help Bill, let the VK3 S.w.l. Group know.

VK NEWSREEL

South Australia.—The local S.w.l. Group are thinking of publishing a s.w.l. journal, which would include circuits, interesting topics, DX heard and in fact any item of interest to the s.w.l. Trevor and Colin have just sent out the circulars to all the s.w.l.'s. in VK5 to see whether or not they could supply any articles towards the journal.

The S.w.l. Group is growing in VK5 and at the present time the numbers are up to 45, which was allocated to Len Cook in Darwin. (Hello Len, how's DX up in your neck of the woods?) There are letters coming in all the time for issue of a s.w.l. number. Well that's very good indeed, looks like my home State will soon catch up to my adopted home.

By the way, to all those concerned, the VK3 S.w.l.'s. have not yet sought permission to use the VK prefix and no one to my knowledge is using it and must not. Permission must be sought first from the W.I.A.

Regarding the A.O.C.F. classes at the Mount, they were able to get the services of Col. VK3CJ and will be resuming classes every Wednesday night. Col's rx i.f.s. have been changed over from standard b.c. to ones out of a No. 19 set and is much satisfied. He says that when he's milking the cows 20 mx is open. Well Col., all I can say is, "Milk the cows earlier." By the time you read this, 240v. a.c. should be connected at his QTH. Col's 4-tube xtal controlled converter is progressing very slowly.

Gary L5026 has his new rx going but still some minor troubles. Not long ago a few of the S.w.l.'s. and Colin erected a 60 ft. mast for his v.h.f. beams and they will most probably be a 10 element on 2 mx and a 4 element on 6 mx. The mast has steps from about 8 ft. off the ground to 45 ft. and the top section of 12 ft. slides down the top section of piping to within about 4 ft. of the top.

Their converters for 2 and 6 mx will be 3-tube xtal controlled jobs on each band. 6ES8 r.f. amp., 12AT7 osc. and 6U8 mixer, feeding into the main converter at 7 Mc., then into the main rx at 3.5 Mc. Altogether a line up of 14 tubes and he says he may then get occasional signals. He's kidding of course.

Peter MacDougall, L5027, is building up a 6-tube rx and at present uses a No. 19 set. Thank you, Colin, for all the news from the Mount.

Victoria.—Last meeting of the Group, 17 were present, and lots of plans were discussed, mainly about the construction nights coming up and the Christmas Break-up to be held on 8th Dec. Mac played a tape of v.h.f. DX he obtained from W land; this was most excellent.

Rob Young seems to be settling in as the new Secretary okay, we can get more out of him now. Noel Harrison has his new 50 ft. mast up, he made it himself out of timber and cold water glue and now has a 20 mx doublet up, he uses an Eddystone 680 rx. Dave Fraser is having a spot of rx trouble (power supply) but won't be long before he's at it again—I hope. Mac has bought a couple of Command rx's to feed converters into. You should see his set up. Five of us worked up at the VK3 Convention on Sunday, 1st Oct. I climbed a tree, my legs are still stiff and we had a good day. Fred Mackiewicz was there also.

Ray Price has been ill, sorry to hear it son, hope you soon recover 100 per cent. Len Poynter was at our last meeting and he tells me he heard a G3 on 160 mx calling CQ, so keep your ears open on the top band.

CORRESPONDENCE

Letters this last month are from Fred Mackiewicz, Peter Drew, Chas. Abernathy, Peter Field, Eric Trebilcock, Peter Vernon (a newcomer from VK2) and Harry Major. Thank you fellow S.w.l.'s.

Fred L3103 has been inactive lately due to school exams.; also the transformer in his rx blew up, bad luck Fred. He still has a Philips d.w. which is pretty good for 7 Mc.

Peter L6021, "The Ears of Nedlands," with all the DX he has heard and cards received, he's only got four Ws States confirmed, tch, tch, Peter. He sent me a design of an antenna which he was told about by VK6LG. It's a sort of vee, each leg is 66 ft. 6 in. and they are at 90 degrees angle. The ends should be lower than the middle for best results. It is fed with open wire and the feeder may be any length. Now the two ends of the legs are joined so from the air it looks like the above. The ant. is multi-directional and works on 80, 40, 20 (for sure) and probably 15, 10, 6, 2 as well, so Peter says. (I have one up and it works.) He received a QSL card from WVVH with a very interesting pamphlet with all the details of WVVH and WVV.

Not long ago Peter, Eric Hardwick L6001 and his XYL, Mrs. Hardwick L6002, visited Fremantle and went over the Japanese ship Iku-shima Maru. Peter was shown from the bridge down to the engine room and of course naturally the radio room. They drank Japanese mun-hed potato chips and talked to the radio ops, Peter twiddled the knobs of the rx for half an hour and tried desperately to get it into his pocket. (Of course he failed, he didn't have his chaff bag with him.) My, this lad hears some DX.

Harry Major has been conspicuous by his absence and he misses us all. He's had other jobs to do and regrets not keeping up with the latest doings. He hasn't heard much lately, 3W1 is poor at his QTH but 2W1, 5W1 and 7W1 can all be heard very well. That is caused through long skip on 40, Harry. He's scrapped his 7-valve super and is looking for a better rxer. Hope you are successful Harry.

Peter Field received a s.w.l. card from UQ2-22317 and is mystified why it was sent to him. You've got me, Pete, I wouldn't have a clue, but that sort of thing goes on, S.w.l. sending their card to S.w.l. all over the world. Peter's teacher at school is interested in Amateur Radio too; get to him, Pete, and teach him all. Thanks for the letter.

Eric Trebilcock—I am amazed at his statistics, it's really something to be proud of and he's setting a pretty fine example to those who are entirely interested in s.w.l. only, surprisingly enough there are only one or two in VK3 that are not interested in the tx side of Amateur Radio that I know of. It's nice to read of Eric's achievements. QSLs received 7,120 (I think this is post-war, I'll confirm this next month), has heard 279 countries in 40 zones, 272 confirmed in 40 zones, log entries 246,723. QSL cards received in 1961 to end of Aug. 465 from 111 countries and 35 zones. Reports sent in 1961, 743 to end of Aug. Rarest 15 cards received in August in rarity order: AC5PN, ZL3VB/Chatham Isl., HQ2AT, KM6BT, W80LT/PK, UA2AG, VR3V, EC2AC, KR6LD, OA4FN, KL7SFN, HK1QQ, KZ5MQ, ZC4PB, 4S7LB. And QSLs so far in Sept.: HK7ZT, JAIANO, JZ0PH, OZ2NU, UA4IE, UA0RD, UB-5AV (letter direct in sealed envelope from the Ukraine), UC2KAG, U18KBA, VK1ACA, W0SMV (South Dakota), ZD6RM, W2MAK (mobile marine).

Most amazing don't you think lads, and it is a real pleasure to put them down in this page. In my opinion he's the greatest of all the S.w.l.'s. and in the bargain a mighty fine guy. He tells me he's done little listening in Sept. so far, only 50 log entries were made. Thanks for your statistics and letter Eric.

Another newcomer is Peter Vernon of VK2. He says "I am an S.w.l. in Sydney and an intending Amateur, but I am sitting for the issuing certificate this year. I have not the time to join the W.I.A." Tch, tch, Peter, that's no good, but he subscribes to "A.R." and after receiving his first copy finds it very interesting. Glad you like it Peter. Peter's rx is only a dual wave with no r.f. stage and the antenna is 66 ft. long, 15 ft. off the ground.

Peter's rather unusual method of receiving a.s.b. may be of some interest to S.w.l.'s. lacking a communications rx. He uses two rx's, the local oscillator of one acting as a b.f.o. for the other on which it is intended to receive the signal. The extra rx need only be a b.c. rx. For example, if one desires to hear a sideband station on 7000 Kc. and the b.c. rx has an i.f. at 455 Kc., simply tune it to 1320 Kc. with the volume down and the local osc. (if it operates on the high side of the received signal) will be tuned to 1775 Kc., now the 4th harmonic of this falls nicely at 7100 Kc.—the frequency of a.s.b. station. Careful

manipulation of the b.c. rx's tuning knob will then produce results. Thank you Peter. He also entered in the R.D. and likes it quite well. The World Radio Handbook he likes too. Here are some interesting frequencies to note that Peter has supplied. The Flying Doctor Service School of the Air around 6.8 Mc. On 6.280 Mc. Melbourne Radio calling Small Ships. Thanks for your letter Peter, most interesting.

Well, fellow S.w.l.'s., that's my issue for this month, so 73 and best of DX, Maurie L3055.

DX LADDER

	Countries Conf. Hrd.	Zns. Conf.	S.s.b. Conf.	S.s.b. Hrd.	No. Cds.
E. Trebilcock	272	279	40		7120
D. Grantley	90	228	36	64	
A. Westcott	76	157	30	31	92
M. Hilliard	62	201	26	3	78
M. Cox	32	203	19	3	97
C. Abernathy	27	56	21		78
P. Drew	19	166	15	2	59
I. Thomas	16	130	13		36
P. Field	13	118	9		
N. Harrison	16	20	13		160
N. Jenkin	10	137	7		
D. Fisher	3	38	3		3

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S.S.B. AND 20 METRES

The October editorial of "A.R." put forth the A.R.R.L. case for the solution of the QRM problem on the high end of 20 mx. This scheme does not find favour all over the world, however. Here is the R.S.G.B. stand on the matter as extracted from the August R.S.G.B. "Bulletin":

"The Editorial in "QST" for July 1961 was headed '20 Metres—a Challenge' and dealt, at length, with a recommendation that U.S. Amateurs should leave the frequencies between 14,335 and 14,350 kc. clear for use by s.s.b. stations outside North America. This recommendation stems from the decision, in 1959, of the A.R.R.L. to request the F.C.C. (the U.S. licensing authority) to allow operation by U.S. telephony stations on the frequencies between 14,300 and 14,350 kc., which permission became operative on March 10, 1960. The A.R.R.L. stated that the main consideration behind this request was the concern for domestic operation, and therefore none of the I.A.R.U. Societies were asked for their views on the matter, and indeed letters from the R.S.G.B. Headquarters to the A.R.R.L. remained unanswered. It does not require a tremendous amount of foresight to realise that an alteration in the habits of nearly a quarter of a million operators in the U.S. would have its repercussions on the rest of the world, and the position is now becoming such that stations in the U.S.A. are often unable to work overseas operators at the h.f. end of the band because of the tremendous QRM blotting out the weaker DX stations, who are commencing to operate around 14,125 kc. away from the W/K QRM.

"To arrest this move the A.R.R.L. recommend that 15 kc. (sufficient space for seven s.s.b. stations) be left clear at the top end of the band. Users of the 14 Mc. allocation are well

aware that this portion frequently contains commercial stations and jammers, and is a resting place for phone patchers demanding a clear frequency, traffic which, in any case, has no place in an Amateur band. Further, the tuning arrangements of many aerial systems lead to least efficiency at the band edges. A somewhat ironic note is that having created the situation by its one-sided action, the A.R.R.L. is now seeking the co-operation of Amateur stations on a world-wide basis. There was considerable opposition amongst W/K operators to the original proposal, and further opposition is now typified by a letter from R.S.G.B. member W2VZV, who presents a logical argument against the recommendation and says, inter alia, '... the League should recognise its mistake and either sponsor the use of the lower frequencies by foreign s.s.b. stations or make a new frequency allocation proposal...' Further, operators in the Commonwealth and Overseas are unanimous in their condemnation of the scheme.

"Your conductor (G2BVN) is firmly of the opinion that the plan has no merit and that all s.s.b. DX stations should continue to transfer their operations to the lower portion of the band in the region 14,120 to 14,140 kc. From there they can either enjoy relatively interference-free contacts with other DX stations or listen in the American telephony sub-band for QSOs with U.S.A."

In Canada, the majority of operators favour the use of "the bottom 40" (14,100 to 14,140 kc. for s.s.b. The Ontario DX Association has been very vigorous in its efforts to promote sideband occupancy of this lower segment. A letter from this association was published in the Correspondence page of "A.R." June 1961. It was signed by Bob Kenny, VE3AYE, the well known second operator of VE3BWY.

In the United States, a very authoritative voice has been raised in opposition to the A.R.R.L. plan. I refer to the September "CQ" Editorial, "Zero Bias." Part of this reads:

"... It soon became obvious to the League that ill feeling was rapidly growing concerning the acquisition of this segment (14,300-14,350) and, on May 5, 1961, the Board unanimously voted that U.S. and Canadian Amateurs voluntarily refrain from operation from 14,335 to 14,350 kc.

"...CQ" feels that Radio Amateurs, also being somewhat related to the human race, are as disciplined as any other intelligent adult group. How successful has the request been to voluntarily curb poor operating practices; QSL 100 per cent. of the time; Switch To

Safety; etc., etc. It should be noted that the latter points are considered as operating axioms, not a question of ethics—with which we are involved here.

"We feel strongly that this voluntary plan is unreal, foolish and can lead only to chaotic conditions, reflecting the unwillingness of the minority to conform with the majority.

"If we are willing to forego the upper 15 kc. for DX—why then do we not relinquish this segment legally? Or perhaps ask our DX brethren to utilise frequencies below 14,200 kc. as has been done in the past.

"We urge the A.R.R.L. Board of Directors to reconsider their hasty move... This situation is too important to leave to chance. A firm decision is required, and required soon!"

What is the feeling on the matter amongst the Sidebanders in Australia? I would be very pleased to receive YOUR ideas. Drop me a line or call me on the air.

[Two letters have been received from VK Amateurs on Editorial in "A.R." Oct. '61. These have been passed to F.E. for comment prior to publication.—Editor.]

BETTER OPERATING—NETTING

Get a net going on any one of our bands and in five minutes one or more of the participants are not quite on frequency. It is stated in the rule book that each five minutes we are obliged to identify. Why not get into the habit of checking the netting at this time.

KEYING THE TRANSMITTER

Have you had the desire to use some c.w. occasionally? Many ex-cw. men are amongst the sideband operators today and many more are joining our ranks. However having once enjoyed the pleasures of pounding brass, it seems a pity not to have c.w. available in your sideband transmitter.

In most transmitters this is not a great problem. Producing the signal is just a matter of unbalancing the balanced modulator. Phasing transmitters usually have some form of carrier insertion and the balanced modulator circuit in the August Sideband Notes shows one method which may be employed. Filter transmitters have a rather more complex form of carrier insertion using a cathode follower and feeding the signal around the filter. The 7380 tube used as a balanced modulator in a filter exciter makes for simplicity in this regard. A switch can be used across the balance control in the beam deflection circuit.

Your keying method will depend on the arrangement of the control circuit in your transmitter. Some way of keying the VOX relay will usually be quite simple. If you use the VOX relay to actuate another relay, the key may be connected across the VOX relay contacts. You will be delighted with the operating convenience obtained, just press the key to transmit with full break-in facilities. Do not forget to arrange for the disabling of the audio section, the note will not sound quite T9 if the microphone is left open!

VK2ON TRANSMITTER

It is regretted that the continuation of this interesting series does not appear this month, however next month, Sideband will bring you a description of the driver amplifier and the final linear amplifier using an EL38 and a pair of the popular 811As in grounded grid.



THUMBNAIL SKETCH OF K6CQM

Bob Murphy, now K6CQM, joined the Navy in 1942 to learn the code. He spent three years in the Pacific area as a radio operator, and within a month of his discharge in 1946, he had applied for his Ham licence. This was in Portland, Oregon, and his first call was W7JMZ. In those days he was an avid 40 mx DXer. Every time he tried to sneak up on 20 mx W7AMX (about five blocks away) would complain of his key click. With his help these were cleaned up. In 1950 Bob joined the Philco Corp. as a tech. rep. and for three years in the Far East he held the call KG6ABB and was chief op. at JAZIM and JAZOL.

Presently working Philco in Palo Alto, age 35, married (KYL Joyce) and one YL harmonic who is already interfering with Daddy's DX activities. Received his K6CQM call in 1957 and started out after 40 mx DX with a 32V3, 75A3 and 40 mx doubler. At the present time equipment consists of a 75A4 rx, HT32 exciter driving a "K6ENX" final with a pair of 4-400s. Sky hooks are a 3 el. Gonset Tri-bander and inverted vee doublers for 40 and 80 hanging from a 55 ft. tower.

Primary interest is c.w., but he does make rare appearances on s.s.b. to pick up new countries for phone DXCC. Present score is 280 worked and 274 confirmed.

TEST EQUIPMENT

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NOTES

FEDERAL

R.S.G.B. MEMBERSHIP

The annual subscription rate to R.S.G.B. for Overseas Corporate Members is 28/- sterling. Application forms may be obtained from the R.S.G.B. Headquarters, New Ruskin House, Little Russell St., London, W.C.1.

TIME STANDARDISATION

At the annual meeting of A.R.R.L. Board of Directors on May 3, 1961, Raymond E. Meyers, W6MLZ, moved that all references to time in any League publications or bulletins of the Communications Department be in G.M.T.

This matter is worthy of consideration by the W.I.A. and all such bodies throughout the world.

RADIO AIDS SHEEP RESEARCH

It was reported by "New Scientist," May 25, that in Australia, the C.S.I.R.O. has equipped selected sheep with portable radio transmitters. The transmitter is used for sending data about the times spent by sheep in grazing and ruminating. Movements of the jaw open and close a switch which causes a signal to be sent to recording apparatus in the laboratory. No mention is made of frequency being used for these tests or the exact location.

CONTACT ON 10,000 Mc.

Congratulations to Keith Jeffcoat, VK2BK, and Alan Nutt, VK2DN, for establishing communication over five miles on 10,000 Mc. VK-2DN transmitter on 10,000 Mc. and VK2BK on 144 Mc. Contact was at 1445K on June 3.

CIVIL WAR CENTENNIAL AWARD, VA-CWC

The Virginia Civil War Commission and the Richmond Amateur Radio Club of Richmond, Virginia, are pleased to announce a new award to be known as the Virginia Civil War Centennial Award, VA-CWC. This award is being issued from the capital of the Confederacy, Richmond, Virginia, to commemorate the four years of the War between the States, 1861-65.

This award is available to all licensed Amateurs. No award is to be made to s.w.'s. The requirement of the award for stations outside the United States and Canada is contact with 10 Virginia stations, 3 of which must be Richmond stations. Henrico and Chesterfield Country stations will be counted as Richmond stations. Contacts shall be made during the period from April 1, 1961, to and including May 31, 1965.

Applications for this award shall be addressed to the Richmond Amateur Radio Club, P.O. Box 73, Richmond 1, Virginia. The list submitted shall be signed by two other licensed Amateur operators or an officer of the local radio club certifying the fact that the applicant has the QSLs in his possession, verifying the contacts. A charge of 50 cents or 4 I.R.C.'s shall accompany the application.

ANOTHER AWARD: E.A.R.S.

This award is issued by Edmond Amateur Radio Society, of 316 East Hurd, Edmond, Oklahoma, U.S.A. All DX stations are to contact three members of the Society after 1st August, 1959. Applicants must send list of stations contacted, giving time, mode and frequency. There is no charge. S.w.'s. are eligible for this award.

The Secretary of the Society, Bertha W5JCY, would like to QSO a YL or XYL of VK Hams.

MR. CHARLES STRADWICK, O.B.E., RETIRES FROM P.M.G. DEPARTMENT

Our congratulations to the retiring Director-General of Posts and Telegraphs, on his appointment as General Manager of the Far East-Pacific-Australia division of International Telephone and Telegraph Corporation and Vice-President of International Standard Electric Corporation.

As Director-General he has been associated with many impressive policy changes and in 1956, Mr. Stradwick was chairman of the Olympic Games Communications and Broadcasting Committee.

B.E.R.U. CONTESTS 1961

The leading entrants in the various sections of the B.E.R.U. Contests 1961 were as follows: High power section: ZC4IP, G5WP, G3FPQ, VE2WW, G5DQ, G5RI; low power section: G3IDC, ZS4MG, VQ3HD, G2DU, VK7SM, and G3GNS.

NEW SOUTH WALES

GENERAL MEETING

The Sept. meeting of the Division was held, as is customary, at Science House, Gloucester St., Sydney, and was presided over by Bill ZYB. The attendance was somewhat disappointing, but the lack of members was in some manner made up by the presence of a goodly number of visitors. These were welcomed by the President and included: Jim 4HZ, Gordon Green, Robin Germon, Ron Mayall, Serge Dubrich, Toba Kovacs and Des Wickham. Apologies for non-attendance were received from ZMP, Z2EL, Z2H, Z2AGH and Z2T.M. The passing of Frank Goynne, VK2UX, was announced and members observed a silence of one minute to his memory. New members admitted consisted of 7 full members, 23 associate members, and 1 member club.

The lecture for the evening was yet another highlight arranged by our Education Officer, Bob Zuker, of Commonwealth Electronics, delivered a most interesting and instructive address on "Transistors in Communications Equipment" and liberally illustrated his points with slides. Readers are urged to come along on meeting nights and support those who are working behind the scenes to arrange lectures of such a high standard, and to absorb some of the technical information which is forthcoming. At the conclusion of the lecture, ZCO proposed the vote of thanks and suggested that a permanent record of the lecture be made. Harold 2AAH, speaking on behalf of the lecturer, announced that Mr. Zuker had expressed his willingness to make a tape of the lecture and in addition had donated the slides he had used in his lecture to the Division.

The Federal Councillor's report was received and Pierce ZAPQ further dealt with agenda items which have been already received and which will be discussed at the Federal Convention to be held in Perth at Easter next year. A note of warning, any members having items which they wish to be discussed at the Convention, should forward them to the Federal Councillor, 14 Aitchison St., Crows Nest, by no later than Feb. 1962, but it is desirable that they be received as soon as possible.

Jim 4HZ spoke in glowing terms of the assistance the VK2 Division had been in supplying the Wide Bay and Burnett Radio Club with Correspondence Course papers in the past which had resulted in an increase in the Amateur population in that area.

DIVISIONAL CONVENTION

Meetings have been held of a small committee to arrange the Divisional Convention, which will be held in January 1962. The January general meeting will be held at Science House on January 26 at which no doubt many country members will be present. The following day, Saturday, a Dinner will be arranged and a Field Day will be held at Dural on the Sunday. Since the organisation of these functions is only in its early stages, no firm announcements can be made, but later issues of "A.R." the Bulletin and broadcasts will carry more information. The main thing is to reserve that date and be here in Sydney to take your part in this, the Divisional activity of the year.

Helpers will also be required as time goes on so join in and assist your Council by doing your bit and maybe the other fellow will join in also. Remember, "many hands make light work."

HUNTER BRANCH

The Sept. meeting of the Branch was again well attended, there being 19 members, nine associates and three visitors present. Main business of the evening was the lecture by Keith Jeffcoat, VK2BK, of "Radio and Hobbies," entitled "Improving the Performance of Your Receiver." The lecture was very well received and members were presented with

SILENT KEY

It is with deep regret that we record the passing of:—

VK2JP—Jack Pike.

VK2UX—Frank Goyen.

Ex-VK5MB—H. M. Brown.

printed diagrams to illustrate the various modifications suggested. Many of the chaps rushed home to get out their soldering irons and high gain valves following the lecture. At least one member, Tony Mullen, has made his AR8 "go like a rocket" since hearing about the finer points. Mind you I think he had a pretty fair idea before. Our old and respected rubber cheque man, Shannon from the bay, reckons he is going to build a preselector to give more gain.

I am told that no preselectors are needed to hear the f.b. 2 mx signal radiated by John ZJG. Congratulations on a mighty signal John. Rumour has it that 2 mx activity in the zone is on the increase and a movement is afoot to have all those interested obtain identical xtals so that a net may be formed. What about it chaps? For further details see Gordon Z2SG or your scribe. (It is said he knows where xtals may be obtained. Among the visitors seen at recent meetings has been Bill 2CW. I don't think it would take much arm-twisting to get Bill to join our ranks again, so you professional arm-twisters, get busy!

Some people are never satisfied. Did you hear that A Young Lad gave Z2SG a 5 and 9 report the other night on 2 mx? Nothing strange you may say, but here's the pay-off. Not two minutes later the same Young Lad gave Bill 2XT a report of some hum. Well? Well they were using the same tx. Some people stop watches too! The hon. member for Tichkoff Tunnel, Raspberry Jam, has sold his 12Z. This can only mean one thing. He is secretly building a super mobile rig to put out a louder sig. than Bill 2XT next field day.

And speaking of field days, we've just had a beauty—or so the lads seem to think. For those of you dear readers who were not there to join in the festivities, they went something like this. To begin, the dinner this year was held at the Esplanade Hotel at the top of the town and everybody agreed that this was a good thing. Almost seventy locals and visitors were present including Mr. Young of the P.M.G. Depart., Neville 2KY editor of "Radio and Hobbies", Ray 2HC, Harold 2AAH and many more. If the editor has been kind to me, you may see some of these distinguished persons in a photo in this issue. After the Royal Toast proposed by Lionel 2CS, Bob 2AQR lit his now famous cigar and the business of the evening began in earnest. Between mouthfuls of delicious food we lent an ear to the speeches of the evening. They were "Our Visitors"—Stuart 2AYF, responded to by Professor J. S. Ratcliffe and Mr. H. S. Young, representing the I.R.E. and P.M.G. respectively. Amateur Radio and the W.I.A.—Ray 2HC, to which Max 2MP responded. There was then an organised bus rush for bundles of technical literature organised by Gordon.

Members by this time had adjourned to the lounge to hear the guest speaker for the evening, Neville Williams, deliver his address. We were treated to some very interesting information about the production of the journal "Radio, Television and Hobbies." To complete the evening, Neville arranged with Bill 2XT to do a test with some imported Citizen's Band gear. This was most impressive and although I was sitting at the back of the room, every word that came through the small speaker was audible. Neville said they had a range of up to six miles. Not bad for a hand-held set weighing a few ounces. And to really put the cap on it, Gordon announced that John 2DZ, local manager for Astor, having already donated a transistor car radio for a field day prize, had now made another generous donation. We had to wait until the next day to find out that this was none less than a new 21 inch t.v. rx. Up until the time of writing these notes, it has not been decided who will win the set, but by the time these appear, you'll all know who was the recipient. The caption was to read, "For the most meritorious performance of the day." After some rag chewing outside the hostelry, parties went their several ways and prepared for the morrow.

The day was windy and hot but competitors, not to be daunted by the weather, began arriving early and soon the field day was under way. First event was the mobile scramble, all bands, and this was won by Bill 2XT with his mobile kilowatt. (I'm joking of course, Mr. Davidson.) He also managed to take off the two 144 hunts, although Lionel and Ian cunningly concealed the tx in each case. The 7 megs hunt was not so easy by all accounts and Harold 2AAH, who came in with 35 minutes to spare, says credit must go to his snoop loop which was equipped with "sense". And that was about the only sense in this hunt too, for while some members chased S9 sigs around the quadrangle at Booragui High School, Ian 2AJF, Tony and Helen, 2nd op. of 2PZ, kept up a barrage of funny stories. These were designed to confuse the searchers and it

seems they did for the terrible trio remained unfound, except by Harold, for the hour. While all this was going on, a 65-passenger launch was cruising on the lake with XYLs, YLs, OMs and junior ops on board. And to make matters even more hectic, a fendish quiz, dreamed up by an old character, was circulating among all who had nothing else to do.

As well as the mobile competitions, a display of home-built gear was arranged with a handsome prize for the winner. Each participant in each competition was given a ticket to be drawn at the end of the day. The prize for the Astor car radio. It was won by Ern 2FP who also won the prize for the best home-built gear. Erica, XYL of Ivan 2AIM, scooped the ladies' quiz again for the third year in succession. Next year we're having a special elimination contest! OMs' quiz was won by Stuart 2AYF and the prize for the best field day programme submitted went to Dave 2AWZ.

And so ended another Blackalls Field Day. Many stories were told and many old acquaintances were renewed and many vows to return against next year were taken. It was pleasing to see such a good roll up and also to see some faces which had been missing from meetings for some time. Among these was Harry 2YL from the coal city. Hope to see you at the meetings too Harry. One of the regulars who could not be there was Harry 2AFA as he was in the hospital with his feet up. He's back on deck again now though and we wish you a speedy convalescence Harry. The committee is most grateful to the Booragull hamburgers for their assistance with the erection of signs and other "behind the scenes" jobs.

P.S.—If you want to know more about 2 mx and the mysteries associated therewith hie yourself along to the University College, Tighes Hill, on Friday week, that's the 10th, and there you will find a man who knows much about this subject. Yes, I mean Major 2RU. So roll up and let's awaken 144 in Newcastle. As Bill is doing a Columbus act just now, I doubt that there'll be any social meeting during November. Never mind, see you the month after. 73, 2AKX.

SOUTH-WESTERN ZONE

The Ninth Annual Convention of the South-Western Zone of the W.I.A. was held over the holiday week-end, 30th Sept.-1st Oct., at Tumbaramba. President of the W.I.A. N.S.W. Division, Bill 2YB, accompanied by his XYL and son, and Councillor Tim 2ZTM, represented the Divisional Council. The Convention opened on the Saturday morning at the Tumbaramba Show Ground with registration and rag chews. During the afternoon the beauty spots of the surrounding district were viewed, when a tour was conducted by John 2EZ. The evening activities commenced in the C.W.A. Hall, with the Convention Dinner, which was chaired by Bill 2AHV. Sixty-six persons attended the dinner during which the Shire President, Cr. O'Keefe, officially opened the Convention. The toast of the W.I.A. was acknowledged by Tim

OBITUARY

FRANK GOYEN, VK2UX

The death occurred, in Concord Repatriation Hospital on 30th August last, of Frank Goyen, VK2UX, after four months' serious illness. Though Frank may not have been known to many members today, it was under his leadership that the N.S.W. Division began its new lease of life as the A.R.A. of N.S.W. was wound up and put into liquidation in the early thirties. Frank had held most offices in the Division over a number of years and rose to the rank of Squadron-Leader in the R.A.A.F. Amateur Radio was well represented at his funeral, by his brothers-in-law, VKs 2EK and ex-2LS, and the Institute was represented by a life-long friend, Jim 2YC. The sympathy of members is extended to his family.

H. M. (MERV.) BROWN, EX-VK5MB

Late R.A.A.F. and P.M.G., aged 55 years. Radio Amateurs in VK5 heard this month, with regret and sadness, of the untimely passing of "Merv," as he was affectionately known to all and sundry. Although not active on the air for the past few years, he was in close contact with the Amateurs through his official capacity as a Radio Inspector, but is most remembered for ready assistance toward the budding Amateur, especially during the early 1930's when he established his school for training in Morse and theory, most of the early "M" call signs in VK5 being a lasting tribute to his painstaking attention to his students.

Respected by all for his fairness and high principles, it often being said of him that he would fight as hard for you as against you, if he felt it necessary. His passing is a severe blow to the VK5 radio fraternity.

To his sorrowing wife, Ivy, we extend our deepest and sincere sympathy, and can only hope that time will assist to ease the sense of loss and sorrow through which she is passing.

2ZTM and at the conclusion of the dinner, an interesting address on Wireless Institute matters was presented by the President, Bill 2YB. Films were then enjoyed until supper time.

Activity commenced on Sunday morning at 10 o'clock, with a 2 mx fox hunt. This was won by Eddie 1VP, second place went to Tim 2ZTM. The fox was Keith 2ZAA. Back to the grounds by 11 a.m., all gathered around to listen to the Divisional broadcast. Due to poor conditions, contact was impossible on the call-back. Next came the Disposal Sale, which was well attended, after which lunch was taken. The early afternoon from 1.30 to 2.45 found members busy with the all-band scramble, but once again due to poor conditions, most of the contacts were of a local nature. How-

ever, Bill 2YB turned in a log of 1-4 contacts to take first place, the minor placings being filled by Frank 2ACQ, with 13 contacts, and Ross 2PN with 12 contacts.

At 3 p.m. the hidden tx hunt got under way to be won by Tim 2ZTM with Keith 2ZAA filling second place. Back again at the Showgrounds, the final event of the Convention was the blind-fold tx hunt. The ladies' section was a tie between Beverly Hilton and Freda 2SU. First in the gents' went to Dave 2DE, second place was filled by Tim 2ZTM. Graeme Flynn took away the first prize in the harmonic section, with Fiona Cutts coming second. After afternoon tea, prizes were presented to the winners of the various events and the zone officer thanked all for attending and the Tumbaramba boys for a job well done. A film evening was held for those staying over night and a very enjoyable tour of the area was conducted on the Monday.

YOUTH RADIO CLUBS

There are gratifying signs of increased interest (official and otherwise) in Youth Radio Clubs. The VK2 Council have approved in principle of the graded set of awards on the lines formulated by Rex 2YA and a Youth Radio Club Committee is being born with members, Rex 2YA, Bro. Lee 2AXK, Keith 2AKX and Ken 1KM.

Canberra is on its way to being a busy centre, as far as spare time permits. Youth groups are meeting at 1LS (Lyneham High School), 1BC (projected at Police Boys' Club), and 1ACA (Canberra Radio Society). The total of active members is about 60. Old sets are collected and scrapped for parts. A series of 22 stencilled sheets is available, ranging from "Information Sheet and Membership Form," "Crystal Set," "Colour Code and Valve Sockets," to circuits for 1 transistor, 1 valve and upwards. (Copies available if anyone writes to 1KM). The VK2 Correspondence is in steady demand (but not allowed to interfere with high school home-work!). The results in a few years should be interesting.

THE BLUE MOUNTAINS SECTION

The monthly meeting for October was held at Lawson Council Chambers, as usual, and 14 members attended. There being no lecture, the night was devoted to business, the section field day programme was finalised and it looks like a good day should be had by those who join us on 5th November.

The lecture Dave 2NK delivered to C.D. at Lawson was well received. A typical evacuation film was shown and proved very enlightening. Eight club members ventured to Lawson to support Dave and by the many questions asked all round, the night was voted a complete success.

The on-the-air get-together is proving quite successful, even though the October night was a bit confused. Some of us remained on till almost midnight. Don't forget second Friday at 2000 hours, 80 and 2 mx.

Sid 2AVK is selling up all his gear in preparation for going on six weeks' holiday and



★
Hunter Branch of N.S.W. Division, W.I.A., held its Annual Dinner on 30/9/61. Among the 70 who attended were (standing, from left) Gordon 2ZSG, Branch Secretary; Pierce 2APQ, Federal Councillor; Allen Fairhall, M.H.R., 2KB; Stuart 2AYF, Branch President; Lionel 2CS, Branch Vice-President; and seated Professor J. S. Ratcliffe, M.I.R.E.; Ray 2HC; H. S. Young, 2AMZ, P.M.G.'s. Dept.; W. N. Williams, 2XV, Editor "R.T. & H."

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then perhaps for an extended working tour. Sid will have portable equipment, about 20w. on all bands, so keep a listen out for him. Alec 2EX has obtained a 2 mx 100w. rig - yet another to the clan. Hope to hear a lot of you on 2 Alec. Don 2ART will have studio modulation very soon and is going to throw the key away. Looks like I will have to hot things up here to keep up with the Jones! Dick 2RM must be a quiet worker, my spies haven't come up with anything yet, maybe next month.

No excuse for Noel Walker now, he has all the bits and pieces for his h.f. rx and is listening on 2 mx and has more than half a tx for that band. January exam, Noel? Jack 2ADF will be on holidays in a week or so, half your luck and have a good time. Col 2AQU was on 2 mx the other night with Bob 2ASZ, and according to my spies Bob is going to have a go at sideband. 73, 2ADA.

BOORAGUL HIGH SCHOOL RADIO CLUB

Although there has not been a great deal of transmitting activity this month, things are still moving behind the scenes and it is hoped that regular transmissions can now be maintained. The club has just completed the recruiting drive from second-year classes and our numbers have almost doubled. Most of the senior boys are getting ready for examinations towards the club attainments certificates and it is hoped that some of the new members may also try for the Elementary in December.

Now that Ian has his call, 2AJF, he has taken to hiding tx's. At least he very effectively hid the 40 mx one for the recent Blacklacks Field Day so that only one contestant found it. Tony helped him there. Bruce and Allen acted as pathfinders, not for the hidden tx, and put up the signs directing strangers to Blacklacks.

Rex 2YA has presented the club with quite a quantity of gear including among other things, an AT5 on loan from the Institute. We may have a big signal soon!—73, 2ATZ.

HIGH SCHOOL RADIO CLUB MEMBER GETS FULL LICENCE

One of the members of the Booragul High School Radio Club (N.S.W.) has recently been allocated his full call. He is Ian Forrest, VK-2AJF, a seventeen-year-old fifth year pupil. Although he has been interested in radio since he was 12, Ian began serious study only last December. Ian is the first member of the recently formed school radio clubs to gain his ticket. Because of school work, he finds it difficult to work the bands as much as he would like, but he intends to make up for this when the Leaving Certificate is over. A keen c.w. man, Ian found little difficulty in reaching the required speed for the A.O.C.P. The theory, he says, was a different matter.



The photograph shows Ian at the school station, VK2ATZ. He designed and constructed the tx. which runs about 15 watts, crystal controlled.

VICTORIA STATE CONVENTION

On Saturday, 30th Sept., the Twelfth Annual State Convention commenced at 2.15 p.m. at Scott's Hotel when Senator Hannan opened the meeting. The Senator gave a short speech outlining certain facets of the Ad Hoc Frequency Committee and stated that regrettably he could not give any advance information. He continued with an outline of the regard in which he held the W.I.A. and wished all a successful and pleasant Convention, which it truly was. All present then visited the equipment display put on by various companies and which gave all there an opportunity to obtain first hand information on various items ranging from a xtal microphone to a full size communications transceiver. In addition, leaflets on various items were available and these were rapidly put into people's pockets.

Excellent displays were featured by Messrs. Mullard, Cunningham, Zephyr, Philips, A. & R., E. A. Monk, Warburton Franki, Collins and Pye, who generously donated various trophies for the Convention prizes.

After afternoon tea the Convention business started. David Wardlaw was in the chair with Michael Owen Secretary. Business commenced by reading the past minutes which, after hav-

ing been accepted and discussed, left the way clear for new business. The Secretary gave a detailed account of the history leading to and culminating in the temporary loss of the Victoria Parade rooms and then outlined the steps being taken to attempt to have permission granted for our future occupancy. All present were surprised at the detail involved in these proceedings and approved of Council's actions in the matter. The meeting continued by discussing various other matters which led to hilarity or ire, depending upon whether those present agreed with or disapproved of the motion being submitted. However, whilst it may have seemed dull, this important part of the Convention was actually very interesting and it is gratifying to note that so many attended.

At the conclusion of the Convention business the meeting retired and the Dinner then commenced. This was a most successful event and the laughter and talking during the entire evening reflected everyone's enjoyment of an outstanding time; and every credit must be given to Doug Bowie for his masterful effort in organising the feature of the day. If you could not be present make up your mind now to come along next year as it is an event you will wish to take part in again or participate for the first time. Put aside two shillings a week for the next year, so you can afford to take your wife or YL and have an evening out; it is well worth it.

On the Sunday, a large gathering took place at Ferny Creek picnic grounds where the day commenced at 10 a.m., but many were there far earlier. The first event was the tx hunt and at 10.30 a.m. the VK3WI broadcast took place from the grounds and was re-broadcast over the p.a. system, then at 11 a.m. the first disposals auction was held and the tent was soon filled with eager bargain hunters, all of whom obtained something for the junk box. By now the grounds were beginning to fill with people, cars, children, and the smell of a barbecue lunch being cooked, so only a few were prepared to leave and inspect the t.v. tx at Mt. Dandenong. Some commenced the fox hunt on 80 and 2 mx, whilst others just enjoyed a QSO with their friends.

After lunch a mystery taped voice contest was held and then the cricket match of the year: Duncie Talk Demons v. Ancient Modulation Maulers. This would have gladdened the heart of any baseball enthusiast. Anything, but anything went, including the batsmen who all swore the pitch was at least four hundred yards long. No cricket was played in spite of the official description, but A.M. beat S.B. (Oh well, it only proves the superiority of A.M. on all occasions.)

During all this time the children were enjoying themselves and being rewarded for winning races and the other events which had been arranged for them.

This two-day Convention was an event which reflects credit on all concerned and proves that every family can really enjoy themselves if they participate. One family, a group of VK0, were so out of it that they phoned their good wishes from Wilkes, and this was only one highlight of an outstanding two days.

And so concludes the description of a most successful Convention for which all credit must be given to the most important people—all those who attended. Their enjoyment was arranged by a very large team of organisers, to whom our thanks are due.

MONTHLY MEETING

The monthly meeting on October 4 was addressed by George Bills-Thompson, 3AHN, on the subject, "The Other Side of Photography." George prefaced his talk with the observation that many Amateurs work at interesting jobs not necessarily connected with radio, and that other Amateurs would gain much from hearing about them. George, who works with Kodak, the name that is synonymous with photography, described the operation of the machine which applies the sensitive coating to film and paper. This machine, 400 feet long, worth a fortune, and the only one in the southern hemisphere, is equipped with elaborate instrumentation, any instrument of which may be replaced at a moment's notice with a sub-standard. George outlined the steps in making the emulsion, coating the stock and checking the sensitive materials, and described some of the elaborate precautions which must be taken to avoid contamination.

It was interesting to note that every sheet of cut film, even the most sensitive panchromatic types, is examined visually by safelight for flaws before packing. Needless to say the colour slides which illustrated the talk were of excellent quality. A film showing the use of the high speed movie camera (over 3,200 frames per second) in the examination of rapidly moving objects, such as relay contacts, shutter mechanisms, and cathode ray tube

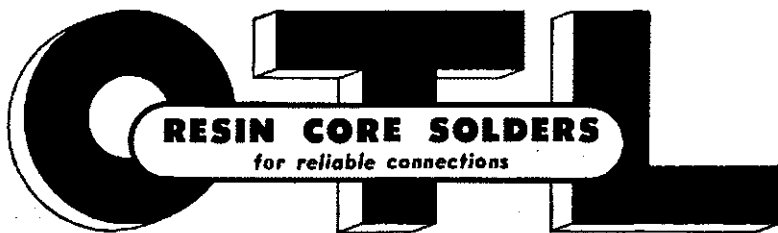
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THE SUNSHINE STATE

Has ye Ed. given us credit for sunshine this month? He has been keeping off it lately and I wonder if it is because he feared an exodus from the States where there is not so much sunshine? Just between you and me, we could do with a drop of rain.

Usually the news I write is a bit stale by the time you read it, but this month we should still have "Jamboree of the Air" fresh in our minds. By the amount of interest shown it should be a good show and we will have learnt a few things to make it a better show next year. Nearly everyone directly approached readily accepted responsibility for organising a Scout district or districts. Many were contacted by letter and at the time of writing a lot were on the job. Central Queensland Branch got away to a flying start but have a few close on their heels. Those Amateurs who could be contacted easiest or who volunteered were organisers. Let us have your reports and comments, organisers, so that we can assess our efforts and our strength.

GENERAL MEETING

This was held on Friday, 22nd at the State Service Union rooms and over 30 were present. Jim 4PR, in the chair, started the meeting at 8 o'clock and after some minor business arising out of the previous meeting's minutes, dealing with QTC and the Ambery visit had been dealt with, we went on to general business. This was a short discussion on "Jamboree of the Air" in which Bob 4RB, who I think, instigated the project in this State, spoke. The meeting closed at 8.15 p.m. for every one to hear an interesting lecture, illustrated by many good colour slides, on a visit to New York and America by "Doc" 4MO. There were plenty of laughs and questions until "Doc" stopped at 9.25 when Jack 4JF proposed a vote of thanks. Even disposed of some oddments and there was quite a rag chew during supper. Did I say something wrong?

Bill 4WX is going along OK but it will be a while before he can take an active part again although he listens to many of the hook-ups.

It was noted at the Council meeting that Bill 4WX would not be able to undertake his secretarial duties for some time and as there were no volunteers, Jim 4PR will fill the breach. To relieve Jim of some of his duties, it was suggested that yours truly become acting chairman of the Council.

GENERAL

The unclaimed QSL cards listed each month has proved a worthwhile feature as many cards have been claimed. This month's list is 4OJ, 4OV, 4PC, 4PG, 4SJ, 4SR, 4SQ.

Among callers for cards has been AGE. Pressure of business has kept him off the air for some years, but he hopes to become active in the near future. Old-timer, Bob 4RB, a regular attendee of general meetings, is a great help to the Scout movement and station 4AH at Ashgrove.

Dr. Thomas, of the Physics Dept. Qld. University, will tell us of his work at the November general meeting. Dr. Thomas' job is "long distance trans equatorial propagation" research. Come along, the talk is for YOU.

I have not heard of any items for the Federal agenda being forwarded. Don't leave it too late.

Members will be sorry to hear that Dell 4RJ has entered hospital and that Stan 4ST, who was preparing for "Jamboree of the Air," is having heart trouble, which we hope won't keep him off the air for long.

Who knows anything about the Brisbane DX Club which is listed in books with world-wide circulation?

The V.h.f. Group is as lively and active as ever. They held a meeting at the QTH of Malcolm 4ZEL on 15th to discuss ways and means of tx hunting. Their next tx hunt will be held on the 8th. They reported some good 6 mx short openings with JA1, 2, 3 and 9. Next meeting at QTH of 4ZAG, Toowoong.

The Northern Command Club's Sept. meeting, which was chaired by President Brian, passed a motion amending the constitution and the new posts of secretary and treasurer were filled by Jim Green and Tony Crane.

Heard Brian 4ZAP galloping off to Southport the other day with his mobile.

CENTRAL QUEENSLAND

The Sept. meeting was to include a lecture by 4MT who has a little Morris chock-a-block full of radio gear, including car radio, xtal

converters, 7-14-50 and 144 Mc., a tx for 7-14 Mc. and for 50-144 Mc.—three tx in all. A modulator is switched for the tx in use and so on and so on—poor Morris.

Hal 4DO has his new tx on the air and it's t.v.l. proof; comes through to here very f.b. 4FN has a transistorised modulator in mobile gear; delivers 15.1w. audio for six transistors and 50 ohm moving coil mike. Old-timer Joe 4LC has had a relapse of Hamitis and is expected back on the bands any day now. Joe 4LC is a very regular attendee at meetings, but Mack 4MJ has been missed lately.

Anyone hearing private s.s.b. "phone patches" on 21 Mc. band is asked to pass information on to the Secretary at Box 638J and appropriate action will be taken.

SOUTH COAST

Settling on the land is Tex 4TX, who is leaving the coast for the highlands within sight of his old haunts and from which he will be able to look down on us all. Here's all the best for success in the venture, Tex.

Spring and the holiday season are affecting the boys. Alf 4OL has been heard bursting forth into song and then took off for holidays at various beaches as far south as Byron Bay and north to Rockhampton. The mobile was not forgotten, but the tyre pump was and Alf had two flats. With help from another motorist he was able to proceed on his way.

The Muse also stirred Howard 4WO, while he was at Caloundra, but the effort was in a serious vein. Maybe we shall hear the results one of these days. Stan 4SA crawled before under a heap of tax avoidance forms and before anyone knew, he bobs up in Bundaberg and the Rockhampton. Mailing southwards and heard well and often are Jim 4HZ and Bill 4SW. The Sunny State is also as objective for the Southerners and Sid 2SG and 3WS have been heard frequently. 73, 4WS.

CAIRNS

Bazil 4ZW carried out tests on 6 mx with John 4ZAV and Charlie 4CA, who were up on "Gentle Annie," near Millaa Millaa, but nary a note was heard by the Townsville boys.

South Australia please note. A certain Cairns Amateur got a big fright recently when he realised he was a little late paying his license fee and broke all records to the local P.O.

What about some details of your transistor powered tx that fits in the palm of your hand, Harry 4HK? Claude 4ZY was in hospital for a while and Bazil 4ZW has been in "cahoots" with a wog. Hope both of you are OK now.

Instead of John 4ZAV going to Gordonvale, he went to Brisbane and got married, but is now back at Atherton. Congrats. John.

TOWNSVILLE

They have done it again, the beautiful cover on the October anniversary issue of "A.R." Simple, but arresting. (Flattery will get you nowhere.—Ed.)

Can we let our sister Dominion, Canada, beat us? See by August "QST" that the Canadian Government has granted a Citizens Band as from April 1962.

The local radio club had a station in the Trade and Industry Fair during Sept. and quite a number of the locals worked a roster.

Have heard Claude 4UX teeing up skeds with the various Pacific Islands for the Scout Jamboree. Very sorry to be out when Sid 2SG called, just missed me by five minutes. Anyhow, will see you both in November.

Conditions on the bands are screwy to say the least. On 14 Mc. one night it will open and next night close and all skeds messed up. Last Sunday missed out the W.I.A. news, conditions were against it even though Norm 8NT called in to help out. Though we have a drought, the quacking seems to be getting more and more as the boys here are going sideband happy, although one or two of the old timers still prefer the key for chasing the DX.

Eric 4EL has had mention in "QST" and also the local paper for the number of QSOs running into the many thousands since he came on the air pre-war and has over 6,000 QSLs to prove it.

Smoke signals being deciphered here has it that a W.I.A. club is to be formed in Ayr now they have the necessary W.I.A. members locally. Good luck to you all.

Heard a chap the other night signing HY4, giving QTH as Seoul in Korea. The new calls certainly keep one guessing.

The northern Z boys seem to have given the game away as they are never heard. Maybe they are sweating out the code. Hope this is the only reason I never hear them. Maybe now summer is here the band will open to the south. 73, 4RW.

explosions was then screened. Any t.v. servicemen present are probably still suffering from nightmares. The talk was rounded off with a film describing the manufacture of camera lenses. The fact that lenses are of reasonable price in spite of the great number of manufacturing operations must be one of the triumphs of mass-production. On behalf of us all, the President thanked George for his very interesting lecture.

The lecture at the November meeting will be on the subject, "Marine Electronic Equipment."—3AEL.

EASTERN ZONE

Main news this month seems to centre around 2 mx where we have a hive of activity. New stations to join the hook-ups, after some long absence, are 3QZ, 3AIT, 3TH, with 3BB yet to report in.

Two new members, Ken and Bill (surnames unknown) are to sit for their A.O.C.P. in October; best of luck, boys. By this time, George 3ZCG will have his 32 element 2 mx array up 90 ft. feeding it with 150w. Peter 3ZDP is preparing a 4-125A for 2 mx. Stan 3ZAB has put his 16 element 2 mx beam back in the air, not much good there, Stan, unless you connect it up. George 3ZCG keeps regular skeds with Peter 3ZLT at West Preston at 0630 hours on Thursday, Saturday and Sunday, with David 3DY and Jim 3ZBV joining in occasionally. David 3DY managing to still work a few W, JA, and UAs on 10 mx and keep a regular sked with a JA. Ross 3ZAQ is testing his 2 mx mobile, and should be in action for the Xmas holidays.—3DY.

NORTH EASTERN ZONE

Activity on the Friday night hook-up in this zone has been very good over the last month and some very interesting QSOs have been forthcoming. The number of stations putting in an hour or so is steadily increasing and there were a total of 12 participants on the last hook-up, including two newcomers to the zone. Alan 3AYD (at Moorookpa) and Greg 3AWT (Waiala, hope that's the way it is spelt, Greg). Both stations were welcomed to the zone and congratulations extended to both on obtaining the A.O.C.P. Alan informed us that there should be at least three more stations (new) putting in an appearance within two or three weeks from that area.

3KR, 3AXW, 3JP, 3AUL, 3KU, 3AHO are all regular customers. Ken, still sideband happy, says there's nothing to it just sit on one frequency and work 'em one after the other. Ken must be running Bill 3AHO a close second now; Bill has certificates everywhere. 3AUL is trying out the 101 ft. 9 in. antenna and reckons it's a beauty on 20 mx—used it four times and worked four new countries. That's a bit of consolation for all the strife he's had over the past few weeks with worn out generators and a crook water switch.

Bob 3UW heard on his way down to Bendigo. Understand Bob is a very worried boy these days; wondering just what the second harmonic will be like; he has no fingernails left, anyway Bob, all the best to you and Berry and congratulations from all zone members in anticipation of the big event.

The possibility of a Zone Convention has been talked of lately, possibly sometime early March, and Malinga has been mentioned in conjunction with Mount Major. Would like to hear from a few more members of the zone as to their thoughts on this matter. So what about it, chaps, hear you all next Friday night at 2000 hours, in the meantime happy days, 73 3AUL.

WESTERN ZONE

On Sept. 24 we journeyed to Mt. Arapilley where our Convention was held. Approx. 20 Hams were present, so together with budding Hams and friends, we had a gathering of about 50. We were pleased to have two VKs who made the trip from Bordertown. After our picnic lunch and much talk, our annual meeting was held.

Our new President is Trev. 3ATR, with Merv 3AFO and Bert 3EF Vice-Presidents, and still same Secretary—3AKW. Tx hunt was next on the programme. Merv 3AFO planted himself and car in the scrub well up the Mount. He was eventually found after some phantom signals were heard. John 3AGD was first to locate Merv (think we will have to disable his car before our next hunt). John was closely followed by Herb 3NN.

Evening meal was enjoyed at a hotel in Horsham, after which we wended our way to Merv's home. Here technical films were enjoyed by all. Merv and Trev must be thanked for selecting and screening these. Supper was the last item on the programme, but it was probably the most enjoyed. Merv's wife, Nora, was the one who excelled at looking after the inner man; she was assisted by Olive, XYL of Keith 3ATS.—73, 3AKW.

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SOUTH AUSTRALIA

The monthly general meeting of the VK5 Division was held in the clubrooms to a somewhat below-normal gathering of members. I chronicle this fact with a sad heart, because I had been reading during the week a statement by Bill Moore ("R. & H.") to the effect that attendances were down at most Divisional meetings, and he gave the reason why. The reason for my sad heart was because I was all ready to go to town on the fact of the VK5 splendid attendances at meetings, and I was quite prepared to score at his expense and do a little judicious boasting about VK5 to boot. Let us draw the curtain on my missed opportunity and carry on with the meeting.

The chairman, John 5JC, with his usual sagacity, was preparing to slip a little Divisional business into the opening of the night but was short circuited by an unscrupulous Council member, who for his own protection shall remain nameless, who moved that all business be suspended and the lecture begin at once. John retired hurt and disappeared into space, after introducing the lecturers, and did not appear until much later in the night.

The two lecturers were Ian 5IW and Alastair 5ZAE and their subject, as given to me by the chairman, "Transistors as applied to radio communication." It was evident very early in the lecture that both speakers had given considerable thought, both technically and psychologically, to the preparation of the lecture and the result more than justified the expectations of the members present. They realised, as did those present, that 75 per cent. of the audience were somewhat at sea when it came to transistors, the remaining 25 per cent. had varying degrees of knowledge on the subject and therefore a somewhat non-technical approach to the subject would work out the best. Alastair came on first and handled the technical side, splashing a few operational curves and some occasional reference to alpha and beta on the blackboard, thus proving that although he had openly admitted in his opening remarks that he still had a lot to learn, this was only said to put everybody at ease, and then went on to discuss the advantages and disadvantages of transistors accompanied by a thoroughly down-to-earth discussion on his own practical experiences with transistors and circuitry, which was so interesting to the members present that they were sorry to see him leave the stage. Ian now took over and won the hearts of all by openly stating that he was not going to be as technical as the previous lecturer, because to put it bluntly, he did not know much about transistors! He then launched forth in a humorous and practical discussion on the construction and operation of a commercial transistor transceiver, proving beyond doubt that he had forgotten more about transistors than most present had ever known.

It is extremely difficult to cover the lecture in these pages, mainly because of the blackboard work, but this I can say without any fear of contradiction, that throughout the lecture at no time did it become boring or over the head of those present, and the whole night reflected the considerable thought and preparation that both Alastair and Ian had put into their lecture, and they both should have been well pleased with the response at question time. The vote of thanks was ably proposed by Johnny 5KO and the applause at its conclusion must have been music to the ears of both lecturers.

Little business, either Federal or Divisional, reared its ugly head, although a letter from the VK2 Division regarding QSL cards was noted and discussed, all present agreeing with the contents and no doubt the boys will endeavour to keep future QSL cards down to the few words permitted under the privilege granted by the postal authorities. A handsome, debonair, athletic, muscular member jumped to his feet and enquired as to why VK2 should have this privilege and not VK5, but was mollified when the chairman said that VK5 were enquiring into the matter. The handsome, etc., etc., resumed his seat muttering something about VK2 and their privileges, the word Max being heard now and then. Peace being restored, the chairman closed the meeting at the witching hour of 10.40, and all present retired to their couches, etc., etc., etc.

The Emergency Fire Services Communications conference was held this month and John 5JC represented the Division in the joint role of President of the Division and Co-ordinator of W.I.C.E.N. John was one of the speakers at the conference and stressed the need of extending the W.I.C.E.N. activities in VK5, and the outcome is that a conference of the technical communications committee is called for the near future, at which two representatives

of W.I.C.E.N. and two representatives of the Elizabeth Radio Club will attend, and it is hoped that from this get-together W.I.C.E.N. will be permitted to assume its true position in the emergencies of the State.

Carl 5SS has that many projects in hand that he does not know which way to turn these days. The number one project is, of course, the big rig, which has already taken almost three years of his young and active life, but rumour has it that soon the budgies, the canaries, the magpies, the eagles and the elephants, sorry, wrong bird, will all be huddling in the corner of their cages and feeling the heat from the r.f. Oh that such wickedness could be.

Max 5OS is at the moment of writing trying by fair means or foul to get a little bandspread on his disposals rx. Many and varied are the suggestions being received from the "experts," but so far he has not been able to squeeze even half a degree extra. George 5CV would exchange half of his bandspread for a method of removing the neon sign QRM in his locality, but is not impressed with the suggestion that he should plant a little black box under the chemist shop, planned to go boom about 2 a.m.!

Joe 5JO is still running around with an arrow protruding from an unmentionable portion of his anatomy, hotly pursued by a little fellow dressed in his birthday suit, but anyway it won't be long now Joe, ere this is being read, the knot will be tied. Judging by the number of locals who have been invited to the wedding, it will be something like a VK5 hamfest. Some rude and coarse type was heard to say who was going to give Fanny away at the wedding? It is the bride who is given away, mug!

"The old boot basher" 5JX, that's what my spy called him, has a new car these days and is sight-seeing to his heart's content, with a consequent suffering of his activity on the air.

The VK5 "Nitwits Network" recently received a tape from the VK3 Northern Suburban Amateur Group (president of which is Reg 3MZ—an ex-VK5 by the way) containing greetings and felicitations from all the members of the group. The N.N.'s, 5SS, 5IM, 5ZC, 5OS, 5LL, 5MZ and many others who care to join in at 6 p.m. (Adelaide time) made a tape along the same lines and sent it back, to everybody's satisfaction. A gentleman who resides near to this band of VK5s commented to me that this was the only way they could get a contact with VK3 on phone, sneeringly adding that they should try c.w. I will release his name for the free gift of a Collins rx. without s.s.b. facilities, or a crystal set guaranteed to work.

Miracles of miracles, Frank 5MZ is reported as being completely free of breaks, fractures, cuts, burns and punctures. The one-eyed monster has him in its grip at night times, but his tried and true Type 3 is doing yeoman service between 5 and 6.30 p.m. on 7 Mc., the truth of which can be verified by many VK3s on this band.

Incidentally, talking about Frank, don't ask me why, but if the person who is using his call sign on 14 Mc. cares to call on Frank, he can take away a big bunch of European QSL cards! Personally I think it is Frank's harmonic, and he is too modest to admit it. I have had them that strong!

Oyez, oyez, oyez. Gather round all ye that follow the gospel according to Comps 5EF. In the August issue of "CQ", under the column headed Sideband, appeared the following, or at least something resembling it closely. The proportion of contacts made on s.s.b. by the DX-pedition 9K3TL/NZ using a KWM2 was definitely in favour of c.w. not s.s.b.! The reason? Simply that they could not operate on s.s.b. because of the terrible QRM generated by the operators who fell over themselves in their desire to get that "rare one" before he got away. The s.s.b. operators literally drove the expedition from the air, as far as s.s.b. was concerned, and the 9K3 operators were forced to turn to c.w. to make their contacts! A lot more follows, but my kind heart does not permit me to continue, but if any followers of the gospel care to read page 82, they can continue with the torture. This hurts me much more than it hurts the disciples of Comps., but the opportunity could not be passed up. I expect to be out of town for the next twenty years! I trust that a certain VK3 friend of mine is still not reading the VK5 notes!

Hughie 5BC was down this month from Renmark on his annual vacation and from all reports was heard and worked mobile by all and sundry. He works on the unmentionable bands so I cannot give any comment, but I understand he was looking in the pink.

Keith 5KH (or 5WI, take your choice) is another one who has been away on his vacation number two. Went up to the Flinders

Ranges and proudly is boasting that he was only there five minutes and had his first contact. He is raving about the receiving conditions, but is dumb on anything else. Talking about vacations, Fred 5MA has taken advantage of the school holidays to move off on a well deserved holiday. I can't say that I hear much of this joker on the air these days, but I am reliably informed that he has not altogether deserted the bands.

Harold 5ZAB was unlucky recently to have a fire break out at his domicile. Fortunately, or as you will, he keeps his radio gear on separate premises and no loss is reported in that direction. Harold and his brother kept the blaze in order with a garden hose and fire extinguisher until the brigade arrived, almost succeeding in putting it completely out. Have not heard if the brigade wants to re-cruit him.

Tom 5TL is at the moment in the throes of learning to play the recorder. For the benefit of the peasants like myself, the recorder is a wood wind instrument dating back to Queen Elizabeth I, although there is no suggestion that Tom has had it all that time. Even his best friends won't tell him about his wood-wind, but all the factories in the district have got up a petition to restrain him, their staffs are all knocking off at the wrong times!

Who was the VK5 travelling in the Renmark district who pulled up alongside the vehicle with a loaded whip on the back, approached the driver and said, "I am VK5—, who are you?" The driver said, "Is that so, well I am the local police car." Our hero retired in extreme embarrassment, so much so that he got into the back of the car, and for one awful moment thought that he would have to go back to the policeman and report that someone had pinched the dash and the steering wheel. You whistle and I will point. Your secret is safe with me sir, I think!

The annual general meeting of the Elizabeth Amateur Radio Club saw a good gathering of members and the following were noted VK5s DS, DY, EU, EJ, FY, HB, JO, NO, NQ, PE, QL, QX, RC, TM, ZBR, ZDA, ZDV, ZJM, ZMA, ZMK and listeners L5039, L5042 and L5044. Altogether a fair smattering of the population, and pin this up on your wall because if you are trying for the Elizabethan award, any of these call signs can help you on your way.

Following a proposal at this meeting, it was decided that the rules for the above award be altered to include members of the club, whether they reside in the district or not.

The first and foremost news from the Elizabeth district tells of the 40 mx ground plane that has sprouted overnight on the QTH of Tubby 5NO and "Fred" 5NQ, all of which indicates that they are going to add to the local QRM. And how!

Harry 5EU has been to G land for a while which means that Ian 5GX has the 15 mx band to himself. Harry is telling all the Gs that if they want his QSL when he returns to VK5 they will have to give him at least an S point above that of Tubby.

Ron 5FY has returned from a vacation in VK2 (what a place to spend a vacation) and nothing can be reported against him whilst there. He has stripped his rx down to the bones in order to re-vamp it, so the call of 5FY will not be heard for a while. Incidentally, he reckons that he did not want to come back to VK5. How low can one get?

Steve 5HA has been having trouble with his tx, all sorts of peculiar things have been happening to it. The latest news is that he is thinking of building a small tx for each band. They think big in Elizabeth, don't they? Keith 5EJ is still making 20 mx his favourite band, but even so does not appear to be as active as of yore. Clive 5PE has managed to erect another antenna, and my correspondent has hinted in the direction of s.s.b., although in his rudeness he called it something else. My pure upbringing does not permit me to mention it, but I can say it sounded very appropriate. Pete 5HB, the low power exciter of Elizabeth Amateurs, is still in the re-building stage and everybody is living in hopes! Ben ex-5BP, who is in G land, has been contacted at times and his call sign is G3PAH. Keep your ears open for him. It would appear in general that apart from the stalwarts 5NQ and 5NO, the rest of Elizabeth are spring cleaning for a burst of summer activity.

Rumour has it that Comps, 5EF was heard at various times this month from the dangerous and unexplored regions of Mildura. I did not hear him myself, but even if I had I would have not been able to understand him, unless of course he had stepped down temporarily to the peasants' system of modulation. I must check up on this angle, what a scoop for me if he did!

In all the years that I have been writing these notes for VK5, the one job that I have never been able to reconcile myself to, is the writing of the inevitable obituary that cannot be side-stepped. This month it was all the harder because of my personal association with Merv and also the fact that his association with Amateur Radio has been so amicable from both sides of the fence. I feel that I have said all that can be said of Merv in his obituary, but the one thing that has always stood out from his many fine qualities was the fact that even though he had left Amateur Radio behind in his vocational climb, he never forgot the Amateur, nor all that Amateur Radio had meant to him.

Incidentally, mainly for the benefit of all the ex-VKs who may read these notes in other Divisions, Don Gooding, Chief Engineer of 5AD and ADS7, passed away also this month, within hours of Merv, I am told. Although not our Radio Amateur, he had attended many of our functions as a guest and representing the I.R.E. was extremely sympathetic toward us, as is demonstrated by the number of Amateurs on his staff, and we learnt of his passing with regret. Our sympathy is extended to his wife and family.

Well, whatever I do, I must not end these notes for this month on such a note of gloom, and in looking around for some relief I have just remembered that at the end of the week I will be tripping the light fantastic at the wedding of Joe. Well, I will be tripping, anyway. I have tried on my new striped hessian suit and although the trousers seem a little tight under the arms, I feel they will stand up to the strain. Everybody is advising Joe to have the floor strengthened for my rock-and-roll efforts, and rumour has it that I am to be approached to give a demonstration of the Charleston. Oh, and by the way, there will be some goodies to dispose of too. Yum-yum, and with me having to watch my figure. 73, 5PS (PanSy to you).

WESTERN AUSTRALIA

With our regular VK6 weather returning, activity on the Ham bands has increased considerably. Mobbles and portables are well in evidence during the day and at night the fraternity are happy to put down their paint brushes and gardening tools and relax in the shack.

Since the visit of the VK3 bushfire party contacts with E.S. Hams have increased. It makes a contact more personal when an Amateur has visited your shack. Incidentally, we have a VK5 spy roaming around the State. One 5XB, and we are wondering if he will ever get back to VK5 after sampling districts like Albany and Esperance. Better stay around Bill.

Our monthly meeting was well attended as usual. These meetings are becoming very popular and it is pleasing to see attendances of thirty or forty in this State of VK6. Among the visitors were 5XB and 2ZFL. Welcome to you both and hope you induce others to brave the frontiers of VK6. After a brisk business session, during which 6RU gave his usual detailed resume of the R.D. Contest and the probable results, and associate Hans Frost, who is a district commissioner for the Boy Scouts Association, gave us some information on the "Jamboree on the Air" to be held in October, then members settled back to hear the usual lecture. This was on "Electronic Instrument Landing Aids for Civil Aircraft" and was ably given by Mr. Haack, of D.C.A., and very interesting and instructive.

One of the highlights of the month was a hamfest at Moorea. This was controlled by 6CL with his 150w/P, and attended by nearby Hams and some from Perth, notably 6AB and 6PH. Many contacts were made, but I will leave this to an abler pen than mine to describe elsewhere.

6LF at Carnarvon is doing his share to keep the lower bands in use. Since he received his call sign during the month he is heard on 80 mx and 40 mx most days and is collecting quite a log.

DX'ers will have to look out for 6WS who now has a permit to use a Panda tx and is a past master at tuning it. Congratulations to our G.O.M. Skipper.

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6XO was absent from the meeting. Our spies tell us he got his hand out of phase with a sledge hammer and at present it is in an "unvented enclosure." Bad luck Herb. We hope it is better soon. What a pity "Dobba Baba" is not down there to "succour and defend." 6KJ is in business again, mobile with a transistor power supply, so we hope to hear him soon. That is if he can stop watching Adelaide t.v. on the side of his beam in Albany.

6PH has been heard lately trying to untangle himself from his "spider web"—sorry, cubical quad, and hope you get that modulator tamed soon Pat. Clem 6CW has been heard occasionally, but not so often since he found that "one-eyed monster." Often hear 6DI on c.w. and getting contacts. Wally 6AG has been in dock lately, caused by trying to use up some stray "ergs" on the wood-heap or something. Silly idea Wally, you should keep all spare "ergs" in the shack. Bob 6BE has been having his troubles since moving to his new QTH. He has mislaid some "drive" somewhere. Probably under the new carpet Bob. Of course he has had plenty of sympathy and advice from 6RG and 6LG. 6RX is mainly heard wearing out his "tilted" beam on the higher bands and occasionally on 80 mx. We hear that 6DX is or has been in hospital at Esperance. Hope you are right again now Bill.

Well that is about all the information I have from my spies this month, so b.c.n.u. 73, 6ZCK per 6LS.

TASMANIA

Old-timers will be sorry to learn of the death of Keith ex-VK7KV, who died early in October. Keith was famous for having worked Egypt on the 160 metre band pre-war.

The Hobbies Exhibition at the City Hall, early in Sept., passed off very satisfactorily indeed, and many contacts, both on v.h.f. and h.f. bands were made. We are delighted with the response from Amateurs throughout Australia who made this side of our exhibit so attractive. All helpers are hereby publicly thanked by the Divisional Council for their invaluable contributions.

The fox hunt, conducted on 3515 kc. and on the 144 Mc. band, on 23rd Sept. on behalf of the fund for our projected clubrooms, cleared £4/10/0. Attendance from the v.h.f. boys was really excellent, but the attendance from the h.f. boys was rather disappointing. We all had a wonderful time, followed by an excellent supper at the residence of 7ZBE, with the favourite meats cooked over an open fire and coffee made out of milk, delicious it was too.

At the time of writing, the phone section of the VK/ZL Contest has passed, and conditions in the south were most disappointing. Severe sunspot activity made all bands largely useless during the entire 24 hours.

The October meeting of the Division was favoured by an excellent address from Joe 7BJ on the basic design of transmitters. Joe again demonstrated his wonderful knowledge of a subject like this and his remarks upon the pi-coupler in particular were most interesting and informed. The business part of the meeting was the liveliest experienced for many months. The interest was caused by the VK2 Division's desire to conduct a concurrent contest with the R.D. Contest for zonal participation. This topic brought into the open the whole subject of the R.D. Contest. Opinions were many and varied, but I feel we all have a better conception of the problems involved as a result of this discussion.

Keith 7RX is passing through a most anxious time at present with the serious illness of his XXV. We wish Mrs. Johnson a speedy recovery to full health.

Snowy 7CH will soon be on during the week-ends on the yacht Moorina, so keep an ear on 3515 Kc. over the week-ends and see whether Snowy is out on the blue.

We have lost the Photographic Club as our tenant in our clubrooms. The loss of income will make a difference to our Institute's finances as from now on, so we can but hope that a new tenant can be found to take their place. 73, 7ZZ.

NORTH WESTERN ZONE

Ken 7KH took the chair for the first time at our October meeting and skillfully handled a lively discussion. Only eight turned up, which was really a poor show. Those present were 7KH, 7MS, 7SF, 7XL, 7ZAA, 7MX and associates Geoff and Alan. Such a bunch of enthusiasts. It was decided to hold a film evening for the social evening in November. This may attract a better roll up. The rag chew session was very interesting.

The exhibition to be held at Devonport has been put forward to November 23, 24 and 25.

So we have more time to prepare. Has anyone the radiation pattern of a full wave vertical on 80 mx? Associate Bob is suspending a gas-filled balloon 250 feet above the hall and will include a vertical wire for an antenna. So look out chaps.

Several locals will have participated in the Jamboree on the Air by the time this is read. Sid 75F has instituted a container service for the transport of disposal gear from the mainland. Could grow into a charter. George 7XL is starting to converse in monkey chatter, so anticipate s.s.b. coming from that quarter one day.

Some peculiar effects have been noticed as a result of magnetic disturbances lately. Had to ask a VK2 to relay to 7KH (about 30 miles away) the other night. Some good signals have been heard on 20 mx so can see Sam 7SM getting a harvest. W.I.A. broadcasts from Hobart on Sunday mornings have been impossible or difficult here lately, both on 40 and 80 mx. The bands appear to be bad early in the mornings. Wonder if the powers that be could give us a land line; doubtful perhaps? Power line noise has been bad here lately also. Possibly salt build-up on the insulators near the sea. Like the farmers, we need a good rain.

Was staggered to learn that my notes were awaited with anticipation, from XXV. My heartfelt thanks to Sweet Buttercup for her encouragement. News is scarce this month, so the old scribe will have to sign off. 73, 7MX.

HAMADS

Minimum 5/-, for thirty words.

Extra words, 2d. each.

Advertisements under this heading will only be accepted from Institute Members who desire to dispose of equipment which is their own personal property. Copy must be received at P.O. Box 86, East Melbourne, C.2, Vic., by 8th of the month, and remittance should accompany the advertisement. Call signs are now permitted in Hamads. Dealers' advertisements not accepted in this column.

FOR SALE: C.R.O. 3" screen, commercial job. All controls, inputs, u.h.f., etc. Pos. and neg. triggering, vert. atten. and amp. Wide hor. sweep, variable e.h.t., beautifully made, excellent performer. Amer. octal base valves, £35. O'Brien, C/o. P.O. San Remo, Vic.

FOR SALE: Drake Model 2A complete with Model 2AQ, Q Multiplier. Perfect, factory new, just arrived. Wife going Melb., no delivery problem. Sensible cash offer. Harwood, Eighth Ave., Armadale, West. Australia.

FS6 For Sale, with power supply, £7. Phone 34-9491, Melbourne.

SELL: AMR200 Receiver with power supply and speaker. Not in working order. Suitable for re-building. £15. Week-ends only please. 46 Elphinstone St., Footscray West, W.12, Vic.

SELL: BC453-454, modified for double conversion, suitable as tunable i.f. for converters. AR77E Communications Rx in good condition, excellent performers. Apply VK2WS.

WANTED: Curtiss Propellor Pitch-change Motor and Gearbox complete. Must be unmodified. Price, etc., to VK50C, Old Belair Rd., Belair, phone 78-2401.

WANTED: Type 3 in good order. VK3AUK, Bob Kidgell, Phone 27-3202.

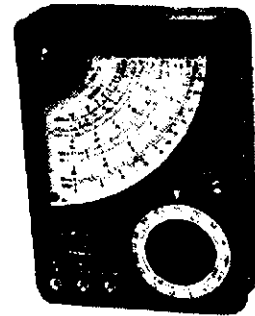
WANTED TO BUY: Complete medium powered 10-80 metre phone transmitter with power supply, amateur band receiver and suitable frequency measuring equipment. Particulars to H. T. Swanton, 16 Karma Ave., East Malvern, Vic.

CRYSTALS ALL THESE FREQUENCIES £1 EACH

FT 3010	FT 4360	FT 4895	FT 5552.5	DC 5980	LP 6547.9	FT 7373.3
DC 3050	FT 4440	FT 4930	FT 5635	DC 6021.1	DC 6561.3	FT 7375
FT 3195	FT 4445	FT 5005.6	FT 5655	LP 6032	FT 6550	LP 7450
DC 3320	FT 4465	FT 5110	FT 5660	LP 6040	FT 6560	DC 7400
DC 3332.5	FT 4483	DC 5145	DC 5700	FT 6050	LP 6561	FT 7406.6
FT 3340	FT 4490	DC 5166.6	FT 5706	LP 6110	DC 6572.3	FT 7425
DC 3440	DC 4495	DC 5170	DC 5710	LP 6130	LP 6640	FT 7440
FT 3690	FT 4535	DC 5180	FT 5740	LP 6210	FT 6650	FT 7600
FT 3828	FT 4540	FT 5205	FT 5744	FT 6225	DC 6700	LP 7890
DC 3830	FT 4549	DC 5210	DC 5770	FT 6235	DC 6750	DC 7890
FT 3830	DC 4660	FT 5237.5	FT 5773.3	DC 6240	DC 6783.3	DC 7925
FT 3885	FT 4672.76	DC 5250	FT 5775	LP 6243.3	FT 6815	LP 7930
DC 3930	FT 4676	DC 5285	FT 5780	FT 6265	FT 6840	DC 7962.8
DC 3970	FT 4695	FT 5295	FT 5782	FT 6300	FT 6890	DC 7810
DC 3995	FT 4730	LP 5300	DC 5810	DC 6350	FT 6935	DC 8036.2
FT 4010	FT 4735	FT 5360	FT 5815	FT 6355	LP 7010	DC 8171.25
FT 4025	FT 4750	FT 5365	FT 5825.5	FT 6375	LP 7120	DC 8176.9
FT 4065	DC 4750	FT 5397	FT 5855	DC 6420	LP 7171	DC 8182.5
FT 4080	LP 4765	DC 5410	FT 5897.5	FT 6462.5	FT 7175	DC 8460
FT 4180	FT 4780	FT 5437	FT 5910	LP 6470	FT 7200	DC 8469.23
FT 4235	FT 4815	DC 5515	LP 5910	FT 6515	LP 7205	DC 8645.45
FT 4280	FT 4840	DC 5530	FT 5920	LP 6522.9	LP 7270	DC 8488
FT 4295	FT 4852	FT 5551.5	DC 5950	FT 6535	LP 7350	DC 8525
FT 4315	FT 4885				DC 7362.5	DC 8562.85

MULTIMETER Model 200H

20,000 ohms per v. d.c. 10,000 ohms per v. a.c.



Specifications:
 D.c. volts: 0-5, 25, 50, 250, 500, 2,500.
 A.c. volts: 0-10, 50, 100, 500, 1,000.
 D.c. current: 0-50 μ A.; 25, 250 mA.
 Resistance: 0-60K ohms; 0-6 meg.
 Capacity: 0.01-0.3 μ F. (at a.c. 5v.); 0.0001-0.01 μ F. (at a.c. 250v.).
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 Battery used: UM3 1.5v. 1 piece.
 Dimensions: 3 1/4 x 1 1/2 x 1-1/8 in.

Complete with internal battery, testing leads and prods.

Price £5/12/6 inc. tax.

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Input 9.3v., output 225v. at 110 mA. Complete with relays and filters, in case. Weight 30 lbs. 19/6 each. 5/- handling charge.

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FT 3535 DC 3560	DC 8383.3 = 50.3 Mc.	DC 8016.5 DC 8023 DC 8030
FT 3536 DC 3562	DC 8400 = 50.4 Mc.	DC 8017 DC 8023.5 DC 8030.5
DC 3537 FT 3564	DC 8416 = 50.5 Mc.	DC 8017.5 DC 8024 DC 8031
FT 3534 FT 3573	DC 8450 = 50.7 Mc.	DC 8018 DC 8024.5 DC 8031.5
DC 3547 FT 3575	DC 8483 = 50.9 Mc.	DC 8018.5 DC 8025 DC 8032
FT 3549 FT 3580	DC 8500 = 51 Mc.	DC 8019 DC 8025.5 DC 8032.5
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Sensitivity: d.c. 20,000 ohms/volt, a.c. 10,000 ohms/volt. Ranges—d.c. volts: 6, 30, 120, 600, 1,200v.; a.c. volts: 6, 30, 120, 600, 1,200v. D.c. current: 60 μ A., 6 mA., 60 mA., 600 mA. Resistance: 10K, 100K, 1M, 10M ohms. Capacitance: 0.001-0.2 μ F., 0.0001-0.01 μ F. Inductance: 30 3,000H. Decibels: -20 to +17 db. (0 db.—0.775v.—600 ohms). Dimensions: 4 1/2" x 6 1/2" x 2 1/2". Weight: 1.3 lbs. Price £9/10/0 inc. tax.

VALVE SOCKETS

7-pin Miniature Valve Sockets and Shields. New. 15 for £1.
 9-pin Valve Sockets, McMurdo, 9d. ea.
 Octal Valve Sockets 1/6 each

ECKO NO. 88 TRANSCEIVER

Portable, xtal locked 4 channel, 40 to 43 Mc., 14 valves, 1L4, 1T4, 3A4, etc., 12v. 3a. input power supply. Less crystals, mike and headphones, etc. To Clear, £6/10/0 each

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Single, 1/32 inch synthetic insulation. 1,000 ft. reel, 50/- . Weight approx. 5 lb.

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Command Receiver Genemotors, 28v. input, 250v. 60 mA. output, new, 25/-

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Type R89/ARN-5A. 300 Mc. Valves: seven 6AJ5s, two 12SN7s, one 12SR7, one 28D7, six relays, and three crystals of 6522.9 Kc. As new. £5 each.

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Band-edge market Miniature Crystal and socket, £2.

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AMALGAMATED WIRELESS VALVE CO. PTY. LTD., Sydney, Melbourne, Brisbane

DECEMBER, 1961



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Townsville Amateur Radio Club's display at the Townsville Trades and Industries Fair, 28th, 29th and 30th September, 1961. (Left: Mr. Brian Harper, Chairman of Trades Fair Committee; right: Mr. Mal Lappin, President Townsville Jaycees; seated: Mr. Bert Boekholt, VK4LB.) Story on page 25.



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"HAM" RADIO SUPPLIERS

(KEN MILLBOURN, PROP.)

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Clean condition. Complete with valves, 5/- handling charge **£5**
 Modified Units, complete with 832s. Few only left at **£7 1/2**
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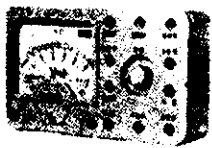
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300 μ A. movement.
 AC and DC voltages: 0-10, 0-50, 0-250, 0-500, 0-1000v.
 Current ranges (mA.): 0-1, 0-100, 0-500 mA.
 Ohms range: 0-100,000 ohms.
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 Complete with leads.

Price only **£2/17/6**, post paid.

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25 μ F. 25v.d.c.w. 2 μ F. 150v.d.c.w.
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 and others.

All **6d.** each

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1K5	5/-	5 a	£1	7E6	3/6	7 a	£1
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1N5	5/-	5 a	£1	12SA7GT	10/-		
1P5	2/-	10 a	£1	12SAH7	5/-	5 a	£1
1Q5	5/-	5 a	£1	12C8	5/-		
1S5	10/-			12J5	5/-	5 a	£1
1T4	5/-			12K8	5/-	5 a	£1
2A3	7/6			12SF7	5/-	5 a	£1
2A5	7/6			12SG7	5/-	5 a	£1
2A6	7/6			12SK7	5/-	5 a	£1
2D21	15/-			12SL7	7/6	3 a	£1
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3BP1	45/-			117Z6	5/-	5 a	£1
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5V4G	15/-			30	1/3		
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6A6	7/6			807	7/6	3 a	£1
6A7	10/-			808	15/-		
6AJ5	7/6	3 a	£1	815	15/-		
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6AM5 (EL91)	10/-			866	32/6		
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6C5	5/-	5 a	£1	9003	7/6	3 a	£1
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6F5	7/6			EF36	5/-	5 a	£1
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6SF7	7/6	3 a	£1	VR150	10/-		
6SG7	12/6			VT52	5/-		
6SH7	4/-	5 a	£1	VT127	4/11 5 a	£1	
6SK7GT	12/6			VT501	7/6	3 a	£1
6SQ7	12/6			Y65	5/-		

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Oval Type, Well Known Make.
 69H 6" x 9" 3.5 ohm voice coil, 37/6
 75H 5" x 7" 3.5 ohm voice coil 32/6
 5000 and 7000 ohm Trannies to suit, 15/-

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 Stand to suit 15/- extra.

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Freq. range (six bands): 120 Kc. to 130 Mc. on fundamentals, 120 to 260 Mc. on harmonics. R.F. output: over 100,000 microvolts. Mod. freq. approx. 400 c.p.s. H.f. output: 2 to 3v. A.f. output: approx. 4 v. Tubes: 12BH7, 6AR5. Power supply a.c. 50/60 c.p.s. x 10 in. x 4 1/2 in. Weight: 6 lb.

Price **£13/17/6** inc. tax.

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 230 volts to 110 volts, 500w., **£6/10/0**. In case.

5.5 Mc. VIDEO COILS

Contains slug-tuned coil former. **6d.** each.

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AMATEUR RADIO

JOURNAL OF THE WIRELESS INSTITUTE OF AUSTRALIA

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WI BROADCASTS

All Amateurs are urged to keep these frequencies clear during, and for a period of 15 minutes after, the official Broadcasts.

VK2WI: Sundays, 1100 hours EST, simultaneously on 3575 Kc., 7146 Kc., and 145.0 Mc. Intrastate call-backs taken on 7050 Kc..

VK3WI: Sundays, 1030 hours EST, simultaneously on 3573 and 7146 Kc., 51.016 and 146.25 Mc. Intrastate hook-ups taken on 7135 Kc. Individual frequency checks of Amateur Stations given when VK3WI is on the air.

VK4WI: Sundays, 0900 hours EST, simultaneously on 7146 Kc. and 14.342 Mc. Intrastate hook-ups taken on 7105 Kc.

VK5WI: Sundays, 0900 hours CAT, on 7146 Kc. Intrastate hook-ups taken on 7125 Kc. Frequency checks given when VK-5WI is on the air and also by VK5MD by arrangement.

VK6WI: Sundays at 0830 hours WAST, on 7145 Kc. Intrastate hook-ups taken on 7085 Kc.

VK7WI: Sundays at 1000 hours EST, on 7146 Kc. and 3672 Kc. Intrastate hook-ups taken on 7115 Kc.

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EDITORIAL**THE CLOSE OF 1961**

December is with us again and the holiday season approaches when most of us turn to the outdoors, to participate in active sport—those of us who feel young enough; to perhaps finish that job around the house which we kept putting off; to go motoring in search of places we have never been before; or to just take this golden opportunity to take a good rest from the pressure of the year's work in defence of a livelihood. Whatever you might be doing, wherever you might be going, we at Headquarters take this opportunity of wishing you all a very Happy Christmas.

We suggest leaving Amateur Radio alone for a week or two to take advantage of a short time of enjoying other things. There is nothing like shaking off the shackles of things—we-do-off-and-on most of the year to enjoy a complete change of scenery and activity.

1961 has seen a possible culmination of the W.I.A.'s effort on behalf of the Amateur Service to protect the Amateur band frequency allocations. The November issue of "Amateur Radio" carried a brief report about the Government's acceptance of the recommendations presented to it by the Radio Frequency Allocation Review Committee—a committee set up in 1960 by Postmaster-General C. W. Davidson, O.B.E., representing the major frequency users. The task of this committee was to review the allocation of frequencies to all Australian users in the light of the proposed Geneva Frequency Table, 1959, with a view to rationalising the use of the frequency spectrum by the various Australian transmitting services.

The recommendations of the R.F. A.R.C. include some sweeping changes which in some instances will be costly. The committee also provided 13 television channels for the future requirements of the Australian Television Service. The Amateur Service

came under constant review because of its allocations throughout the spectrum. A completely unbiased committee working in the national interest looked very closely at Australian Services before it made recommendations and what finally was submitted to the Government completed a year's work by a team of representatives qualified to see that justice was done in allocating these frequencies from one end of the spectrum to the other.

The Australian Amateur Service lost a few kilocycles in some parts of the spectrum and gained some in others. It came out with a better status as a recognised Service. It came out with some bands on a shared basis secondary to other services, but at least it maintained its bands. With other services it came out with a recommendation which will protect its operators who operate in areas where t.v. reception is of a low signal strength. To sum the position up in a few words—it came out of it very well indeed.

From now on it's up to the Amateur himself. Use the bands! They are yours to use! If you don't use them some other service will rightly claim they can. This committee made it quite clear that no service—and we repeat, no service—will hold frequencies in the frequency spectrum if they don't use them. That doesn't mean that we have to be filling the bands allocated to us for 24 hours of the day—other services don't do that. But it does mean that we must regularly operate within our bands to justify their allocation.

So take that few days off during Christmas and forget about Amateur Radio. Take a breath of fresh air and commence next year with a new purpose, to come on the air and use up the allocation that has been held for you by dint of hard work with a purpose.

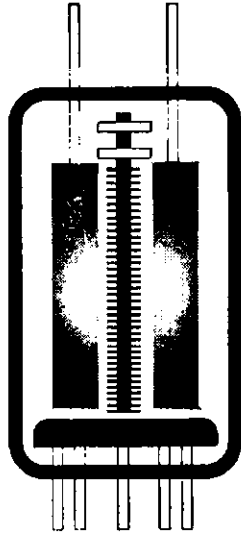
HAPPY CHRISTMAS!

FEDERAL EXECUTIVE.

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PHILIPS



TRANSMITTING AND RECTIFYING TUBES FOR MOBILE EQUIPMENT

The necessity of telecommunication equipment for sea and air transport is obvious. In this field, telecommunication equipment is often obligatory. In many other fields, however, a need for communication is equally felt, but the bulk and cost of transceivers of usual design has long been prohibitive. Faced with this problem, equipment designers and tube and component manufacturers, working in close co-operation, have gradually developed mobile transmitting equipment that successfully combines small dimensions, low cost, ease of operation, high and dependable performance. As a result, mobile telecommunication equipment is being used on an ever-increasing scale in numerous fields, as, e.g.:

- coasters.
- motor launches of shipping agencies, ships' chandlers, contractors of harbour works.
- small fishing boats.
- tugs (e.g., for direct communication with their tow).
- seagoing yachts and other small maritime craft.
- fireguard for contact with central office.
- taxi cabs for contact with the central point.
- doctors' cars for contact with their base.
- building firms for contact between remote or not easily accessible spots.
- public utility firms for contact with their outside personnel.
- service firms for contact with their personnel on vehicles.
- lonely farms in sparsely populated areas.
- airport vehicles.

Transmitting tubes

PREFERRED TYPES

Further additions to the range of "quick-heating" tubes will be announced shortly.

TUBE OUTPUT IN CLASS C TELEGRAPHY	TYPE OF TUBE	QOE02/5 Double Tetrode (6939)	QOE04/5 Double Tetrode	QOE03/12 Double Tetrode (6360)	QOE03/14† Double Tetrode (7893)	QOE04/15 Double Tetrode (6895)	QOE03/20 Double Tetrode (6252)	QOE05/40 Tetrode (6146)	QOE05/35‡ Tetrode (8042)	QOE06/40 Double Tetrode (6894)	QEL1/150 Tetrode (1 x 150A)	QEO8/200 Tetrode	PEL/100 Pentode (6083)	TB2.5/300 Triode (5866)	QB3/300 Tetrode (6185)	TB2.5/400 Triode	TAL2/300 Triode
	(W)	(W)	(W)	(W)	(W)	(W)	(W)	(W)	(W)	(W)	(W)	(W)	(W)	(W)	(W)	(W)	(W)
2 Mc/s	5.8 7.2*	7.0 8.0*	14.5 18.5*	14.5 18.5*	26.6 35.0*	48	52 69*	52 69*	90	195	200	132	390	375	390	500	
20 Mc/s	5.8 7.2*	7.0 8.0*	14.5 18.5*	14.5 18.5*	26.6 35.0*	48	52 69*	52 69*	90	195	200	132	390	375	390	500	
30 Mc/s	5.8 7.2*	7.0 8.0*	14.5 18.5*	14.5 18.5*	26.6 35.0*	48	52 69*	52 69*	90	195	200	132	390	375	390	500	
60 Mc/s	5.8 7.2*	7.0 8.0*	14.5 18.5*	14.5 18.5*	26.6 35.0*	48	52 69*	52 69*	90	195	132	390	375	390	500		
100 Mc/s	5.8 7.2*	7.0 8.0*	14.5 18.5*	14.5 18.5*	26.6 35.0*	48	40 53*	40 53*	90	195	390	375	390	480			
120 Mc/s	5.8 7.2*	7.0 8.0*	14.5 18.5*	14.5 18.5*	26.6 35.0*	48	35 47*	35 47*	90	195	390	375	390	475			
150 Mc/s	5.8 7.2*	7.0 8.0*	14.5 18.5*	14.5 18.5*	26.6 35.0*	48	29 40*	29 40*	90	195	390	360	390	465			
200 Mc/s	5.8 7.2*	7.0 8.0*	14.5 18.5*	14.5 18.5*	20.0	48	8.0*	24.0*	90	185	197	225	445				
300 Mc/s	5.8 7.2*	7.0 8.0*	6.5 8.0*	34.5	75	170	400										
430 Mc/s	5.8 7.2*	7.0 8.0*	23	66	155	350											
500 Mc/s	5.8 7.2*	7.0 8.0*	22	60	140	325											
600 Mc/s	7.0 8.0*	20	290														
850 Mc/s	7.0 8.0*	180															
960 Mc/s	7.0 8.0*	180															

* Intermittent. † "Quick-heating" version of type QOE03/12 (6360). ‡ "Quick-heating" version of type QOE05/40 (6146).

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"THE BEER BOTTLE VERTICAL"

K. C. SEDDON, VK3ACS, and H. L. HEPBURN, VK3AFQ

READERS may be interested in an antenna used with excellent results by the authors during the 1961 National Field Day when they formed one of the teams operating under the call sign of VK3APC/P—The Moorabbin and District Radio Club.

No originality is claimed for it, but we felt that its construction (and perhaps other possible new developments from it) was unusual enough to warrant a mention.

The antenna is a vertical half-wave dipole fed at one end with co-axial cable. On the National Field Day it was used in conjunction with two ended long wires. One was 240 ft. long and pointed NE/SW, whilst the other was 180 ft. long and pointed NW/SE. As they were fairly directional on 14 Mc. to VK2/VK4 and VK6/VK5, the need was soon felt for an antenna which would enable the band to be monitored in all directions. Once a "new" station was heard and identified, the idea was to use the appropriate long wire to obtain a QSO.

However, as it turned out, the vertical gave us as good results on 14 Mc. as either long wire and saw a great deal of use. At the end of the first period of the Contest, nearly two hours were spent in QSO with various Ws who were giving S6-8 reports from the 25w. rig.

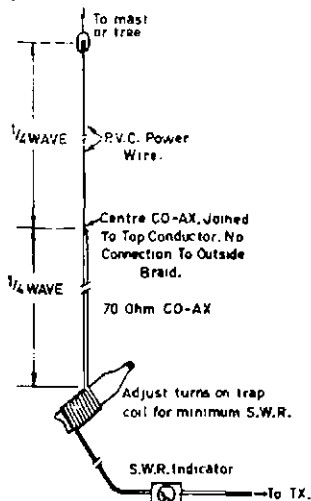


Fig. 1. General arrangement of vertical antenna.

The sketch shows the general set up. A piece of p.v.c. covered power wiring, a quarter wavelength long on 14 Mc., and fitted at one end with an insulator, was soldered to the centre conductor of a long piece of 72 ohm co-axial cable. The end of the co-ax had been stripped of outer covering and insulation for about $\frac{1}{2}$ " back from the end.

In our case, the junction was made mechanically secure by threading both co-ax and wire through the mounting

● An interesting practical article written by members of a VK3 team in the last National Field Day Contest. The authors developed a new idea for horizontal aerials which as far as known is presented for the first time.

holes of a small stand-off insulator, and soldering the two wires at the tag on top of the stand-off. Any suitable method of strengthening may be used (even a "splint" of dry timber taped on), but it is most important that some form of support be used as otherwise the whole weight of the bottom half of the finished antenna would be placed on the soldered joint.

Next, a 12" length of insulation tape was doubled round the outside of the co-ax a quarter wavelength along from the centre joint. This left a 6" "tab" sticking out from the co-ax. This "tab" was placed lengthwise along an empty beer bottle and eight turns of the co-ax wound onto the bottle over it, so securing the first turn. The last turn was temporarily taped into place round the bottle.

Next, the whole boiling was hauled up from a convenient (?) tree branch until the bottle and coil were about three feet off the ground. (Later on it went a bit higher, but for the moment leave it near the ground.)

The far end of the co-ax was then coupled to the transmitter via a s.w.r. indicator, and the number of turns on the bottle adjusted to give minimum s.w.r. In our case, the reflected power showed less than a division on a meter having a forward power indication of 50 divisions, so that the indicated s.w.r. was at least 1.04/1, and possibly a bit better. We found that we had to make three additions to the number of turns before this state of affairs prevailed, and we finished up with 12 turns. The final turn was then securely taped into place and the antenna pulled up as far as it would go. The bottle finished up about 8-9 feet off the deck.

We could not measure any appreciable variation in the s.w.r. over the 14.0-14.2 Mc. segment of the band we were using.

Because the coil acts as a self resonant trap at the frequency in use, the braid of the co-ax between coil and transmitter is isolated from r.f., whilst the braiding of the quarter wave between coil and feed points effectively becomes the second half of a dipole. Thus the whole thing acts as a conventional centre fed vertical dipole, with a feed impedance in the region of 70 ohms.

The co-ax from transmitter to coil can be of any length you please as it is acting as a non-resonant feeder.

Coil winding data may vary somewhat with different formers. The num-

ber of turns we used will not be exact in all cases, but will form a good starting point if your former is between 3 and 3 $\frac{1}{2}$ inches outside diameter. You simply add on turns or take them off until you obtain the lowest s.w.r.

Other frequencies can be tackled in the same fashion. Lower frequencies would need more turns (and a much higher tree!), whilst higher frequencies would need less turns. The important thing is to adjust the number of turns of your co-ax on your bottle for the minimum s.w.r.

Whilst it has not yet been tried, there seems no reason why the antenna could not be used in a horizontal position. The feed point being physically at one end, but still electrically in the centre, would then be very useful in the typical suburban lot where centre feeding of dipoles can present a problem if the "shack" is in the house. As the resonant trap has a high L/C ratio, it is possible that it will be effective over the greater part of the band for which it is designed. In addition, the use of co-ax as one active element must tend to decrease the Q of the antenna and so make it less critical to frequency change. This latter possibility could be enhanced and symmetry improved by using a second piece of co-ax with inner and outer conductors in parallel in place of the power wire.

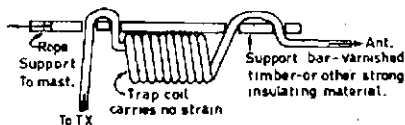


Fig. 2 Suggested end support arrangement.

For a horizontal model, there would be a couple of points to be watched. The need to remove strain from the centre junction and the coil would become extremely important, so that provision of low loss "splints" across them would be obligatory. The second sketch gives suggested constructional details.

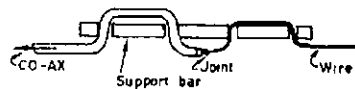


Fig. 3 Suggested centre support arrangement.

When one of the authors (VK3AFQ) gets round to putting up a 40 ft. pole, it is intended to carry out measurements on a 80 metre horizontal model, so that there may be more on this subject anon.

As a second development, there is the frightful possibility that the coil trap could be air-cored rather than being wound on an empty beer bottle. This one we will leave to the theoreticians as the practical prospect has little attraction.

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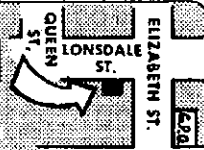
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GETTING TO KNOW THE OSCILLOSCOPE

PART ONE

J. L. K. MATCHETT,* B.A., B.Sc., B.Ed., VK3TL

WHEN one first examines the control panel of a cathode ray oscilloscope, one is struck with the complexity of the apparatus. It would seem that it may be too complicated an apparatus to explain to pupils even of Matriculation standard. And whilst the writer agrees that there are many components in its circuits, it is not impossible to carry out a number of simple experiments which illustrate the principles behind its rather complex circuitry. Such experiments serve to bring out some of the practical applications of resistors, capacitors, electron emission and so on, which are studied by the pupils. It is the purpose of this demonstration then, to illustrate some of these principles with apparatus easily procurable by the teacher.

Probably the best starting point in understanding the cathode ray tube (which is the most important component of the cathode ray oscilloscope) is the ordinary electric light globe. A current may be passed through it and the pupils told that hot bodies emit negatively charged particles called electrons. In the case of an electric light globe, the electrons simply form a space charge about the hot filament.

The next step is to revise the pupils' knowledge of the wireless valve. Point out the function of the plate, cathode, filament and grid. Obtain a few old radio valves from the local radio repair shop. (He will be only too glad to get rid of them.) Wrap some clothing around each one in turn and gently squeeze in a vice. In this way only the glass envelope will be smashed and not the valve electrodes.

The directly-heated cathode type (ordinary battery type), may be compared with its indirectly heated equivalent (a.c. mains type), with its separate cathode coated with material which will readily emit electrons when hot. Some c.r.'s. have their cathode connected to their filament, i.e. heaters, others not. Valve types should be examined and the teacher could demonstrate that the hot filament is emitting electrons by means of a simple electro-scope.

Once the principles of the triode are understood, it is time to examine the c.r. tube itself, and the similarity to the radio valve pointed out.

Concentrate upon the cathode, heater, grid and accelerating anode electrode.

Fig. 1 shows a simplified drawing of the c.r. tube.

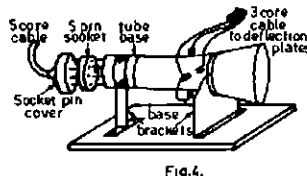
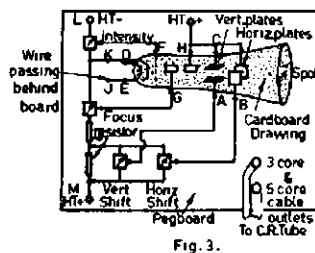
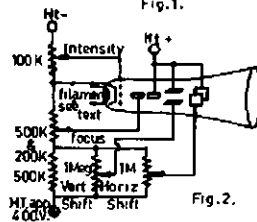
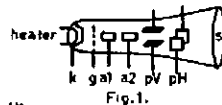
In addition, the electrodes are connected to pins which protrude from the base of the c.r. tube as in the case of a radio valve. Not all c.r. tubes are as simple as this but they all have an electron gun, that is, a part that shoots electrons toward the screen.

A simple circuit for the c.r. tube may now be examined. A circuit show-

ing values which ensure proper shift of the electron beam, focus, etc., are only found by experiment, but the writer found the circuit of Fig. 2 suitable for the 905 tube. Undoubtedly it would be quite suitable for many other types.

Most of these components are obtainable from radio odds and ends. All are potentiometers ("pots" as they are called), with the exception of the 200K and 500K fixed resistors.

Note how the grid is made more negative than the filament and also how a voltage (obtained by allowing a current to flow through a resistor) is applied to one of each set of deflecting plates.



The 905 (or 905A or 907, both of which are very similar) is available on the disposals market and is very suitable for classroom demonstration. This tube lacks the usual graphite lining within the tube which serves to facilitate the return of electrons to high tension anode. In addition, the connections to the deflection plates are brought out through the glass about half way down the tube, and so an ordinary five-pin valve socket will suffice for the c.r. tube pins. Whilst on the question of sockets, always try to obtain the appropriate socket for the tube you buy.

In order to demonstrate the c.r. tube, the wiring was set out on a piece of masonite peg board enamelled white to

show up the coloured wires. The size of the board was approximately 2 ft x 1 ft. 6 in.

A drawing of the c.r. tube was made upon a stiff piece of cardboard and then stuck on to the peg-board as shown in Fig. 3. The wires as shown leading to the piece of cardboard were then taken at the back of the board to the cable outlets. The three-core cable is connected to one of each set of plates and the high tension to each of the remaining plates (Connections A, B and C in Fig. 3). The five-core cable (or one ordinary three-core and one two-core cable) is connected to each of the two heaters, the grid, focusing anode, and accelerating anode. (Connections D, E, F, G and H in Fig. 3.) Fig. 4 drawing shows the connections of each cable to the actual c.r. tube.

The socket connectors of most c.r. tubes differ from each other. In the case of the 905 (or 905A or 907), they are:—

- Pin 1—Heater.
- " 2—A1 (focusing anode).
- " 3—A2 (accelerating anode).
- " 4—Grid.
- " 5—Cathode-heater.

Unfortunately socket connections for c.r. tubes are not shown in valve manuals, but some are listed in the A.R.R.L. Handbook which is possessed by almost all Radio Hams and many technicians. This volume also contains details of filament voltage, filament current, anode voltages and grid bias. Amongst the common c.r. tubes available on the disposals market at reasonable prices (average about 30/-) are the following: 5BP1, 902, 915, 3AP1 (or 906), VCR-139A, VCR138A, VCR97, 511, 913, CV-112. None of these tubes require high voltages. When buying a c.r. tube avoid buying one which requires magnetic deflection coils. Electro-static deflection tubes have simpler circuitry and illustrate principles more clearly.

The electric light switch cover affords protection from any contact with the bare radio valve socket and is squeezed over the cable. The three wires of the three-core cable are connected to the deflection plate caps with four insulated plate caps of an 807 transmitting valve type. The actual c.r. tube is mounted upon a heavy baseboard by means of aluminium brackets cut to fit the diameter of the tube. When fitting brackets ensure that rubber padding is used so that the tube will not be scratched. It should be noted that once set up the tube should not suffer any vibration and must not be scratched with metal or the tube may explode. Four other connections are necessary to the peg-board in addition to the two cables. These are firstly two twisted wires which come from a source of filament current. This is usually a 6.3 volts supply but in the case of the 905, a 2.5 volt supply is necessary. A dropping resistor of high wattage rating may be used to drop the voltage across the filaments from 6.3 to 2.5. You will find

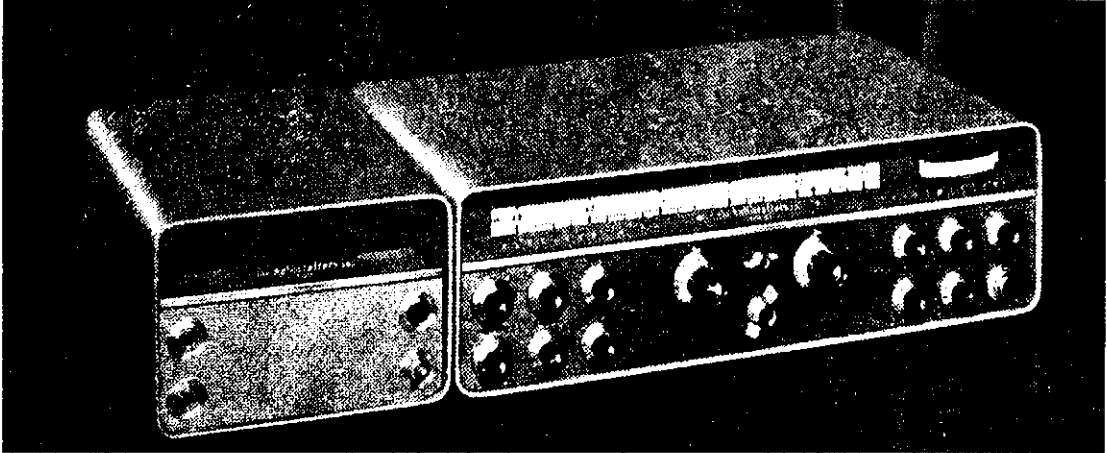
(Continued on Page 7)

* 845 Riversdale Rd., Box Hill, Victoria.

The above article is the summary of a demonstration given by the author to Secondary School Science Teachers during the Summer School, January 1959.

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C.W. maximum out	23 amps.

 No need for alternators or heavy duty generators.
- ★ Switch on front panel selects tracking or independent frequency control.
- ★ Power supply and heat producing amplifier tubes mounted in air duct, from which heat is exhausted by a transistor powered fan. This compartment is thermally baffled from all other circuitry.

Sole Australian Representative:

W.F.S. ELECTRONIC SUPPLIES CO.

225-7 VICTORIA RD., RYDALMERE, N.S.W. Phone 08-1715

Sole Victorian Agent: ELECTRONIC SERVICES, Douglas St., Noble Park, Vic. Phone 746-8446

Sole South Aust. Agent: TELEVISION & RADIOTRONIC CO., 11a Gays Arcade, Adelaide

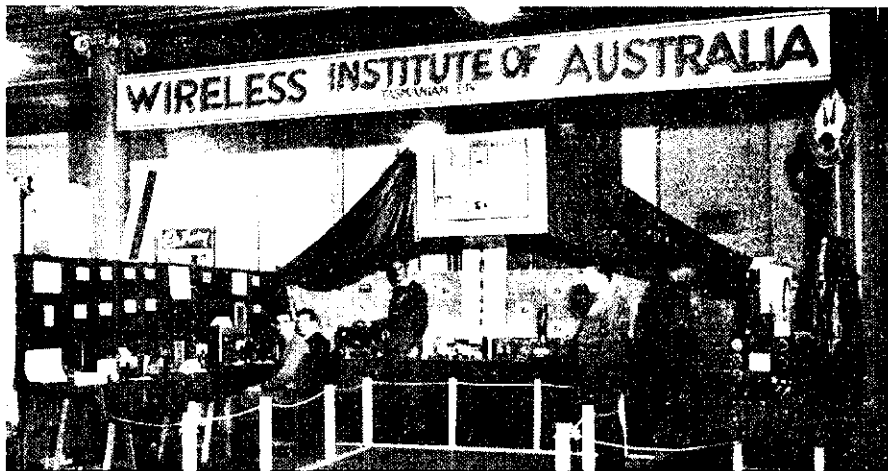
Sole Queensland Agent: GENERAL IMPORT DIST., 135 Lutzow Street, Wellers Hill, Brisbane

W.I.A. EXHIBIT AT HOBART

The Tasmanian Division of the W.I.A. staged an exhibit at a recent Hobbies and Careers Exhibition organised by the Hobart Junior Chamber of Commerce in the City Hall, Hobart, from 5th to 9th September. Being during the school holidays, the exhibition was well attended by both children and adults alike—emphasis seemed to be on careers, other exhibits being provided by

Operation was on 80, 40, 6 and 2 metres under the call of VK7WI/P. V.h.f. only was used throughout the day, both around the town and, using a walkie-talkie on 2 metres, to points around the hall. Mike VK7ZAV did a marathon job through the period and was reinforced by others when possible.

Gear on display included QSL cards and certificates, converted and uncon-



the Services, various government departments, plus private enterprise.

We received very good publicity, signed quite a few new members, were featured by the local commercial t.v. station, and had an "interview" recorded, via Amateur Radio, and re-broadcast over a local national radio station.

verted disposal gear, Ross Hull and R.D. Trophies, plus various bits and pieces.

A special QSL card will be issued to all stations contacted.

Pictured is the exhibit and some of the v.h.f. boys, from left: Wilf VK7ZAQ, Mike VK7ZAV, Reg VK7ZAO, and extreme right, Bryan VK7ZBE.

KNOW THE OSCILLOSCOPE

(Continued from Page 5)

a length of ordinary electric jug element satisfactory. For your calculation, the current through the filament is rated as 2.1 amps. In many cases, the dropping resistor won't be necessary, for some old power transformers with a 2.5 volt heater winding are to be found at a very cheap price since they are no longer used in radio circuits. The remaining two wires are connected one to each of the high tension terminals as shown.

To ensure good connections, two insulated terminals, one red, one black, are fixed on to the peg-board for the h.t. and two cheap green terminals for the filament wires. These terminals are shown on Fig. 3 as points J, K, L and M. The shafts of the four pots were brought out to the front of the peg-board and small square blank scales with pointer knobs fitted. Full use should be made of old radio parts which are available at low cost. Some useless valves are on the disposals market for a few shillings and some of these are very large; thus their parts are very

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for reliable connections

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ALWAYS SWITCH TO SAFETY

SAFETY PRECAUTIONS

Even a few hundred volts can cause most unpleasant physiological effects if carelessly handled. The voltages developed in many Amateur stations are capable of causing injury or death. Reasonable precautions should always be taken.

All apparatus and wiring should be so placed and constructed that it is impossible to touch points of high direct-current or radio-frequency potential under normal operating conditions.

The aerial should never be directly connected to the anode coil of the output stage (this is illegal and highly dangerous). Never attempt to change transmitter coils with the power ON.

Use double-pole iron clad switches to ensure complete isolation of all mains transformers. These switches should be clearly marked with ON-OFF positions. Some other person in the house should know where to find the main switch for use in case of emergency.

High wattage bleeder resistances across power supply filter capacitors will prevent many shocks. If it is necessary to touch the transmitter while the power is ON, keep one hand behind your back or in your pocket; never wear headphones while working on a transmitter.

Insulated extension spindles fitted to transmitter tuning controls will eliminate danger from exposed grub screws.

**MAKE SURE THAT ALL METAL
WORK IS EFFECTIVELY
EARTHED**

—Reprinted from R.S.G.B. "Bulletin."



APPLYING FOR AN AWARD?

When applying for an Amateur Radio award, whether direct, through the W.I.A., or through an overseas society, always:—

1. Write a letter of application for the award.
2. Supply a check list showing the essential details of the cards submitted, viz. Date, time, band, mode.
3. Write your name, address and call sign legibly on each application sheet.
4. When forwarding QSL cards, always enclose international reply coupons or appropriate unused postage stamps for the return mailing cost on your cards.

Your close attention to the above-mentioned points will make the task of the Awards Manager ever so much easier.

—Eric Trebilcock, BERS-195.

easily examined. The "gun" of a broken c.r. tube and a magic-eye indicator also come in useful in your explanation of the workings of the c.r. tube. Reference may be made to the effect of the electrostatic field created by the focusing and accelerating cylindrical electrodes upon the electron stream, and a magnet waved near the fluorescent screen to show magnetic effect upon the electron beam.

RESULTS OF REMEMBRANCE DAY CONTEST, 1961

OUR congratulations this year go to Western Australia for regaining the Remembrance Day Trophy from the holders for the last two years, Tasmania. We understand that a lot of organising went into contest preparations in W.A., and the results prove that the effort certainly was worth it.

Second place goes to South Australia, followed by Tasmania, New South Wales, Victoria and Queensland, in that order.

An interesting sidelight is that this year VK2 beat VK3 into fourth place. The bands were well populated during the Contest, but it is a pity that some States still have a participation factor of less than 10%. Victoria sent in only 80 logs out of 1,314 licensees, while for instance Western Australia submitted 87 logs out of only 288 licensees.

After all these years it becomes quite obvious that the larger States will never get the required number of log entries to win the Contest. Several suggestions for changes in the rules and in the scoring system have been submitted with this year's logs, and next year we may try something new. The Federal Contest Committee will study the possibilities of any suggestion sent in and will, in due course, submit the most promising to Federal Executive and to the Divisions for consideration. If you have any ideas, let's hear them.

Unfortunately the Contest Committee's lot is not a happy one. In the past we have not passed much comment on the logs received. Due to the large number of logs which, in one way or another, do not comply with the rules, we feel we owe it to the contestants to point out the major mistakes made.

Wherever possible the Committee has corrected the faults, but unfortunately we had to disqualify several logs which, among other things, did not show the time when each contact was made. Apart from those, there were quite a number of logs without the front sheet, some were without the declaration, while others started serial numbers with a number other than "001", claimed wrong points (obviously through reading the scoring table from top to bottom), claimed no points at all, had the times in G.M.T., had the log in order of bands worked or in order of c.w. and phone contacts, instead of in numerical order.

By careful reading of the rules, all these mistakes could have been avoided, saving the contestants points and the F.C.C. a lot of extra work. We are happy to say, however, that the biggest logs without exception were excellently made out and we found hardly any faults in them. We hope that the above remarks will help everybody to send in better logs and obtain bigger scores next year.

Unfortunately, quite a few of the Short Wave Listeners had also trouble with the scoring, nearly half the logs had wrong scores. Many listeners claimed points for both the stations calling and the stations being called. This F.C.C.'s interpretation of Rule 3 (Receiving Section), and its ruling, is that points can only be claimed once for one particular contact, whether or

REMEMBRANCE DAY CONTEST 1961 RESULTS

State	Total State Score	Aver. Top Six	Licenses	Log Entry	Percentage	State Log Aver.	Total State Points
New South Wales	23676	940	1372	124	9.04	191	3079
Victoria	16793	746	1314	80	6.09	210	1776
Queensland	9094	594	446	48	10.76	189	1573
South Australia	17357	917	518	78	15.06	222	3529
Western Australia	10787	546	288	87	30.21	124	3805
Tasmania	7916	600	148	49	33.11	162	3221

not both sides of the contact can be heard by the listener.

One other thing we would like to mention. In all States club stations entered the Contest under their own call sign, without showing the call sign of the operator of the station, as required by Rule No. 6. There have been precedents to this in previous Contests and we have therefore accepted these logs this year. However, as it is possible for one operator to submit two logs, one under the club station call sign and another one under his own, the rule regarding substitute operators will be re-worded to make it quite clear that club stations come under this category.

F.C.C. hopes that the above remarks will not be taken as criticism, but rather as what they are intended to be, an attempt to give everybody a chance to submit a bigger and better log for the next Contest.

Once again our congratulations to Western Australia for a very good effort, and we hope that all States will put up a good fight next year in trying to win the trophy from them.

Now here are the results in detail.

STATE TROPHY

Western Australia 3798 points

HIGHEST STATE LOG AVERAGE

South Australia 222 points

HIGHEST INDIVIDUAL SCORE

VK5NO 1389 points

Open— AWARD WINNERS

VK2AHH—R. J. Whyte	1215 pts.
3ALZ—I. F. Berwick	874 "
4DP—D. M. Portley	919 "
5NO—L. H. Vale	1389 "
6RU—J. E. Rumble	903 "
7MZ—H. Hancock	362 "

Phone—

VK2AHH—N. A. Hanson	1072 pts.
3ADW—D. A. Wardlaw	839 "
4UX—C. P. Singleton	609 "
5FT—F. K. Tapley	959 "
6KW—R. W. S. Hugo	592 "
7MS—D. M. Slowan	807 "

C.w.—

VK2QL—F. T. Hine	556 pts.
3XB—I. Stafford	423 "
4XW—G. Harmer	251 "
5MY—H. M. Roberts	457 "
6SM—M. H. Shaw	358 "
7SM—S. G. Moore	446 "

Receiving—

L2211—R. C. Abernathy	808 pts.
L3076—R. Young	629 "
T. A. Lane (VK4)	363 "
K. A. Wehr (VK5)	1084 "
L6021—P. W. Drew	586 "
R. De Balfour (VK7)	965 "

NEW SOUTH WALES

Top Six Logs—

VK2AHH	1215 points
2AHH	1072 "
1PM	948 "
2ASZ	842 "
2DO	821 "
2BO	740 "

Phone—

	Cont. Pts.		Cont. Pts.
VK2AHH	373 1072	VK2VO	30 70
1PM	360 948	2GV	29 64
2AXL	199 621	2ACZ	34 64
2ADE	207 609	2AOU	18 62
2VU	199 573	2OD	26 62
2VU	203 529	2RU	12 50
2APP	173 510	2JA	22 48
2AWZ	189 465	2IV	14 47
1AOP	188 439	2TP	27 47
2AXI	197 439	2MI	15 44
2NB	161 410	2EJ	17 43
2YN	134 345	2LY	23 43
2ALV	129 333	2BK	23 41
2XT	104 314	2AKV	8 37
2AHV	126 260	1ANR	11 35
2CS	113 255	2LQ	12 35
2AMA	85 247	2AYZ	16 34
2HO	77 245	1RJ	19 31
2AFP	105 223	2AJL	7 29
2BB	108 216	2JS	14 29
2OH	89 215	1EM	18 29
1VP	65 205	2AWF	14 24
2AXX	106 199	2ME	10 22
2AHT	73 190	2AWI	6 20
2AIA	59 189	2ADA	6 18
2ACQ	79 186	2AAH/M	5 18
2AQJ	76 174	2LA	9 17
2AEB	46 168	2AQR	7 17
2RJ	51 157	2FF	8 17
2ADL	49 156	2AT	9 17
1KM	75 156	2AAT	10 13
2ALU	61 152	2AKX	7 12
2XP	62 149	2AWX	7 12
2MW	53 147	2OZ	9 12
2OE	41 114	2ACS	6 11
2CO	46 101	2WI	6 10
2APQ	44 89	2MP	6 10
2RX	33 86	2ADM	8 10
2SG	17 78	1ML	9 10
2ACD	24 74	1KK	Disqualified
IDG	38 74	2DE	Disqualified
2AIM	30 71		

Open—

	Cont. Pts.		Cont. Pts.
VK2AHH	405 1215	VK2QA	70 167
2ASZ	317 842	2FE	58 143
2DO	299 821	1SB	53 96
2BO	257 740	2YC	26 81
2PN	280 715	7AC/2	32 77
2APK	209 673	2CH	17 50
2AGS	200 493	2AUC	20 42
2CK	124 321	2HZ	15 41
2AOC	116 312	2AHA	15 31
2AGH	83 284	2PL	10 19
1JE	107 254	2AVN	7 12
2EU	87 198		

C.w.—

	Cont. Pts.		Cont. Pts.
VK2QL	185 556	VK2ZC	25 50
2EO	112 342	2FX	17 47
2YB	118 329	2IC	10 35
2VN	81 247	2EG	12 35
2CT	82 241	2AFA	9 34
2DI	64 222	2OT	9 26
2EL	68 197	2GW	9 24
2HC	28 62	2OW	8 23
2JM	18 58	2XQ	11 17
1AB	18 53	2ANU	Disqualified
2ZO	20 52		

VICTORIA

Top Six Logs—

Table listing top six logs for Victoria with columns for call sign and points.

Phone—

Table listing phone contacts for Victoria with columns for call sign, Cont. Pts., and name.

Open—

Table listing open contacts for Victoria with columns for call sign, Cont. Pts., and name.

C.w.—

Table listing C.w. contacts for Victoria with columns for call sign, Cont. Pts., and name.

QUEENSLAND

Top Six Logs—

Table listing top six logs for Queensland with columns for call sign and points.

Phone—

Table listing phone contacts for Queensland with columns for call sign, Cont. Pts., and name.

Open—

Table listing open contacts for Queensland with columns for call sign, Cont. Pts., and name.

C.w.—

Table listing C.w. contacts for Queensland with columns for call sign, Cont. Pts., and name.

SOUTH AUSTRALIA

Top Six Logs—

Table listing top six logs for South Australia with columns for call sign and points.

Phone—

Table listing phone contacts for South Australia with columns for call sign, Cont. Pts., and name.

Open—

Table listing open contacts for South Australia with columns for call sign, Cont. Pts., and name.

C.w.—

Table listing C.w. contacts for South Australia with columns for call sign, Cont. Pts., and name.

WESTERN AUSTRALIA

Top Six Logs—

Table listing top six logs for Western Australia with columns for call sign and points.

Phone—

Table listing phone contacts for Western Australia with columns for call sign, Cont. Pts., and name.

Open—

Table listing open contacts for Western Australia with columns for call sign, Cont. Pts., and name.

C.w.—

Table listing C.w. contacts for Western Australia with columns for call sign, Cont. Pts., and name.

TASMANIA

Top Six Logs—

Table listing top six logs for Tasmania with columns for call sign and points.

Phone—

Table listing phone contacts for Tasmania with columns for call sign, Cont. Pts., and name.

Open—

Table listing open contacts for Tasmania with columns for call sign, Cont. Pts., and name.

C.w.—

Table listing C.w. contacts for Tasmania with columns for call sign, Cont. Pts., and name.

PAPUA/NEW GUINEA

Table listing contacts for Papua/New Guinea with columns for call sign, Cont. Pts., and name.

ANTARCTICA

Table listing contacts for Antarctica with columns for call sign, Cont. Pts., and name.

RECEIVING SECTION

Large table listing receiving section contacts for various regions with columns for call sign, Cont. Pts., and name.



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A UNIT OF THE FERRIS GROUP OF COMPANIES

NATIONAL FIELD DAY CONTEST, 1962

Dates: **Saturday, 10th, and Sunday, 11th February, 1962.**

Duration: **Saturday, 1800 to 2300 hrs., Sunday, 1000 to 1600 hrs.**

Objects: The operators of Portable and Mobile Stations within all VK Call Areas will endeavour to contact other Portable/Mobile and Fixed Stations in Australian and Oversea Call Areas.

RULES

1. There shall be five sections in the Contest:—

- (a) Portable/Mobile Transmitting, Phone.
- (b) Portable/Mobile Transmitting, C.w.
- (c) Portable/Mobile Transmitting, Multiple Operators, Open only.
- (d) Fixed Transmitting Stations working Portable/Mobile Stations, Open only.
- (e) Reception of Portable/Mobile Stations.

2. All Australian Amateurs may take part. Mobile or Portable Stations shall be limited to an input of 25 watts to the final stage. This power shall be derived from a self-contained and fully portable source. A Portable/Mobile Station shall not be located within one mile radius from the home(s) of the operator(s), nor be situated in any occupied dwelling or building.

Portable/Mobile Stations may be moved from place to place during the Contest.

No apparatus shall be set up on the site earlier than 24 hours prior to the Contest.

All Amateur bands may be used, but no cross-band operating is permitted.

3. Amateurs may enter for either (a) or (b), or both, in the Portable/Mobile sections.

4. One contact per station for phone and one for c.w. per band is permitted.

5. Entrants must operate within the terms of their licences and in particular observe the regulations with regard to portable operation.

6. Serial numbers consisting of RS or RST report plus three figures commencing with 001 and increasing by one for each successive contact shall be exchanged.

7. Scoring:—

(a) **Portable Mobile Stations:**

- For contacts with Portable/Mobile Stations outside entrant's Call Area 15 points
- For contacts with Portable/Mobile Stations within entrant's Call Area 10 points
- For contacts with Fixed Stations outside the entrant's Call Area 5 points
- For contacts with Fixed Stations within the entrant's Call Area 2 points

(b) **Fixed Stations:**

- For contacts with Portable/Mobile Stations outside entrant's Call Area 15 points
- For contacts with Portable/Mobile Stations within entrant's Call Area 10 points

8. The following shall constitute Call Areas: VK1 and VK2 combined,

VK3, VK4, VK5 and VK8 combined, VK6, VK7, VK9 and VK0.

9. All logs shall be set out under the following headings: Date/Time (E.A. S.T.), Band, Emission, Call Sign, RST/No. Sent, RST/No. Received, Points Claimed. Contacts must be listed in numerical order.

In addition, there shall be a front sheet showing the following information:—

Name..... Address.....
Call Sign..... Section.....
Call Sign of other operator(s) (if any).....
Location of Portable/Mobile Station.....
From hours to hours
From hours to hours

A brief description of equipment used, bands used and points claimed, followed by the declaration:

"I hereby certify that I have operated in accordance with the rules and spirit of the Contest."

Signed..... Date.....

10. The right is reserved to disqualify any entrant who, during the Contest, has not observed the Regulations and the Rules of this Contest or who has consistently departed from the accepted code of operating ethics.

11. The decision of the Federal Contest Committee of the Wireless Institute of Australia is final and no disputes will be entered into.

12. Certificates will be awarded to the highest scorer in each Call Area. Additional Certificates may be issued at the discretion of the F.C.C.

13. **Return of Logs:—**

All entries must be postmarked not later than 10th March, 1962, and addressed to the—

**Federal Contest Committee, W.I.A.,
Box 851J, G.P.O.,
Hobart, Tasmania.**

RECEIVING SECTION

14. This section is open to all Short Wave Listeners in VK Call Areas. The Rules shall be the same as for the Transmitting Stations. Logs shall take the same form as for Transmitting Sections, but will omit the serial number received.

Logs must show the Call Sign of the Station heard, the serial number sent by it and the Call Sign of the Station being worked.

Only one lot of points can be claimed for any one contact between two stations, for example: VK2AA/P calling VK3XX/P and exchanging numbers. Points can be claimed only for VK-2AA/P working VK3XX/P. NO points can be claimed for VK3XX/P working VK2AA/P during this particular contest.

Scoring will be on the same basis as for Transmitting Stations. It will not be sufficient to log a station calling CQ. A station may be logged once only for phone and once for c.w. in each band.

Awards.—Certificates will be awarded for the highest scorer in each Call Area.

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Regrinds £1/10/-.

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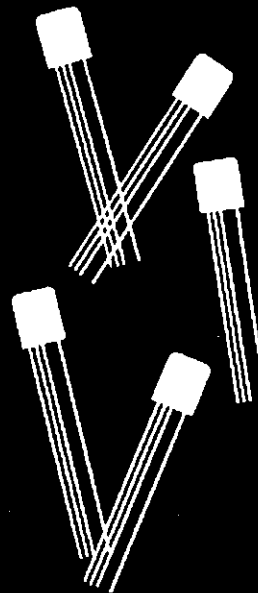
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OC169 - OC170 - OC171

Transistor Type	OC169	OC170	OC171
Collector Voltage (V_{cb} max.)	-20	-20	-20 V
Collector Current (I_c max.)	10	10	10 mA
Max. Dissipation (25° C)	80	80	80 mW
Typical parameters at (measured at $V_{ce} = -6V$, $I_c = 1mA$)	0.45	10	100 Mc/s {common emitter} {common base}
Input Conductance	0.4	2.5	23 mmhos
Input Capacitance	80	65	-6 pF
Feedback Admittance	< 100	100	600 μ mhos
Transfer Admittance	36	32	14 mA/V
Output Conductance	7	60	350 μ mhos
Output Capacitance	7	4.5	2.6 pF
Ideal Unilateralised power gain	61	32	>10dB



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MT117X

DX

Alan Shaws Smith, VK4SS
35 Whynot Street, West End,
Brisbane, Qld.
Phone 4-6528 (7 a.m.-4 p.m.)

DX this past month has been good, but far more important to the DXer, or all Hams, is the fact that we now know the findings of the R.F.A. Committee in relation to the new frequency allocations of our bands.

All must be by now aware of these changes and I think no one is going to complain. It is true that our past endeavours should be enough to insure us against any further loss in frequencies, but sadly this will not be so, because in all fields man only retains what he fights for. So this is a plea to make more use of the bands. It could be later than you think.

The VK-ZL Contest seemed to go off rather well as conditions on 7, 14 and 21 Mc. at least were fair to good. The old die-hards were at it as usual and some good scores were being compiled. VK6RU this year should be a hard one to beat among the locals. Unfortunately there was a certain amount of QSO snatching. Under the pressures that rise in such a competition I realise that it is the weakness of impatience that brings this about, rather than the deliberate act of QRM to foil a QSO of another. But it sounds just as bad anyway. Power, be it military, political, or simply watts, is used, it seems, to cut down the other fellow. I would like to think that Amateur Radio is completely above this. But it isn't.

The day and night preceding the Soviet 30 megaton bomb explosion, the northern UAs were particularly strong here, both on 7 and 14 Mc. The day and night after, DX to the abovementioned regions was conspicuous by its absence. This, however, could merely be a trick of the ionosphere itself. Did any one else notice anything significant?

October should have pleased the hearts of all DX men no matter what band they might specialise in. All frequencies were lively and working, even though they might not have been as open as past years, the signals were there at reduced strength. I will give more specific DX times later in the column.

NEWS AND NOTES

FB8XX/Pierre, on Kerguelan Is., has been active on 7 Mc. around 1900 hrs. GMT. Some of the boys have worked him. The QSL goes via 5R8CC.

FBZZZ is also active, but does not seem keen to work DX.

Denny Weil, VP2VE, originally planned to leave W6 land on another world-wide cruise in September last, but man proposes and God disposes, so now it seems the trip is to commence on 1st November. The first port of call is F08, Marquesas Is.

Expédition F30LV/VS9K, G3NAC/VS9K, F3NWR/VS9K, and other Gs are operating from Kamanar Is. They have been heard and worked on 7 and 14 Mc. The QSLs go via R.S.G.B. of course. They are a group of R.A.F. boys whose operating techniques left something to be desired. (Unofficially it's another new country.)

Another Expedition to Bechuanaland, in the form of ZE3JO/ZS9, is coming up. Watch 14 and 21 Mc. phone.

There will be activity in November from KG4AG/KC4.

YJ1MA is expected to show up on c.w., 14 and 21 Mc. Late November.

Arthur VP2VJ is one to look for around 2000 GMT on 14 Mc. c.w.

HK1HV, HK7VT and others are also being heard here, to advantage, on both long and short paths around 0700 and 2000 hrs. GMT, 14 Mc. c.w.

F2AA is about to make an Expedition to the following: FY7AA, FM7AA, FG7AA, VF2M and other near areas, on 14 and 28 Mc. c.w. and s.s.b. QSL to C8KS. A small monetary contribution with a QSL would be appreciated to defray the cost of equipment.

Earl FJ3AD is to be heard on 14 Mc. c.w. around 1000 GMT. Usually easy to work.

VS9AAC is a regular on 7 Mc. c.w. each morning around 1900-2100 GMT.

For those who still want Korea, there are HM and HL calls audible on both 7 and 14 Mc. between 1000 and 1100 GMT most nights.

TR8AA and TR8AB are active from Gabon. (No further information available.)

XE1CV/XE4. R. Gigedo, will be on expedition for 24 hours early in December on 14 Mc. s.s.b. (No more information to hand yet.)

FW8AS should be operating during November. FB8WW (Crozet Island) on from 20th Dec.

ACTIVITIES

Frank VK2QL has been active on all bands and sends in the following. 3.5 Mc. c.w. wkd: WL1YH, W1QMM, W8JIN, W8MMZ, O4AFM, ZK1AR, and heard UA and OK 07 Mc. c.w. wkd: LV95L/5, XE1OK, VP2VL, VY5BJ, KX-GAJ, LUYE and on the long path DL1FF, and heard VS9KAC. 14 Mc. c.w.: AF5CP, UA-1KED, VP5BH, VP1VB, YS1O, G3GKQ/VS9K, VS9KAC, ZP5LS, 5A3TO, VQ5IB, VR4RM, KR-8AF, EP2BB. 21 Mc. c.w.: FY7YF, VR1B, KW6DG, EP2BB. 28 Mc. c.w. wkd: KW6DG, W and VE. (Nice work Frank, the 3.5 Mc. effort is particularly fine with your QRP.)

Laurie VK2AMB has found the bands disappointing with previous years. He logged the following on 14 Mc. c.w. wkd.: OH5AC, LU9WA, Z5TM, Z3SEW, Z51WU, G3GJQ/VS9K, G3NAC/VS9K, G3OLV/VS9K. 14 Mc. c.w. hrd.: VS9KAC, VU2RM, VQ3HQ, 9M2FR, CR7CI, FB8XX, EI1CG, 6N2RDG, YS1O (0315z), ZK-2AD, 4STEC, OH3OB, YU3KS, G3GPE/VS9K, UP2KNP, FO8AC.

Bruce VK3BM has been active and really worked some nice ones during the month. 3.5 Mc. s.s.b. VESBQP. 14 Mc. a.m. wkd. UA0KOA, CN2BK, UR2AT, UA1DZ, HB9WT, MP4BBN, PI1J, TG9AD, HI8DGC, XE1JP, VY1ZF, XE1CE, HK3LX, YV6CQ, XE1FFW, VR2DK, and hrd. PK2HT, EA6AZ, 5N2AMS, K6CQV/KS8 (Samoa). 14 Mc. s.s.b., wkd.: GC3LXK, OZ7JV, VP5BL, HPILO, Z56FC, Z5-5JM, DUTSV, G3MEA, HB9XM, SM2AZ, OD-5CT, G3NUG, DJ2WB, DJ3VM, DJ1BZ, G8PO, SM3BIZ, G5FPQ, OE1AZ, DL7BA, DL7AD, MP4BBW, G3NMR, SM3EF, HB9TL, HM4AQ, DL4FX, DL4FC, SM5CO, GM3KEZ, DL5HI, SM5LL, G2PL, DL4FO, SM5DW, G6XN, SM-5TR, UA3DR, DL4AF, SM5CZQ, G2AAN, HS-5OSQ, KL7HRZ, KL7RBD, XE1CV, KL7DQT, HM1AE, HM1AE. 21 Mc. a.m. wkd.: OA4EA, VP2GAJ, OA4DG, YV9BB, TI3CL, Z56CV, Z52ND, ZE3JJ, ZS2OM, CR5SP, ZS6AXI, CR-7AG, CR7CK, KW6DG, KG8NAC, KX6CG, ZK1AR, VE7EH, VR4CB, VE7CE, TG9AD, TG9US, HK4EB, KH6J. 21 Mc. s.s.b. wkd.: KZ5SW, VE7EH, TG9US, HK4EB, VE7CE, KH-6J. All the above and many not listed were worked. (That's a magnificent list Bruce. It's a good boost for s.s.b. Please give me a further line on your equipment there. Notes must be here by 1st month OB.)

Don L2022, who never fails to hear some good ones, gives me this list. 7 Mc. c.w. hrd.: VP3YG/VP4TP, VETTT, OH7NF, WA6GKL and others. 14 Mc. c.w. hrd.: HA8CF, KP4CC, YV-5BZ, KH6EDY, UB3LC, VR1B, VY1RZ, VR4CV, HB9XU, FB8WW, LTTFE, DJ3DT, FO8AK, VK-9B3E, LU1ZL, ON4FL, G05BE, ZL7SE, F9B9P, U8KAB, HH2CE, UWB9Q, BV1USA, AF5CP, YS1O, UP2KNE, PA0ZL, U8KAA, 4STEC, V5V1A, etc. 14 Mc. a.m. hrd.: XE1CV, VR1G, FK8AJ, 9M2DQ, KW6DG, CN2BK, PY3XU, XE1JT. 14 Mc. s.s.b. hrd.: TG9AD, VE1ZM, XE1CV, HC1FB, OD5CT, UL7JA, KW6CIA, CN8PU, VU2NR, EP2AG, KB6ER, HH2IE. 21 Mc. c.w. hrd.: UA0LL, JA1BEH, JA1CXW and others. 21 Mc. a.m. hrd.: KH6GBR, ZL, etc. 28 Mc. hrd.: Ws. QSLs recd. were G14RY, UC2BB, UBSKID, UA0/UU, SP6FZ, VQ4RF, 6O1MT and others. (Yes, Don, the bands are open now. Keep up the good work.)

Eric BERS195 has to his credit the following DX hrd. 3.5 Mc. c.w.: OH3WM, SM7QY, W8MMZ, 7 Mc. c.w. hrd.: G3JBR, G1OQR, LA5HE/M, LZ2KBA, MP4BDN, MP4BDO, VE-3BQ/SU, UA6BO, UA6FG, UB5KBV, UB5VW, UTSEK, UC2BW, UO5AS, UI8LB, UJKAA, YKOVK, VS9AAC, YU2AAE, YU2BO, 4X4HC, 4X4MJ. 14 Mc. c.w.: AP5CP, BV1USA, EP2AF, EP2AT, FB8XX, HK7UL, JZ0ML, KC6BD, KX-6DE, LA2BH/M, LA5HE/M, LA7RF/M, TI2ACH, MP4BDN, UC2KAA, UJKAA, VQ8BM, VR2DK, VR4CV, V51FW, VS9KAC, G3NAC/VS9K, VS-9AAC, VU2LNZ, VU2JY, ZC4TC, ZK1AR, 4STEC, 9M2FR and so on. (Eric reports hearing a lot of choice ones getting away from me on 7 Mc. this past month. You can say that again OM!)

John VK3ZC, whose 7 Mc. signal really gets out, sends in these wkd.: EA6AF, ZE1AS, ZE3JS (4 watts), KG1AA and others.

Tom VK5JE, who is a regular on 7 Mc., got amongst the good ones. They were FB8XX, VK0TC, VR1B, G5R1, VQ2WR, FK8AZ, VQ4HE, 5N2LKZ, VY5DE, VS9AAC, MP4BDN, ZC4IF, ZC4SC, VQ4DT, HA3KC, hrd.: UJ3AL, UC-2KAR, SV0W1, LA7HE, O5BG, al c.w. (Good work OM. I hear plenty calling you.)

Hsl VK4DO has been busy this month and wkd. the following: 14 Mc. c.w.: JA, W, E, KH6, AF5CP, BV1US, DJ4DN, DM3RVL, DL-6EN, DU6TY, EP2BE, G2FYT, HC1JU, I1WFL, JZ0ML, KR6LY, KX6DF, LUI1L, LU9MBI, OA4FN, OA4CB, OH1TN, OH3TQ, OK2QR, PA-

0DV, SM7CNI, SP5ADZ, SPRCK, SP9CS, UA-0EH, UA3DV, UA3HO, UA8LD, UA9CM, UA-9DN, VR1M, XZ2TH, ZEBJW, ZC4TC, ZK1AR, ZS5CI, Z55QU, 14 Mc. phone wkd.: W, K, KH6, FK8AU, I1ANY, I1CSP, VR1G, OA4CB, 14 Mc. c.w. hrd.: BV1USA, CE1DN, CN2BK, E1SC, FO8AC, FO8AK, G2DC, G8BTA, G5HS, HA8KCU, HB4FT, HK3RQ, HDCE, I1IF, JT-1KAA, JZ0PH, KG1BO, LZ1KDP, LZ2KRS, LZ2PA, LU9WA, OA4HK, OD5CT, OE3RE, OH-5RH, OH9BG, OK1CG, OK3DG, OK3ER, OZ8U, SM3XJ, SP2BK, SP4JF, SP4K1, SP5WC, SP-9SG, TN8AX, UA1FJ, UA1MA, UA3AS, UA3QC, UA6KWB, UA9MK, UB51F, UB5FG, UB5KED, UB5ZC, UC2AD, UC2AR, UC2KAG, UD8AT, UD8GF, UG6KAA, U8KAA, U8KGA, UL7KAD, UL7KBK, UL7LE, UP2KNP, UR2KAE, UQ2DQ, VU2JY, VU2KU, VU2LC, YU1AH, YU1JF, YO-3FY, YV5BZ, 5A3TQ, 5R8CQ, 5N2RDQ, 9G1DE, 14 Mc. phone hrd.: EA3JE, HC1FG, I1BKK, OA4EY, TI2HK, TI2LF, 9M2Q, 21 Mc. c.w. wkd.: W, K, KH6, VE, JA, G3PE/VS9K, DJ-3EN, DM2AMM, DL6EN, DL8RK, DL9XL, DL-6DF, OE3WB, OH1TN, OH9QG, ON4LX, SP6ZF, SP9SG, SP8HJ, SP9RF, UA0KIA, UA41F, VR1B, VY1FW, V55GS, V56EM. 21 Mc. c.w. hrd.: DJ4DN, DL7YQ, FB8ZZ, G2KO, G8BTA, G3CW, HA1KSA, HB9AAQ, KB9SF, HB9LK, SM4AEE, SP6ADL, OZ3AY, Y06K1, VU2SO, VS9KPH, 45TLB, UA2KAA, UA3WZ, UA4IE, UB5CC, UB5LM, U8KAD, UP2KNP, UR2KAE. 21 Mc. a.m. wkd.: SP8HT. 21 Mc. a.m. hrd.: AP2MR, G2XK, I1ASO, OH5SM, VS1KZ, 457YL.

Your Humble Servant managed the following wkd. 7 Mc. c.w.: VY5DE, KW6DG, UA0EY, ZE1AS, FB8XX, G3OLV/VS9K, VZDK, ZS-6AVK, LA5HE/M (off Yemen, Red Sea), VK-0TC, VK0VK, VS9AAC, MP4BDN, 4X4WF, VE2LI/2, SM5CE, GISUR, ZE1JE, UA0KZA, UA9KOA, FA8RJ. 14 Mc. c.w. wkd.: 5N2LKZ, VR1B, KP4APY, ZB1HC, VS9KPH, VR4CV, G3NWR/VS9K, G3NAC/VS9K, HK1HV, HM1AS, HC2IU, 5U7AC, LU9WA, KZUNQ/HL, PJ3AD. 21 Mc. c.w. wkd.: VR1B, KR6DO, HK7ZT.

David VK3VJ says the 28 Mc. band has been flat during October, but managed to raise the flag, on phone JA1GY, JA3IW, JA4OJ, JA4XW, JAS5V, VETBBG, VS1GQ (0700z), W3QNS, W4AGE, W7POH, W0AKP, W0MGI, ZL1KW and many other Ws. He hrd. G3OPJ, G3KFT and other Europeans, KH6EDY (Kure Is.), KH6WV, KL7HM, KM6BI (2138z), UA-3ANN, UA0LBQ and many more. (Keep the receiver warm OB, because December and January should be better.)

George VK5RX comes up with a nice month's score. He wkd. these, CT2AJ, PJ5AE (0510), FY7YF French Guiana (0808), CX2BT (0800), LU9DL, MP4BDO (1246), KC6BD (0818), G3NAX/VS9K, AP5CP (1610), HPIE (0814), UC2AA (0605), UC2KAS (1517), ZS1OU (0744), UP2KNP (0608), UP2KAS (0700), EA7IA (0730), UA0EK Sakhalin Is. (0937), UA2BD Kalingrad-udast Region (0711), VR1M (0807), UAIKFA Archangel (1145), SV0WC (0626), SP7HX (0730), UL7KAD (1435), UT5CC (2047). (The FY7 QSO gave George D.U.F. 4. This award also carries a Silver Medal and Bar. Congrats. OB. Keep knocking 'em over.)

Ray VK5RK, who has been inactive this month, mostly, worked on 14 Mc. c.w. V51JV and Js, etc. He received some rare QSLs, viz. FB8XX, VK0BH, VU2AK, KSASX (Swan Is.).

Jeff VK5NQ had a good month and submits the following wkd. 7 Mc. c.w.: 4X4FU, FA-8RJ, 5N2LKZ. These three were wkd. on the short path west around 2030 hrs. GMT. 14 Mc. c.w.: HR2FG (0442), HB1ZT/FL (0603), KG-4AP (0615), HI8DGC (0813), KG1BO (0937), VQ2W (1326), MP4QAA (1515), E1SAJ (1538), AC5CP East Pakistan (1230), KR8AJ (1315), 4X4FU (2023), VP5BH Cayman Is. (1300), G3GPE/VS9K (0403), SV0WC (1520), FO8AQ (0548), LU9WA (0628), 457NG (1353), G3NAC/VS9K (1456), CE2OF (0446), UF6FN (1307), VS9AAC (1315), FO8AK (0655), UG6KAA (1253), ZP5LS (0551), PY4GA (0905), MP4BDO (1340), MP4BDN (1425), LU1ZN (1157). (Jeff says he's given up phone DX. It's too much of a rat race. I agree OM.)

Tubby VK5NO also was well in the swim this past month. He wkd. 7 Mc. c.w.: FB8XX, VQ2WR, VS9KPH, VQ5AU, 14 Mc. c.w. wkd. VP5EH, G3GPE/VS9K, EP2BE (1411), OY7ML (1709), ZB1HC (1755), OA4FN, YS1O (0330), FJ2AE, OD5CT, 5N2LKZ, FO8AQ, G3OLV/VS9K, TT8AG (1710), CR7Z, VQ3HZ, AF5CP (1720), LU1ZN (1142), VQ4HE, VQ8AJ, VS9AAC (1210), ZS1WP (0942), 14 Mc. a.m. wkd. VR-4CB (0945), HM1AE (1008), HM1AB (1008), 21 Mc. c.w. wkd. XE1AX (2213), EP2BBO (0847), EP2AF (0934). 28 Mc. wkd. all W areas and Js, etc. (Nice work Tubby OM.)

George VK2QU also had a good month, and added a few new countries to the bag. He logged these on 14 Mc. c.w. 5U7AC (0625), HPILO (0600), KH6EDY, VR1B, KW6GW, ZP-5LS, YV5BZ (0600), KC6BD/MM, KV4CI/MM, FB8XX (0515), FO8AQ (0630), FO8AK (0445), ZK1AR, HPIE, YK9VP (0445), KB6BS, HK-

(Continued on Page 15)

Correspondence

Any opinion expressed under this heading is the individual opinion of the writer and does not necessarily coincide with that of the publishers.

S.S.B.—COMMENTS ON EDITORIAL

Editor "A.R.," Dear Sir,

As one of the pioneer s.s.b. operators in this country, with over ten years of s.s.b. operation on 14 Mc., my reading of the Editorial in the October issue of "A.R." has prompted me to write this letter. It would appear that Federal Executive, over whose name the Editorial appears, is completely out of touch with s.s.b. operation on the 14 Mc. band.

The history and present set-up of 14 Mc. s.s.b. operation is as follows:

Early VK and overseas s.s.b. work was done between about 14,100 and 14,200 Kc. Early W operation took place anywhere in the W phone band.

By 1953 the W s.s.b. stations had congregated below 14,300 Kc. and s.s.b. operators elsewhere began to use the 14,300-14,350 Kc. section of the band, or, operated inside the W phone band, a course which in the early days of s.s.b. was a necessity, as often s.s.b. Ws never listened outside their phone band. This set-up existed late in 1959, when a move was initiated in the U.S.A. to extend the upper limit of the W phone band to 14,350 Kc.

The proposed move was by no means popular, either inside the U.S.A. or elsewhere, and many clubs and private individuals, both in the U.S.A. and in other countries, put their views in writing, both to the F.C.C. and the A.R.R.L., stating what they considered the consequences would be. However, the W phone band was widened, as proposed, early in 1960, to cover the 14,200-14,350 Kc. range.

There followed a period of utter chaos amongst the s.s.b. fraternity, over the whole face of the globe for the best part of six months, in the face of an avalanche of W signals, into the 14,300-14,350 Kc. section of the band. Unfortunately a large percentage of the signals appeared to be originated by operators with hoggish manners, and absolutely no courtesy. The law of the jungle truly prevailed.

QSOs were rudely broken into with squawks of "break break," not by one operator but by many, most of whom were never heard of again after they were given a report. A QSO that you commenced with another station in any country, would be broken into by five, six or more stations, without so much as "by your leave," one of whom, frequently would appoint himself as M.C. of the whole set-up.

As often as not the original stations, (1) shut down in disgust, (2) shifted to another channel without a word by pre-arrangement, or (3) if they chose, told the inconsiderate ones in no uncertain terms to clear off and continued their QSO.

Many operators, including the writer, almost ceased operating for some months and did a large amount of listening in an endeavour to evaluate the situation, and slowly but surely a workable pattern clearly emerged.

The European s.s.b. operators, because of their geographical location, were amongst the hardest hit by the QRM. Soon, many were found below 14,200 Kc. and finally congregated in the 14,100-14,130 Kc. section of the band. Many operators in other countries all over the world followed suit, to escape the W QRM, and after all there are over 200 other countries in the world to work besides the U.S.A.

The Ws meanwhile, and A.R.R.L. described what was happening in their phone band and looked with a certain amount of disfavour on the 14,100-14,130 Kc. activity, as being too far away from their phone band.

The 15 Kc. DX s.s.b. segment of band stems from the foregoing situation, one which they were warned about would happen, but they still brought on. There was no need to extend their band right up to 14,350 Kc., a 14,330 Kc. limit, or similar, would have given them what they now seek, but they would not be told, and unfortunately there are enough inconsiderate operators in W (and not only in W land) that a clear 15 Kc. segment in W land, unless made legally binding upon them by the F.C.C., is in the opinion of practically all s.s.b. operators in this part of the world, a very remote possibility.

Secondly, there are so many s.s.b. DX-peditions and s.s.b. stations active from exotic DX locations these days, that VKs, ZLs and others wish to QSO as well as the Ws, that from that angle alone a VK very often would be unpopular operating in that small segment of band should some of these stations be there,

and almost always there are now a few of them about.

Again, on 14 Mc., upper sideband is transmitted so a conscientious operator with a clean narrow transmission, would have to keep at least 3 Kc. in from the band edge. One could guarantee that at the 14,335 Kc. edge of the segment there would be splatter from stations pushing the "band limit" below 14,335 Kc., so the 15 Kc. would be really narrower than what it would first appear.

The present set-up is as follows: W s.s.b. operators who wish to keep clear of W QRM, and work other DX, or work only one W station at a time, usually operate around 14,100-14,130 Kc. Those interested in W QSOs specify the frequency on which they intend to listen for replies. Operators anxious to engage in round-table W QSOs, or who wish to contact DX or other stations operating in the W phone band, themselves operate inside the W phone band, either on, in the case of round-tables, or adjacent to, in the case of DX, the frequency of the other station.

A few operators are sometimes found around 14,200 Kc. but not many. However, W s.s.b. operation can now be frequently heard from 14,200-14,350 Kc. over the full width of their band.

VK s.s.b. activity is growing rapidly. Frequently on an evening there are more VK s.s.b. stations than a.m. ones audible on the band in Sydney, and while I think of it, F.E., neither I, nor any s.s.b. operator I have mentioned the matter to, has heard any of you active on s.s.b., either on 14 Mc. or any other band.

—N. Southwell, VK2ZF.

F.E. COMMENT ON VK2ZF'S LETTER

Editor "A.R.," Dear Sir,

First let me correct Mr. Southwell's impression, and perhaps others, that the Editorial was meant to imply that all s.s.b. operators in Australia should restrict their operations to the "top 15"—if such impression was created, we apologise, as this was certainly not the intention, nor would the Executive attempt to convey such policy without the proper authority of the Federal Council.

It is well known that in the U.S.A. stations are required, by regulation, to operate within certain sections of an Amateur band. This has been found necessary by the F.C.C. to preserve some sort of order for the large proportion of the world's Amateurs who reside there. We, in Australia, are in a much more fortunate position in that any subdivisions within our bands are not regulated by the assigning authority. The present voluntary subdivisions in our bands are the results of lengthy and detailed consideration by the Federal Council—the subdivisions, incidentally, being between phone and c.w. only.

In the case of 14 Mc., the subdivisions are 14-14.1 Mc. for c.w. exclusive, and 14.1-14.35 Mc. for phone emissions which include a.m., n.f.m., p.m., d.s.b. and s.s.b. The Editorial, with these points taken for granted, recommended that any Australian s.s.b. operator at the top end of the 14 Mc. band should follow the A.R.R.L. recommendations, and for their convenience and yours, not work any U.S. station in the "top 15". The wisdom or otherwise of the A.R.R.L. in making these suggestions is not for me to say without a full knowledge of all the facts that led thereto, but I believe that in view of the League's past history, this recommendation was not lightly made; and the Executive therefore felt incumbent to pass on the recommendation to all s.s.b. operators.

If they chose to ignore the Editorial, that is their business; but do not say later that the "top 15" because of the Americans, has been denied to us and other Amateurs throughout the world. A little bit of extra band space is surely always welcome.

—Major W. Mitchell, for Federal Executive.

SUNSPOT ACTIVITY

Editor "A.R.," Dear Sir,

Most of us are aware that solar activity plays a major part in the propagation of Radio signals from one point to another point and that the indication of the level of sunspot activity is in the form of sunspot numbers.

It should interest all concerned that there is a period of low sunspot numbers almost with us and it is anticipated by overseas authorities that a near zero sunspot minimum will be reached by early 1965. (By way of comparison, the sunspot number for January 1961 was around the 70 mark and for October 1961 it was 51. It can be seen therefore that reception difficulties on the higher frequencies in particular will become increasingly worse during the next three years or so.)

With the above in mind, it will be necessary for all Amateurs to keep in thought the fact that during the period concerned the ionospheric layers will become less dense because of lowering of solar activity and this, in turn, will result in the m.u.f. for h.f. communication becoming progressively lower and the available frequencies for such communication becoming less and less.

Our 3.5 Mc. band should be much in demand from now on, both by day and by night until such time as the present trend towards zero sunspot minimum continues.

—Eric W. Trebilcock, BERS195.

R.D. CONTEST OPERATING

Editor "A.R.," Dear Sir,

I have read with a certain amount of amusement, sundry letters in your columns moaning about the rough tactics of some operators in the R.D. Contest.

It seems strange that the operators who really score well do not moan about the rest—after all, they spend the most time on the air and should therefore be in a position to pass judgment on what should or should not be done.

I must admit I really enjoy participating in this Contest. Apart from the continual battle of tactics in endeavouring to get through the howling, seething mass, it brings back to me many memories of war years, of friends who never came back, of the thousands who threw themselves into the maelstrom of war in the cause of freedom—freedom for us to moan and winge.

Every R.D. Contest teaches me something—it shows me in no uncertain terms that I must improve something—maybe it's the changeover switching this time, the netting another time, the band changing, the receiver selectivity, etc. Perhaps if our disgruntled friends could adopt the same objective attitude they could improve their gear (and their outlook) to such a point that they wouldn't find it necessary to complain about some naughty boys treading on their corns.

I will admit there are a few signals which don't come up to modern standards, but I would hesitate to condemn those concerned. I would rather say "Thank You" to them for at least making the effort to join in. I would also say that if you yourself can honestly plead not guilty to putting a bad signal on the air at some time or other then you are either a commercial rig tycoon or you just haven't done much experimenting. The genuine Ham likes a candid, but accurate, report on his signal, but components will break down at the most awkward times.

In conclusion, I would like to pass my regards to all my once-a-year friends. See you again in the next R.D.

—G. W. Groves, VK7XL.

P.S.—The rules of the R.D. Contest do not specify the wearing of kid gloves.

THE LAZY Z CALLS

Editor "A.R.," Dear Sir,

"What do others think?" Well, I find that Peter VK4PJ has adopted a very narrow viewpoint on the use of Z calls. Perhaps he can't understand that some people are more content to work v.h.f. than the lower frequencies.

A Z call is the easiest way to obtaining a full licence, using the intervening period to work on the code. However, some operators find the "call of the wilds" on v.h.f. stronger than c.w. and become quite content to become good v.h.f. operators, which in fact requires far more technical skill than to build up simple gear on say, 80 mX. Having got the gear set up and operating v.h.f. DX they get more kick out of working VKs and JAs from VK3 on 6 mX than lower freq. types get from working Yanks on 20—after all, it doesn't take much effort to work a Yank on 20!

"What a boost they could give to the lower frequencies." It seems to me the lower frequencies don't need any boosting—take 40 mX on a busy evening, you can't find a spare cycle! So why not leave these happy v.h.f. Z calls to fill the empty wastes of 6 and 2 mX where there is plenty of room.

The suggestion that the Limited licence be made current for one year only is a very selfish one—for this would indeed deny the medium of Amateur Radio to many, including myself, who are enjoying it today, for they just would not deem it worthwhile to make the effort to take the exam. under those circumstances.

Even now, though I find myself in the position of having passed the c.w. exam. and awaiting a full licence, I feel that a majority of my own operating will still take place on the v.h.f.s, and I think this is the attitude of a lot of other Z calls.

If the Limited licence were to be current for one year only, there would possibly be few indeed who would be able to find time to operate if they were to pass the c.w. within 12 months, so why give them a call sign at all?

To summarise, I think the Z licence is a very worthwhile step forward from the old system, because—

(1) It is enabling people to become licensed Amateurs who would otherwise have considered the step too great, thereby swelling our ranks.
 (2) It is a means of populating the previously little-used v.h.f.s.
 (3) It is helping the v.h.f. art to progress by these very Z calls trying consistently to improve their equipment, and opening up new aspects altogether in Ham Radio, such as v.h.f. f.m., t.v. and microwave techniques.

—Bill Bell, VK3ZFG.

IN REPLY TO VK3ZCE/T

Editor "A.R.," Dear Sir,
 No one, I repeat, no one advocated the use of low power and omni-directional antennae. In fact, the reference to the two items are entirely separate and as inferred by 5ZCR, entirely out of context.

The statement that he openly discriminates against low power stations is revealing. Another OPERATOR on the v.h.f. bands. When are you going to learn that you were probably originally licensed as an experimental station. How many stations have lived up to their licence? Again let's get a few things straight. How many of the present v.h.f. Amateurs were around 15 years ago to collect disposals equipment at bargain prices? Think of the newcomer today who, because of the way the bands are used, has to pay of the order of £40 for a receiver before he even thinks about the converter. By the time he's paid this out there is not very much left for a 50w. transmitter. I run 40w. input, but it took me nearly two years to accumulate the necessary parts to build it. There would be very few of us in the position where we can spend even £10 a month on Amateur gear and not worry about it.

Anyway, let's not run down the bloke with low power, it's his business how much he runs (the economics are only one part of it). Let's tune our converters up properly and listen for him and not be high power snobs over the subject. I've heard better 3-watt signals on 6 than a lot of the 150w. signals that clutter up the band.

The only time I get niggly about stations who can't hear me is when they are running 5 or 6 watts and are getting 5 x 9 this end. Shows lack of proper receiving equipment or too much noise—which can quite readily be understood. Anyway, have you ever taken a good listen with a good converter to 15w. input to a 522? You may get a surprise. A lot of them are doing better than home-brew rigs. I think the Institute did a good job in promoting the sale of 522s at a price people can afford. If they'd do the same with good receivers things might be better.

500 Kc. a minute is quite a good tuning rate, gives you three minutes to tune from 144 to 145.5 Mc. If the DX is coming through and someone hears you, they'll call for at least this length of time unless they are right on the frequency of the station you just finished with.

The frequency list of Victorian 2 mx stations, soon to be published by the W.I.A. (Vic.) shows just what a rat race 2 mx is with four or more stations on the one frequency and maybe 30 Kc. before the next pile up. So when it all boils down there's not much to tune for except a dogpile on each frequency you can't make sense of.

If you take them one at a time, state which direction you are tuning and from what frequency you are going to start tuning, there should be no trouble in working stations. After all, forming a round-table on a DX opening is not quite the thing is it?

Your last statement re "Every thinking operator . . ." is commonly known as an inadmissible generalisation on two counts: (1) All Amateurs are not operators and vice versa; (2) a lot of them think, and boy, they don't think what you think.

Also when I'm flying an armchair and doing the criticising you can delete all reference to what I said. I've done my share of experimenting and operating and am in most cases on 6 mx.

At least I'm on the band and I will talk to anyone else who is on no matter what his power or signal strength or readability. Let's share our hobby, not be selfish about it.

—Another Angry Young Man.

Editor "A.R.," Dear Sir,

I read with interest the letter from VK-5ZCR/T Nov. '61 "A.R." His remarks on the 144 Mc. band have caused me to put pen to paper. My observations in searching for weak stations follow his remarks closely, and I think most operators would have a similar problem, as 1200 Kc. is a lot of band to tune carefully. I don't think, however, that using only 500 Kc. is the correct approach to the solution.

Several years ago Ballarat v.h.f. stations were faced with the problem of local QRM whilst looking for out-of-town stations. Imagine

six or seven stations all within a mile or two—high powered and well modulated—operating anywhere between 144 and 144.5 Mc., as was the case in those days. We co-operated and after testing on separation of station frequencies, etc., we came up with the following plan.

We of Ballarat grouped our frequencies in the first instance around 144.2 to 144.4 Mc., but later from 145 Mc. upwards. Thereafter any station wishing to contact the Ballarat area needed (until lately) to tune 145 to 145.2 Mc., i.e. 200 Kc. Each station was given a frequency in 20 Kc. steps and at the time there were eight stations operating in that section.

Now if a similar plan could be formulated for various areas within each State it would be only necessary to place a directional antenna system on a certain direction and tune say 200 Kc. knowing that all stations, in that area, would be on that portion of the band.

Cost? Well before the t.v. channels were revised we were all up for a crystal regrind in 1963 anyway.

—B. M. Stares, VK3ZBS.

[Letters in reply to R. Jones, VK3BG, on the Gentlemen's Agreement have been received, but owing to space limitations will not appear until next issue.—Editor.]

DX NOTES

(Continued from Page 13)

3RQ, XEIDA, LU9WA (0654) CE2OP, UW3ME, OA4BR, VR4CV, JZ0ML (0825), also wkld. JA, UES, UA1, 2, 3, 4, 6, UP2, SP3, 6, 8, 9, ON4, OA2, G3, 5, 6, PA0, OH2, OE1, DL6, DJ2, SM, OK, DM and all W areas. Good ones hrd. were VPTCB, SA3TQ, VS9KGA, KG1HD, OD-5CT, SU1IM, FA8VN, ZC4TX. (I hear a lot of DX calling you OM. Hope your new rig wks. out f.b.) Times were GMT.

It will be seen by the above reports that the bands have been lively. I still want notes on 21 and 28 Mc. however. They should be at their peak by now.

ADDRESSES

- 4S7EC—Box 907, Colombo.
- ZD7SE—Via W9FJY.
- 5N2RSB—I Brigade Signal Troop, Kaduna, Nigeria.
- VF2LO—Cliff Wesler, K6CEO, St. Lucia, B.W.I., or QSL via Gary Stillwell, W6NJU, 434 N. Laurel Ave., Los Angeles 48, Calif.
- VS9AAC—J/T A. R. W. Lake Block 1, Bottom West, R.A.F. Khormaskar, B.F.P.O. 69, Aden, or to G3MO, via R.S.G.B.
- VQ2CZ—W. E. Rymer, Box 332, Kitwe, N. Rhodesia.
- HC2IU—Box 3200, Guayaquil.
- 5N2AMS—C/o. Ministry of Works, Minna, N. Nigeria.
- TNSAT—P.O. Box 108, Brazzaville, Republic of Congo.

SUMMARY

Predictions for December. 7 Mc. will fall away somewhat. This and the QRM may make the band less attractive.

14 Mc. also may not be up to par, particularly during daylight hours. The night path to Europe and Asia should be OK, with Africa also coming through at times.

21 Mc. will be best during daylight hours, but sporadic activity should occur at night. Keep listening now on this band and 28 Mc. because the next three or four months should see these frequencies at their best.

Here are some summer pattern listening times, which may prove helpful to the beginner in DX.

- 7 Mc. band and time E.A.S.T.:
 1700-1900 hrs. Odd Ws. Occasional Central America, N. Africa and West Europe.
 1900-2100 hrs. Odd S. America, near Asia and J.
- 2100-240 hrs. Asian and northern UAs.
 0001-0300 hrs. Asian, Middle East, E. Europe.
 0300-0500 hrs. Generally a lull but odd Asians sometimes.
 0500-0700 hrs. East Europe, N. Africa, and L.P. to Central America.
- 14 Mc. band and time E.A.S.T.:
 1400-1700 hrs. Occasional Ws and Central America. Little else.
 1700-2000 hrs. Add Europe on L.P. and a few near Asians.
 2000-2400 hrs. Mixed bag. Europe on land, short path Asians and South America.
 0001-0300 hrs. Europe (short path), Asia and N. and S. Africa.
 0300-0500 hrs. Mostly quiet.
 0500-0800 hrs. Often good to all Europe and Asia and long path to Central and North America.
 0800 hrs. Ws for a while only and some JAs.

21 Mc. band and time E.A.S.T.:

- 1300-1500 hrs. Ws and S. America sometimes.
- 1500-1700 hrs. Ws and odd West Europe and N. Africa on long path.
- 1700 hrs. Unreliable, but sometimes open to Europe and Asia.
- 0700-110 hrs. Often open to the East as far as Central America and West Indies area.

All the above times are to be considered as a general pattern of things, rather than an expected daily occurrence. Naturally, great variations will occur.

If one has reasonably good low angle of radiation, very little power is needed to work DX on 21 and 28 Mc. successfully. However, every watt of power is an advantage on 7 Mc. When the Europeans are at the height of their activity from 1700-2200 hrs. GMT approx., it is almost impossible to work from VK into their area on 7 Mc. as the QRM is just too great.

I have a few enquiries for listening times for DX on 3.5 Mc. During summer I expect the DX heard to be of little consequence, but with the coming of autumn there may be openings over the longer paths. Around 1100 hrs. GMT (give or take about an hour, depending on the QTH), the Ws often show up for periods. I am told that there is also an opening to Asia around midnight or after. However, there seems to be practically no activity from that region. Africa might appear (I said might) from 1530 hrs. on and then Europe. 3.5 Mc. DX should be a practical and regular affair for distances up to 6,000 miles anyway. But as it is largely the watery wastes that surround us the band remains dead and undisturbed. Next year because of the low solar activity there may be an increase in DX on this band.

Finally this:—

"A DX contact needs brevity. Knows most of the Hamming fraternity. But there is one 'bright light', that try as he might,

Can't resist getting so much into the last over of a QSO, that the boys think he'll go on to Eternity."

Let me take this opportunity to wish all those connected with Amateur Radio and the DX news, a Merry Xmas and a Prosperous and DX-full New Year. It has been a pleasure to receive all those letters and my one regret is time does not permit my personally answering them. I'm really too old, now, to make New Year Resolutions, but let us all aim to make 1962 a bigger and better year in Amateur Radio. 73, Al VK4SS.

P.S.—Please have your notes in early this month.

R.S.G.B. 21-28 Mc. PHONE CONTEST

Radio Amateurs throughout the world are again invited to take part in the annual R.S.G.B. 21-28 Mc. Telephony Contest to be held this year on 2nd and 3rd December, 1961.

The rules are the same as in previous years, but the attention of overseas contestants is drawn to the bonus for working each additional ten U.K. stations irrespective of band.

The relevant rule (8) is as follows: Scoring: Overseas stations may only claim points for contacts with British Isles Stations (G, GB, GC, GD, GI, GM and GW). For overseas stations, each completed contact with a British Isles station will score five points. In addition, a bonus of 60 points may be claimed for the first contact with each British Isles country-numeral prefix on each band (i.e. G2, G3, G4, etc.). A further 60 bonus points will be scored for each additional ten stations worked in each of the above categories irrespective of band.

The closing date for posting entries is 18th December, 1961.

There is also a receiving section to this Contest and the rules are as previous Contests.

OHIO VALLEY AWARD

OHIO VALLEY AMATEUR RADIO ASSN.

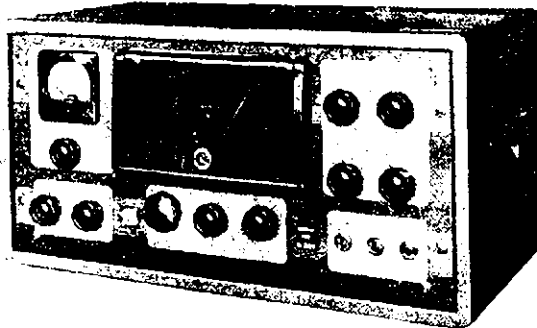
In order for those Amateurs interested in earning points to obtain the "Ohio Valley Award," the members of the above Association will hold a QSO party beginning Dec. 22, 1961, and continuing through to Jan. 1, 1962. Members will operate 30 Kc. above the low edge of all bands on c.w., 10 through 160 mc. and will call CQ/OVA and sign their calls/OVA. Members will do their best to maintain the time and band schedule as follows: 10 mx, 1400-1500 and 2200-2300 hrs. 15 mx, 1500-1800 and 2100-2200 hrs. 20 mx, 1200-1400, 2300-0000, 0200-0300 and 0600-0700 hrs. 40 mx, 1100-1200, 0000-0100 and 0300-0400 hrs. 80 mx, 0500-0600 hrs. 160 mx, 0500-0600 hrs. All GMT. Send Contest Log to W8JIN.

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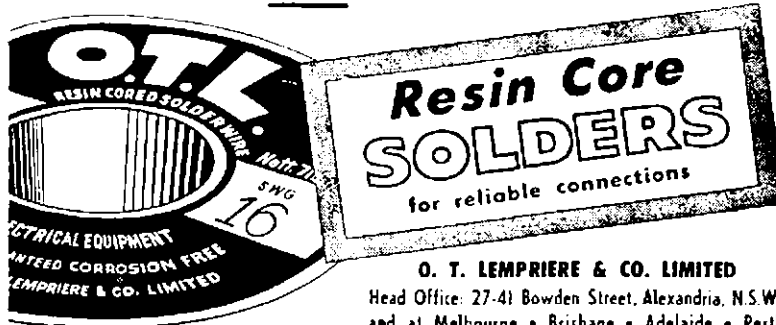
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VHF

David Tanner, VK3AAU
17 Wolsley Street,
Mont Albert, Vic.

By the time you read these notes I shall be well on my way to the land of VK8. I hope to be in Alice Springs on Saturday, 1st Dec. I will be using a.m. or c.w. on 50.40 Mc. and will be on the air from about 8 o'clock or so. I will be driving north toward Darwin for the next couple of days, so if conditions are any good we may be able to do business. The call sign will either be VK3AAU/3 or VK8AU. The rig will be running about 60w. on c.w. or carrier controlled a.m. Operation from Batchelor will commence soon after I arrive, both in the evening and also at dinner time, whatever time that happens to be.

I hope to be on the other bands some of the time as well, in particular on 20 mx during Sunday morning, to swap information with anyone who cares to.

DX on 8 mx seems to be very slow in making a start this year, as yet no one has reported any Interstate openings. I believe the boys up north have been getting a few openings to Japan again, but only a few weak JA signals have been heard elsewhere.

This year's Ross Hull Contest should be quite interesting, particularly from the point of view of those chaps who disagree with the inclusion of "local contacts". I would like to ask all participants to send in their logs, no matter how small they are, and also include any comments you care to on the rules at the same time. In this way, the FCC will get the ideas of those who are particularly interested in the Contest, quite early in the year and have plenty of time to digest them before they make up amendments to the rules. The number of logs sent in in past years has been a bit disappointing, so how about seeing what you can do about it this year.

Lastly, I would like to thank all the chaps who have sent their notes to me during the past year. Bill 3ARZ will be taking over from January's issue, so give him your support. Bill is a man of many progressive ideas and has given the VK3 Group a good lift, and he is quite keen on taking over the notes. All the best for the Christmas and New Year DX and I'll see you from VK8.—3AAU.

NEW SOUTH WALES

50 Mc.—About 20 or more local stations are active on this band with a few more listening. There are many more in the country also, but no DX yet.

144 Mc.—A good deal of activity and a number of new stations have appeared. Renewed activity in the Gosford-Newcastle area is providing consistent signals into Sydney. Doug 2ASA is the strongest signal from this area. Hugo 2WH at Forbes has been worked by Sydney stations recently on Wednesday and Sunday nights. 2ZGM at Ungarie is also trying to work into Sydney. Geoff is running about 150w. into a 4X150 feeding a 32 element array 50 ft. high. Frequency is 144.09 and times are 1030 and 1400 hrs. on Sunday and 2100 hrs. on Wed., Sat., and Sun.

New stations heard in Sydney are 2ZJE at Guildford, 2ZWG at Cordell Park, 2ZRA at Long Jetty and 2ZRB at Fairfield.

The Nov. meeting of the Sydney Group was held on 3rd. Barry 2ZAG showed some films he had taken on his recent trip to Japan and gave some of his impressions of Amateur Radio in Japan. The Dec. meeting will be on 1st. This will be an auction night of members' surplus gear with Jim 2PM and Bob 2OA as auctioneers. There will be no meeting in Jan.

The October fox hunt was on Wed. 25th with Eric 2ZDP as the fox. It finished at Kyle on the Georges River. First in was Dick 2ZCF in 28 minutes after covering 10 miles. Jim 2PM with 12 miles was second, followed by Dave ZAWZ who was solo. Many of the hounds crossed the river and got bushed on the other side. A special medal to Alan 2ZCS who came in using a halo antenna, and also to Paul 2ZPJ who was last seen heading off 180 degrees out of phase and is still hunting. December hunt with Barry 2ZAG will start at Top Ryde and will finish with a Christmas get-together.

The Merry Christmas Scramble will be on Sunday, 17th Dec., at 8 p.m. The Mid-Summer Field Day on Sunday, 31st Dec., will be a points per mile contest held during the afternoon and evening. Details on the broadcasts.

VICTORIA

50 Mc.—During the month of Oct. the band has been very quiet, following much the same pattern as the winter months. George 3ZCG at Morwell on 50.16 Mc. and Stan 3ZAB at Traralgon on 50.45 Mc. look to the north for DX each lunch time and 3ZBV at Morwell will be joining them as soon as his beam is finished. On 18th Oct. between 2130 and 2200 hrs. E.A.S.T. 3ZBN and 3ZDK heard some JA signals but were unable to identify the call signs. On 30th Oct. Jim 3AZY at Frankston worked David 5AW at Penola on 2 mx with 9 plus signals, so they tried 6 mx and had a two-way contact with 5 and 8 sigs.

Bill 3XE at Hexham reports quite a bit of 6 mx activity down in his part of VK3 including such stations as 3FX, 3ZFG, 3UT, 3AKR, 3AKN and 3ANQ. A new station on this band is Ian 3ZMM, located at Blackburn. Ian is running 12w. input to a 2E26 and is using a dipole as a temporary antenna. John 3ZHN now has his 30 ft. long beam on top of an 80 ft. tower and is intent on working DX.

The Oct. 6 mx scramble took place on Sun., 2nd, at 7.45 p.m. Once again activity was rather poor and only fifteen stations participated, including a surprise entry in the form of Bert 3KU, at Kilmore. Peter 3ZDO was the winner for the evening with 13 contacts with a number of stations equal second with 12 contacts. Don't forget the next 6 mx scramble which will be held on 24th Dec., 7.45 p.m.

Two metres has been very active during Oct. and quite a number of DX contacts have taken place. Some of the more distant stations to work into Melbourne were 3ZCW at Ouyen, 3ZEA at Rainbow, 3NN at Yanac, 3ATN at Birchlip, 5AW at Penola, 3ZDP at Sale, and 3DY at Maffra. Syd 3CI at Nagambie has reappeared on the band. George 3ZCG at Morwell worked Col 7LZ on 144.62 Mc. at Launceston on 9th Oct. and also heard 7BQ on 144.3 Mc. Again on Nov. 2 George heard Col but was not able to establish contact because of high level electrical interference at Col's end. Rex 3VL at Numurkah is believed to have heard 4ZCI on two metres, and I hope to get further details of this in the near future.

The stations in Gippsland are very active on this band and are on each Thurs., Fri. and Sun. evenings from 1930 hrs. onwards looking for DX contacts.

The Geelong area also has quite a bit of activity and on 27th Oct. the boys had quite a feast of DX, working most of the western stations. For the early risers an early morning net is conducted each morning from 0630 to 0745 hrs. and to date quite a number of DX stations have participated. Anybody is welcome to join in and tuning breaks are taken between each over. The Adelaide boys are also looking eastwards at this time of morning. The far north-western stations are making a point of looking for Melbourne contacts each Sunday evening from 2000 to 2100 hrs.

New stations on this band include Graham 3QZ at Traralgon on 144.3 Mc., John 3ZKO at Meeniyah on 144.35 Mc. and Daryl 3ZNC at Geelong on 144.54 Mc. Graham 3ZIX at Hampton is active again. Ken 3ZDK at Croynon, who has been active only on 6 mx to date, now has gear for this band and, by now, Geoff 3ZNA at Geelong should be active.

The 2 mx scramble is very interesting and after five of the series of six, Dick 3ABK at Geelong is way out in front in the country section with a terrific score of 161, but in the city section it is a close contest with John 3ZCB just in front with 109 pts. Michael 3ZCY is very close with 108 pts. and Ted 3AAD is not far behind with 104 pts. The next 2 mx scramble will be held on 10th Dec. at 7.45 p.m. The average participation in these scrambles is 35. It is a pity the 6 mx scramble does not attract as many entrants.

The Dec. field day will be held on Sunday, 17th, between 1100 and 1700 hrs. so how about joining in and helping to make it a successful day. Remember the winning portable station over the series will receive a complete SCR522 tx as a prize. You do not have to submit a log. All you have to do is advise Bill 3ARZ of your total claimed score before the next week-end.

The Dec. fox hunt will be held on Wed. 13th, commencing at 8 p.m. and will start from College Crescent at the rear of the Melbourne University.

The Oct. V.h.f. Group meeting, held on 18th, was quite successful and approx. 40 members attended to hear an excellent talk from Phil 3APB on v.h.f. communication in aviation, and to see two excellent films. The Dec. meeting will take place on Wed. 20th in the Victory Publicity Building, commencing at 8 p.m. and will take the form of an open night.

Don't forget that news for the Sunday morning broadcasts and for inclusion in "A.R." is hard to gather, so how about passing along any interesting items to Bill 3ARZ by telephone (23-9492) or on Sunday mornings on 2 mx between 0930 and 1000 hrs.

QUEENSLAND

The only news from this part of the world comes from Dane 4ZAX who is in business on 144.00 Mc. He has four 24 ft. long yags, a high powered tx using 2B3/300 and some rather hot converters which include a parametric amplifier and a nuvistor pre-amplifier. Dane reckons that the bird-perch will only stay up for a couple of months and he is looking for skeds with southern gentlemen suitably equipped. Sideband and c.w. facilities are both available.

SOUTH AUSTRALIA

50 Mc.—This band has been quiet this month, two stations listen during the midday period; 5ZMK at Wasleys and 5ZBR at Gawler; but as yet no DX has been heard. 5JH goes out portable now and then and provides some interesting contacts on 50 Mc. about 30-40 miles.

Two metres has been reasonable. 5ZDR has skeds every evening with 5AW at 2000 hrs. C.S.T. and 3NN at 2030 hrs. C.S.T. 3NN is worked more often than 5AW, but the latter was worked on the evening of 27th by 5ZDR and again at 0700 hrs. next morning by 5ZDR and 5ZCR.

Keith 5ZMK is now running 120w. on 144 Mc. and is excellent copy in Adelaide; he is in Wasleys about 40 miles north of Adelaide. Doug 5SKK has regular skeds with VK6 at 2000 hrs. on 144 Mc. but as yet no go.

At least two Adelaide stations, 5TN and 5ZCR, have built xtal markers using 5 Mc. xtals to give a signal on 145.00 Mc. for project "Oscar," the American satellite on that freq. These 145 Mc. markers would be handy also for listening to the VK8 beacon on 145 Mc.

One metre has only one regular station on xtal control, but the mod. osc. boys had a red-letter day on 28th and 29th Oct. when a number of near-country contacts were made (good tropospheric conditions).

Brian 5TN is experimenting with a new final amplifier on 50 Mc. using a 100TH. Brian is also talking about xtal markers using 5 Mc. xtals to give a signal on 144 Mc. 5ZFG worked 3ZGD on 144 Mc. (Adelaide to Melbourne) on 3rd Nov. This is the first contact from Adelaide to Melbourne. It appears that 5ZDR didn't work 3ZGD.

TASMANIA

During the coming season southern VK7 stations will be aiming at 2 mx DX for the first time. We hope to have as much success as our northern colleagues. A complete list of freq. and relevant details of VK7s interested will be circulated amongst mainland stations and groups who have shown interest. A few of the stations concerned are: 7MX 144.27, 7ZAI 144.35, 7ZAK 144.018, 7ZAD/7ZQA 144.14. There may also be some stabilised 7 mx stations looking for DX.

At time of writing (late Oct.) southern States are participating in skeds between 3ZCG, 7LZ and others at 1930 hrs. daily; believe 7LZ and 7BQ contacted VK3 stations during mid-Oct.

On 19th Nov. the VK7 V.h.f. Group operated from Mt. Wellington (4,166 ft. high) on 2 mx in an attempt to reach portable VK3 stations in particular—we hope this proved successful. This is the first time we have been able to use a.c. power at this site—equipment used was 90 watts to a 24 element yagi. This beam will be left on the mountain for general use and will make portable operations "from our best site" considerably less difficult—by courtesy of one of our t.v. stations—and may provide for more 2 mx DX.

Six mx is very quiet DX-wise; the only sig. was c.w. on 50.15 heard by 7ZAI on either 27th or 28th Oct., pity none of our c.w. "experts" were on deck.

Col 7LZ at Launceston reports some good contacts on 2 mx. He worked 3DY and 3ZDP on Nov. 5 and heard 3ZCC. Col hears a carrier or tone from 3ZCG on most nights which would be strong enough for a c.w. contact. TDK has a good converter on 144 Mc. now and will be on soon. He is at Postina, a hydro-electric town 1,000 ft. up in the Western Tiers.

Col also sends his following statistics for 144 Mc.: VK3s, 74 different stations; QSLs from 66. VK8s, two stations and two QSLs. On 288 Mc., four VK3s and four QSLs.

OFFICIAL V.H.F. RECORDS IN AUSTRALIA

As you are no doubt aware, dates of two record QSOs in the official list of VK v.h.f. records are missing (ref. p.4 Nov. '61 A.R.). I have information to hand from VK2RU that the date of his QSO with JAIANO on 50 Mc. was 1/4/56.

I have been unable to ascertain reliably the date of the 144 Mc. QSO between VK3ZCW and VK7LZ. I am not persevering with this one as I believe this distance has been bettered by VK7LZ. I will forward full details when and if I get reliable information.

—D. H. Rankin, Federal V.h.f. Manager.

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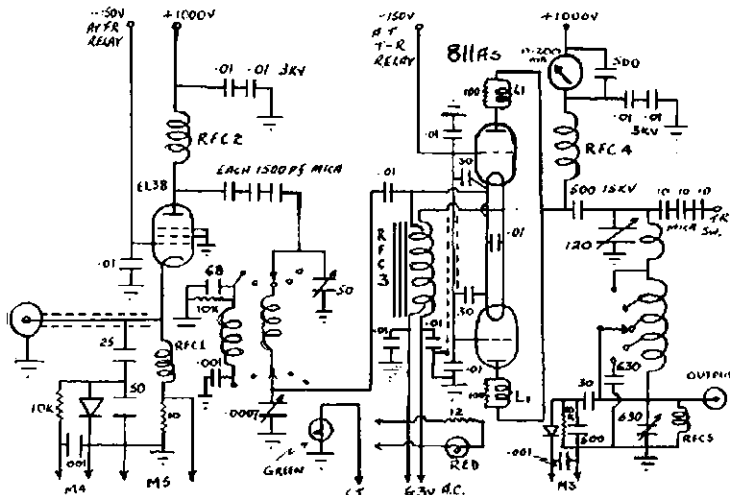
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SIDEBAND

Bud Pounsett, VK2AQJ
6 Alice Street,
Queanbeyan, N.S.W.

VK2ON LINEAR AMPLIFIER (Sixth Part of Series)

The second and third linear stages use an EL38 as a triode in grounded grid and 811As in parallel in grounded grid. This arrangement was suggested by VK3AIL and although two g.g. stages in cascade are not recommended in the text books, they work well in practice. The EL38 and tuned tank circuits are on one side of the partition in a BC375 T.U. chassis and the 811As and tank output on the other side. The EL38 is mounted on its side and the 811As vertically with a shallow sub-chassis supporting them. The perforated top-plate needs a cut-out with special shield to accommodate the plate caps. The tank coil is wound on the original porcelain former and the variable condenser used as is. The EL38 stage is quite trouble-free. Resistor loading with 10,000 ohms is used on 80 and 40 to reduce gain slightly. The pi-tuning is not critical and is roughly set for each band. It could be replaced by a fixed condenser to suit the band in use.



Meter switching is used to check on r.f. input, r.f. output, cathode current on EL38 (which varies from 15 to 30 mA.) and grid current of 811As (up to 25 mA.). R.f. chokes 3 and 4 are not critical and are easily made. The meter for the plate current of 811As is insulated from the front panel by a sheet of celluloid. Disc-ceramic 0.01 μ F. condensers 3kv. rating are not safe over 1kv., I have found, and two are used in series. The 500 pF. 15kv. t.v.-type condenser has a measured capacity of 800 pF. which is all to the good.

Parasitics in the 811As are eliminated by L1 shunted by a non-inductive 100 ohm resistor in each plate lead. The correct size of L1 is quite important as a larger coil did not work. 30 pF. mica condensers between grid and filament are right at the socket and shielding of leads coming away from the grids is of great assistance in preserving stability. Parasitics in 811As can make the plate current soar to great heights and a very short dit can blow the fuses. Interstage pi-coupling is a further anti-parasitic measure. A larger tank condenser than 120 pF. is desirable for 80 metres, but the results are quite good anyway.

Like all other linears, this one can flat-top and cause distortion. When overdriven the flat-topping occurs in a gradual manner with this type of amplifier however, and the result is a clean signal under most circumstances. This is not so with Class AB and ZL linear types, in my experience. Loading of 811As is adjusted so that 100 mA. plate current occurs with 20 mA. grid current. Good linearity with good

output is obtained at these settings. Adjustment of EL38 tank circuit has no effect on this ratio. Plate current of 811As fluctuates from 55 to 120 mA. with voice peaks. Cables connecting the linear with power supply are unshielded and there is no t.v.l. problem. 7/22 earthing wire in nylax tubing about 4 feet long is the 6.3v. line to the power supply.

Next month it is hoped to describe the T-R switch and a.l.c. rectifier circuits which also share the 811 compartment.

VR1B

The Gilbert and Ellise Islands conjures up a picture of coral atolls, waving palms and dusky maidens in grass skirts, and while you and I dream of maybe having a holiday in this exotic place, to Chas. Hawker, this is home and very common place. However, Chas. has not always lived there, being a native of Victoria.

Tarawa, the capital of this island group is not the first DX-otic spot from which Chas. has called CQ, his two "homes" before this being very different indeed.

Chas. first came on the air as VK3IB and no doubt, many will remember this call. In 1954, he went to Macquarie Island for a year and put VK1AC on the air. Not being content to have been isolated from civilisation for a whole year, he went to the Antarctic Continent in 1957 and wintered over at Davis Base, this time operating the Amateur bands as VK0AB.

Two and a half years ago, Chas. went to Tarawa to take over the maintenance and installation of communication facilities in these Islands. On the Amateur side he began on c.w. and later a.m. with screen modulation, the call sign this time is VR1B.

VOX ANTI-TRIP

While looking through a bunch of R.S.G.B. Bulletins, I came across a letter which will be of interest to many. This is a different method of effecting anti-trip in the vox circuit. In part, the letter from G3HRH reads:

"The second valve in the microphone amplifying chain is a variable slope pentode type 6BA8 which is operated as a normal voltage amplifier. The grid of this valve is returned to a negative bias derived from the receiver a.f. stages. The operation is in effect a form of audio frequency a.v.c., and I find that a much finer range of anti-trip control can be obtained by such a method . . ."

I assume that "the second valve in the microphone amplifying chain" is not in the speech amplifier but in the VOX section. This idea has interesting possibilities as many receivers in use today employ audio-derived a.v.c. which could be used as a source of control voltage.

SEE YOU UP TWO

Inspired by Col Harvey's (2AQU) excellent article in "A.R." August 1961, I obtained a pair of crystals for my BC348 receiver and the results are very satisfying. This receiver was already double-conversion using 85 Kc. I.f. transformers in the 2nd i.f. channel but this half lattice filter improves the performance.

For the BC348, the crystals required are Chennel numbers 878 and 880, 914,583 Kc. and 916,667 Kc. respectively, this is practically 2.1 Kc. apart. They were obtained from the U.S.A. at 75 cents each plus one dollar airmail, being received in nine days from the date of posting the order and bank draft.

"CQ" WORLD-WIDE DX CONTEST

Sidband came into its own during this Contest when conditions were the worst experienced for a long time. A.m. signals were practically non-existent for most of the weekend, while the s.s.b. gang were in there working lots of DX although things became very tough on the Sunday. Sunspot count was zero!

It was pleasant to notice that most stations were transmitting good clean signals and courtesy reigned supreme. There was some rare ones to be found, HA9OZ being one of the notables. Several Russian s.s.b. stations were in evidence also. There was almost a total lack of W/K signals, at least in Queanbeyan, during the Contest. It was a most enjoyable affair and showed VOX operation to advantage.

W.I.A. D.X.C.C.

Listed below are the highest twelve members in each section. New members and those whose totals have been amended will also be shown.

PHONE

Call	Cer. C'tnt- No. ries	Call	Cer. C'tnt- No. ries
VK6RU	2 256	VK6KW	4 206
VK5AB	45 256	VK3ATN	26 204
VK6MK	43 250	VK4HR	12 192
VK3AHO	51 230	VK4RW	23 184
VK4FJ	21 221	VK3BZ	3 176
VK3WL	14 211	VK3GB	50 171

New Member:
VK2AGH 55 102

C.W.

Call	Cer. C'tnt- No. ries	Call	Cer. C'tnt- No. ries
VK3KB	10 293	VK4HR	8 218
VK3GX	28 284	VK6RU	18 215
VK4FJ	29 264	VK3XU	48 213
VK3NC	19 250	VK7LZ	17 212
VK3FH	15 228	VK3YL	39 211
VK3BZ	6 223	VK9XX	41 204

New Member:
VK2AGH 71 197

Amendment:
VK4SD 52 182 VK5JT 54 146

OPEN

Call	Cer. C'tnt- No. ries	Call	Cer. C'tnt- No. ries
VK2AGX	6 289	VK4HR	7 233
VK6RU	8 271	VK3AHO	76 232
VK4FJ	32 267	VK3BZ	4 231
VK3NC	77 265	VK3JA	43 229
VK6MK	74 254	VK3WL	45 225
VK3HG	3 241	VK7LZ	23 223

New Member:
VK2AGH 83 245

Amendment:
VK5JT 63 152

In June 1959, through the good offices of W6UOU and lots of organisation by Stan ex-VK9AD, a Central Electronics 10B s.s.b. exciter arrived in Tarawa. This was run "barefoot" for a short time but humidity played havoc with parts of it and it was off the air for a long period. After lots of hard work and trouble getting components, VR1B again appeared on s.s.b. in July 1961, running the 10B and a 6146 final into a three half-waves in phase antenna with 90 watts input. VR1B is to be heard nightly on 20 metres and puts a fine signal into Eastern Australia.

FINAL AMPLIFIER POWER RATINGS (U.K.)

It is interesting to note that in the United Kingdom, the British Post Office has this to say regarding the measurement of the legal limit of power output from the final amplifier: "The peak r.f. power output from an A3a transmitter shall not exceed that obtained from an A3 transmitter working at an overall efficiency of 66 per cent. The power shall be measured by the following process:

"(i) Apply a pure sinusoidal tone to the transmitter and adjust the input to 150 watts d.c.; the deflection on a cathode-ray tube by the r.f. envelope shall be measured. (D.c. input power is to the total d.c. input to the anode circuit of the valve(s) energising the aerial.)

"(ii) Replace the tone by speech; the maximum deflection on the cathode-ray tube showing the r.f. output caused by the peaks of speech shall not be greater than twice the previously measured deflection for the tone input."

S W L

Maurice Cox, WIA-L3055
Flat 1, 37 Boyd Crescent,
Olympic Village, Heidelberg,
N.23, Victoria.

Fellow short wave listeners, I am sorry but this is my last issue of writing the s.w.l. notes for the next couple of years. I thank you very much for the letters that you have written me with all your details of listening, equipment, antennae and everything associated with that wonderful hobby, Radio.

It has been your letters that have helped me to make this page the page for the short wave listeners. I hope that I have helped you in some way and will always be pleased to hear from you all at any time in the future.

To help this page going for the s.w.l.s., please write to Robert Young, WIA-L3076, of 14 Alverna Grove, Brighton, Victoria, or Ian Woodman, WIA-L3006, of 24 Fewster Road, Hampton. They will both be compiling the notes for this page. Just as you have helped me, help them to keep this page going for you.

To both, I wish them the very best of luck; it's all yours, fellas. Go to it!

Here is some good news. On 2nd March, 1962, the next S.w.l. Convention will be held at Warrnambool. It is hoped that we will be able to meet the VK5 boys. A good programme is being arranged and we anticipate it will cost about 8 db. each. So I would suggest you all start saving for it now. Sometime next year, you could let Rob Young know if you intend coming along to this second S.w.l. Convention.

VK NEWSREEL

On 21st and 22nd Rob Young and myself helped out in the Scout Jamboree at the Air. We were the monitors for the Footscray Scout Group. The only trouble was that the monitoring receivers were in the same hall and each time 3ZGD's tx of 100w. came on Rob's AR7 just didn't exist, so we didn't bother much with the monitoring service. Bert 3ZGD made up a quad ant. which didn't look much. It had a list to starboard but by crickey it had a wonderful back-to-front ratio—it really worked. Only I didn't discover until Sunday afternoon that I had the back of the beam on the station they were working. Of course I was ticked off in no uncertain manner, hi! We had a wonderful week-end and I hope all Scouts, Amateurs and S.w.l.s. had a good time. Next year we hope to have a 2 mx link for monitoring.

Our first construction night went off with a big success; 19 of the boys brought along their rx's. Ray Price and Ian Woodman went from rx to rx doing their best to get them going for the boys and believe it or not, they succeeded. Craig Cook went home very happy, his R1155, after 10 years of not being aligned properly, is back to normal. Our special thanks to Ray and Ian for their splendid work, keep it going fellas, the boys appreciate it very much.

Ray has been sick and we hope by the time he reads this, he's well on the way to recovery. Rob Young is considering buying a 35 ft. tower with 2 and 1 mx beams on it. He's half way through constructing a 2 mx converter, but he gets the stitch now and then, but hopes it will be completed by Xmas. I'll be in VK5 land for a month over the Xmas period and will enter the Ross Hull from there. It's hoped I will by then have 2 and 6 mx converters over there.

Frosty Fraser is still on hot bricks, his HRO power supply gave up the ghost and is being fixed up for him. Mac Hilliard is still logging solidly on s.s.b. on 20 mx, he's using a long wire of over 200 ft. Rx is a home-brew copy of the Drake. Noel Harrison is creeping up with his U.S.A. States confirmed and now has 22 of them. His 20 mx doublet is working out very well. Haven't heard of Ian Thomas, I hope he's doing well in his exams.

NEW SOUTH WALES

Season's Greetings to all from the QTH here in New England Tablelands. As advised in October there has been a change of QTH. The new address is "Lynden," Fitzroy Street, Walcha, N.S.W. Tony L2219 has been elected as Minute Secretary to handle general meeting affairs.

Around the Group. Alan L2185 is now listening on 2 mx with the 522 from this station and on all bands with his well tuned AMR101. Rig here is now built around two AR7 rx's, well tuned with slight mods., and a TBS power supply. Tony L2219 reports he was fox hunting with 2AAH at the Newcastle Convention and is now well geared for d.f. work. From slgs. received here, I thought the fox was lost and heading my way.

A letter to hand from Gerry Albeck in VK5, seems he is having trouble getting an s.w.l. number from the VK5 S.w.l. Group. Gerry is now a member of the VK5WC Club. Best DX Gerry.

The Sept. meeting was well attended and a talk entitled "2 Metres in 2 Hours for 2 Db." covering 522 mods. was the topic for the evening.

On behalf of the VK2 S.w.l. Group, I wish to extend to Interstate Groups and all W.I.A. members the Season's Greetings and best of DX for '62. 73, Doug WIA-L2215.

TASMANIA

First of all, Ted 7EB, due to a misunderstanding, Neville reported that his 3.5 Mc. coils were burnt out. The truth is that the iron dust slug in one of the coils is busted. It was done when he brought home the rx. Neville apologises Teddy (so do I for making that crack). Anyhow Ted is scrapping his zepp and is putting up a 14 Mc. ground plane.

Mike Jenner L7007 is active on 6 mx on his h.b. rig with converter-AR7 set-up. Nev. was astounded, he said, when Mike told him that he had a listen on 14 Mc. not so long ago.

The next VK7 meeting will be the election of office-bearers. Much work is progressing on 1-tube converters for the younger members of the Group. Attendance is always very low and it's impossible to arrange visits, etc., if they don't get the necessary lads along. Now see here you VK7 lads, how about going along to your monthly s.w.l. meetings, so that the office boys can do something for you. After all, that's why they are there and also help you with any Radio problems. Don't let them down lads.

SOUTH AUSTRALIA

Regarding their journal, nought has been done due to waiting for replies from the VK5 boys. Dale L5025 was the only member of the A.O.C.P. classes to sit for the last exam. In the Limited licence. We all wish you the very best Dale. Colin found band conditions very poor during the VK-ZL Contest. We all did, Colin. He only scored half as many points as last year. His 20 mx converter is working very well. He's logged five new call areas in this last month: UB5FG, VU4AS, KB6BR, DUTIM and KC6AZ. Colin has had a letter from Peter Field.

MAIL BAG

Letters were received from Chas. Aberneathy, Eric Trebilcock, Peter Drew, Don Grantley, John Kennedy, Kev. Walsh, Fred Mackiewicz, Brian MacPherson, Peter Field, Harry Major, Milton Richardson, Dave Jenkins and Ian Thomas. I am only going to take interesting extracts from the mail bag, only to space limits.

Ian Thomas says he's in the middle of his exams (I hope you make that B.Sc. my boy) and seems to be doing f.b. Has been playing around with his rx and it's now working OK with only an intermittent fault somewhere. Keep at it, Ian.

Chas. Aberneathy isn't listening very much, in fact not at all, due to his rx being away; a chap is modifying the i.f.s. from 1,600 to 85 kc. Chas. has procured an electric clock for his shack. Also a map of W land showing Zones and Amateur prefixes and as he says "a beauty"—really a treasure for the Ham as well as the S.w.l.

Eric Trebilcock is still hard at it. He put in 11 hours in the VK-ZL Contest and on c.w. only scored just under 5,000 points, which he doesn't think will be enough to give him the "VK" top score. He doesn't enter to win any more, just for the fun of being in it. His total inward QSLs this year are 555 so far. Activity is very lively on 7 Mc. he says, so keep listening chaps. Apart from his listening, he still finds time to tour around in his car.

Don Grantley says 40 mx is still bringing 'em in. We, Pacific and Europeans mainly, all c.w. with a few Ws on a.m. and s.s.b. Well, that confirms Eric's listening on 7 Mc.

Fred Mackiewicz has just finished putting a new shack together. His rx has really packed up and wants a circuit or circuits of a 5-tube superhet, or something similar. Can anyone help? So at the moment Fred is inactive.

Kev. Walsh is also inactive due to no rx, but when he had one on loan he made a welter of it and has received quite a few Amateur cards back plus s.w.b.c. cards. He hopes to procure a rx after Xmas.

John Kennedy has a brilliant idea for a rx which is partly under construction, but as he says whether anything results, well!! It comprises nine valves including a pre-amp. (all band) and also a 2-valve xtal controlled converter for bush fire network on 3.360 Mc.

Brian McPherson has added several new countries to his score and has had another rx given to him for 15 mx listening (that's the DX band, Brian).

Milton Richardson is from Albury—one of Grantley's mob, eh! I met him a short time ago, nice guy. He built himself a double conversion rx, but he's having trouble with the 1st mixer. The r.f. signal is not being converted to the 1st i.f. of 5780 kc. Rob Young got on to his ear and I think has helped; hope so, Milton. Sing out any time if you want help.

Peter Field. Peter, I'll be coming to Adelaide sometime after 18th Dec. so I may see you. By the way, get your QSL cards printed, it may be a long time before the number is changed. Peter has heard quite a lot of DX. He intends to build a 2-valve converter to cover approx. 17-26 Mc. to give him another Amateur band to listen to. Don't worry Peter, 3ZGP heard the G on 160 mx, I'll take his word for it for sure. I know him too well.

And so my illustrious friends, this is all from the mail bag; keep writing as you would be surprised how much others have learnt from the s.w.l. page.

QSL CARDS RECEIVED

L3655: W5LEF, FK8AU, L2211: YV5AYK, W5LJJ, BERS195/L3042: G3NSG, G5ZA, GW-3NWX, HA8CF, HC2CB, JA1CXX, JA3BEA, LA2NG/P (Jan Mavens Is.), LU5AQ, OE7PG, OK3KGW, SP1AFM, UA1GH, UA3GM, UA-3KAE, UA3KND, UA00M, UC2KAC, VE2NV, VQ2CZ, VQ8AM, YV3EJ, UQ2AE/M (Eric's countries total this year is 120). L2022: G1ARY, K7CLL, G3BKF, UC2BE, UBSKID, UA0UU, SP6FZ and VQ4RF. L5089: KH6CL, VK9NT, UQ2AN, ZK1AR, VR5RZ, 4STIW, G3JAF. L6211: VE7CE, OD5CT, ZC2CO and TI2VMB. That's a nice collection for a month.

And now on to some DX heard. Myself, first for once, have heard in the last month (Oct.) five new countries: UF6FB, UI8ZG, UP2NV, AP2MR, UG6AW on 20 mx s.s.b. except AP2MR, plus plenty of other rare DX. All call signs listed below I have heard, so we won't repeat them.

Mac Hilliard has heard, on 20 mx s.s.b.: I1LDV, VQ8FS, UBSUN, UBSWI, UA3CR, UA-3AT/P, UA0BP/P (Zone 19), HM4QO, VP5BL, HS1K, SV0WB, SV1AE, CN8FU, E19Y, HB9TL, CP5EA, OK1AH, OE1ES, OD5CW, OZ5KH and DL5HI.

Peter Drew donates, on 20 mx s.s.b.: DU9PET, 9M2AD, VE3BMJ/W4, VU2TN, VR4CB, IT1ZHA, DL9YX, I1ANY, VQ4ERR, VU2NR, UR2KAT, LU8KO, K81WA, CR7CI, Z5SRU, Z5RSR, Z5-2DY and many other ZS's. There are a lot more of Peter's but space does not permit.

Colin Hutchesson, 20 mx a.m.: EA3JE, VK-0FZ, I1TMG, G5BO, G2PU, LU8ES, VU4AS, LU7FS, KA2KO, VR1G, UB5FG, VY5AHM, DL-3KO, OA4KU, ZK1AR, on s.s.b.: KA4USV, KG6NAA, HB8FI, FY2AC.

Peter Field, 28 Mc. W/K and Jas. 21 Mc.: PK, VR 457, ZE, ZS, G, DJ, DU, VSR, V81.

Eric Trebilcock's and Don Grantley's list appears on the DX page. And that's that my fine friends; please keep writing either to me or the two new lads. (If to me, I'll pass them on.)

Help them as you have helped me and I thank you all from the bottom of my heart. So it is with reluctance I ring down the curtain on my s.w.l. activities for a while. I wish you all a Very Merry Christmas, a Bright and Prosperous New Year, and may all your QSLs be acknowledged. 73, Maurie.

DX LADDER

	Countries Conf. Hrd.	Zns. Conf.	S.s.b. Conf.	Hrd. Stat.	W
E. Trebilcock	272	280	40	—	50
D. Grantley	90	232	36	—	64
A. Westcott	76	157	30	31	92
M. Hilliard	64	284	33	4	114
M. Cox	33	288	19	3	110
C. Aberneathy	27	57	21	—	12
F. Drew	22	189	17	5	61
I. Thomas	17	131	16	—	—
P. Field	26	133	—	—	—
N. Harrison	20	30	17	—	22
D. Jenkin	10	141	7	—	—
N. Fisher	3	36	3	—	—

ADDRESS REQUIRED

Would Harry Goodman, VK3AGZ, or anyone knowing his current address, please communicate same to the VK3 Inwards QSL Officer, Box 36, P.O. East Melbourne. Correspondence to last known Brighton address has been returned by P.O. endorsed "left address".

NOTES

FEDERAL QSL BUREAU

Divisional QSL Managers are requested to note the corrected address for W4:—

W4HYW, Mr. Thomas M. Moss, P.O. Box 20644, Municipal Airport Branch, Atlanta 20, Georgia, U.S.A.

The Rabaul Amateur Radio Club notifies its address as the Bureau for New Guinea: Rabaul Amateur Radio Club, P.O. Box 170, Rabaul, New Guinea. Apparently Papua still goes to VK9RO.

The present address of the QSL Bureau for American Forces in Germany is: DL4 and DL5 QSL Bureau, C/o DL4VJ, Base M.A.R.S. Station, A.P.O. 130, New York, N.Y., U.S.A.

Cards for DJ or DM stations should be sent to D.A.R.C., Box 98, Munich 27, Germany. At one time all DL5 stations were of French nationality, now all DL4 and DL5 stations are either members of American armed forces or civilians employed by American armed forces.

Since most American Hams in Germany are not members of the German national society, D.A.R.C., it is requested that your cards be sent directly to New York so that the D.A.R.C. QSL Manager is not overloaded with cards for non-member stations.

—Ray Jones, VK3RJ, Manager.

FEDERAL AWARDS

W.A.V.K.C.A.—During the past six months awards Nos. 166-185 have been issued to XZ-2TH, ON4QX, KSADQ, XE1UV, KH6BPF, W5WZQ, SM5SCE, W4BJ, FK8AH, OK1SV, W4MS, W5ARJ, W3AYD, W3OCU, ZLIAMO, VE8TF, OK1CG, W8WT, W5EJT and G14RY.

—A. Kissick, VK3KB, Awards Manager.

NEW SOUTH WALES

The October general meeting of the N.S.W. Division was held at Science House, Gloucester St., Sydney, on Friday 27/10/61. The attendance at 8 p.m. was poor, despite the warmer weather, and the fact that a lecture of popular interest had been arranged and well publicised in the Bulletin and broadcasts. Since, with the lack of a quorum the meeting could not be opened officially, the President invited the lecturer, Oak Stockton, VK200 (ex-W6EWM) to proceed.

Oak spoke at length on some aspects of Amateur Radio in the U.S.A. and outlined to the meeting the finer points of Amateur Radio in the States. At the outset he emphasised that Amateur Radio has been and will continue to be, a hobby which will fit our younger members for a career in Radio and Electronics and added that many of the top brass in the Armed Services of the U.S.A. are Amateurs, and that they still participate in their hobby.

With an Amateur population of 220,000 in that country, the bands are freely patronised, but he added that, despite opinion here, the average power run by the Amateurs in the U.S.A. is about 150 watts.

Oak dealt with all phases of Amateur Radio, the availability of equipment, both ready constructed and in kit form, antenna kits, etc., enabling the young fellows to purchase gear at reasonable prices, but which facility is in some manner causing a trend away from the genuine experimenter.

He also dealt with the Amateur participation in the satellite project "Oscar" in which the National Space Administration have sanctioned the installation of Amateur equipment in the satellite which presumably will be put into service in the coming months.

SILENT KEY

It is with deep regret that we record the passing of:—

VK2EV—Eric McCready.

VK2JP—Jack Pike.

Many questions were asked of the lecturer and finally the President, Bill 2YB, tendered a vote of thanks to Oak for a most interesting discourse.

Following the official opening of the meeting, routine matters were dealt with, new members admitted and our visitor for the evening, G3OGI was welcomed. Finally, the meeting closed at 10.55 p.m.

As has been customary throughout the year, Council meetings have been held at fortnightly intervals and have kept councillors busy until a late hour. Mainly routine matters have been dealt with during the month, the main exception being the tabling of the Recommendations of the Radio Frequency Allocations Sub-Committee which were recently released. The report brings to our attention the magnitude of the task which confronted this committee in its investigations of all the frequency spectrum, and the excellent job done by our representative on the committee. Arthur Tinkler has most capably carried on the job which had been initiated by the late John Moyle, and the thanks of all our members are extended to him.

12th ANNUAL CONVENTION

The Convention Committee have been deliberating on the programme for the coming Convention which will be held on the weekend of January 26-28, 1962.

The opening of the week-end will be the general meeting on Friday, which will be held at Science House, Gloucester St., at which the lecture will be given by Bob Wilson, of Stromberg-Carlson Ltd., and his subject will be "Linear Amplifiers." We are expecting a large audience on this occasion, including quite a number of visitors from the more remote areas of the State.

On the following day, Saturday, it is hoped that a Dinner can be arranged, announcements regarding this will appear in later Bulletins and broadcasts.

The main event of the week-end will be the Field Day which will be held at the home of VK2WI, Quarry Road, Dural, with activities commencing at 9.30 a.m. On this day, all are to be catered for, with mobile events, transmitter hunts, mobile efficiency test, many novel competitions, and disposals. It is requested that you bring your own food for the day and with the family enjoy a picnic lunch. Tea and biscuits will be provided and we hope to arrange to have ice cream and soft drinks available on the grounds.

We will offer this extensive programme for a nominal charge on registration.

You are advised to consult your Bulletin for fuller details.

Council extends to all members and our non-member readers the Compliments of the Season.

HUNTER BRANCH

The October meeting of the Branch was again well attended, there being 12 members, eight associates and two visitors presents. Stuart gave welcome to the visitors, the Andriessen brothers, and received several apologies for absence. The meeting took the form of a "do it yourself" night and those to perform were Lionel 2CS, Stuart 2AYF and Keith 2AKX.

Lionel showed his crystal filter rx, Stuart a 2 mx tx and the other chap had a band-spacer thing. Not all was well with Lionel's gear and it gave quite a deal of trouble before it showed its proper form. Never mind, it gave him some good practice and he did find the h.f.o. switch. We were given some most interesting diagrams and a list of possible suppliers of crystals. Stuart made building a 2 mx tx sound easy and showed how he had done it, with diagrams. At the end of all this, a travelling salesman, Bob Bailey, attempted to dispose of a large quantity of small parts and he had a goodly crowd of enquirers, if not all of them parted with the hard earned shekels.

By courtesy of Reg 2AI, some candid views of members at the recent Annual Dinner were passed among the assembled company and great was the delight of those who saw themselves as others see them. I have here borrowed a phrase from our worthy President who had the temerity to send through the post a photo of me at this same function. Now I know why it didn't make the block in last month's "A.R." Other well built men take note—a blight on all candid photographers. You need not laugh Bob Rose, at least my 80 mx signal can be heard in Newcastle.

It was once said in these notes that a certain gentleman residing in the shadow of Sugarloaf had a potent signal on 80. Well, don't believe it. It is all absorbed by Westy's t.v. antennae, and as for your billiard playing companion, Dear Reader, have you ever wished for something to banish everything from the said electronic lantern? Well here's the answer. Take one well known commercial v.f.o., shield it and add a small piece of coax to couple into

an AT3, switch on and there you are, a perfect blanket signal. Remember, it must be shielded, well. And the t.v. set must have cost no more than 37/-. If you need further details see Shannon 2ZL. He'd be delighted. You might even find him disposed to sell you a carpet shampooing kit, complete, but without any shampoo. There are some people who actually believe door-to-door salesmen.

Our friend Harry 2AFA now fit again after his holiday at Newcastle, was surprised to receive a telegram from the R.I. the other day. These days one is not allowed to transmit simultaneously on 80 and 40 and some monitoring stations are very quick and have super-sensitive ears, especially to note such things. You may be thinking I am hard on Harry and that I deserve to be excommunicated (that means having your aerial cut down), but not so. The aforementioned gent was innocent. How could he have done this thing? Was he not enjoying three meals a day with his feet up? Perhaps some kind person can explain.

After straining to hear the Monday night broadcast on 40 mx, it is a very sad thing to have to scrape the speaker cone off the wall just because Jim 2AHT has done it again. And not far behind for sheer db, is Jack 2KQ, at present having some days away from the stamp machines. The relay supply at the Aberdeen station is keeping 2PZ off the air but I am told it features in the current seven-year plan.

Tony of Lakeside residence is not so sure that the temptation of a twelve foot whip perhaps is a little much for some fishermen. It seems that way nevertheless because twice now this has happened and Tony is beginning to consider the fitting of a collapsible version. Come to think of it, this would go well with the collapsible vehicle to which it is attached. It does have the only rack mounted AR8 though, just behind the passenger's seat.

It seems remarkable the number of people who try to avoid me now that I have a large notebook. One such was Les 2RJ, seen struggling with an electrically driven kitchen appliance and muttering something about sausages for tea as I walked into a well known wholesale house the other day. How was I to know that it was a cunningly designed 144 snoop loop for use at the Blue Mountains Field Day. Anyway, he only got second place. That'll teach him to ignore those who have influence.

The other night only two chaps answered the call back from 2AWX. And so, it had to happen, the frequency was changed to 80 mx, lo, the trade increased apace. All the old regulars may now be heard again reporting on the signals. So all you chaps who are not in the know, and I am told that there are some misguided souls who do read this column, listen on 3573 if 2AWX is inaudible on 7050. The loudest signals of course are from Merv 2MW and Dave 2DE, so what about some of you other chaps from the mulga calling in on Mondays round 7.30.

Ian 2AJF has given up signing autographs since his picture appeared in "A.R." He now refers his fans to the said copy in the magazine. By the time this appears, Bill 2XT should have finished scaling Fujiyama and be on his way to other exotic places. Whether he will be back for the Christmas meeting is not known but even if he is not, the rest of us will be there and you are all invited to come.

W.I.A., N.S.W. DIVISION

TWELFTH ANNUAL

CONVENTION



A FIELD DAY

will be held at

QUARRY ROAD, DURAL

on

SUNDAY, 28th JAN., 1962



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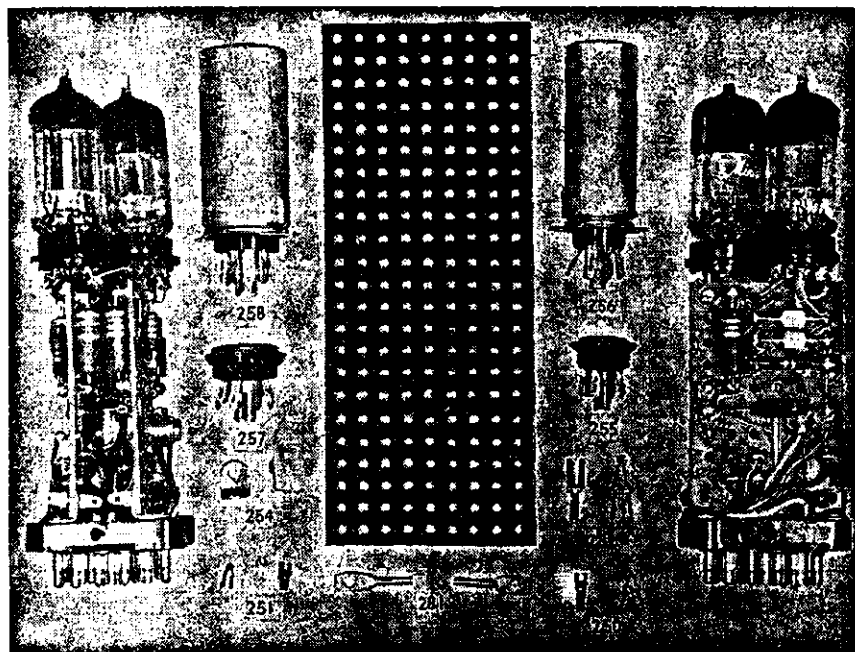
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along and see what happens. There will probably be films of some sort and Bob 2AQR has promised to take a film of 2ZL washing up. I reckon it will be worth coming along to see Bill pour the coffee and bring it round. The usual place, University College of N.S.W., Tighes Hill, and the date to remember is Friday, 8th. For those not able to attend, a little advice, you'll have to hang up a chaff bag if you want a HalliCrafters. 73 for Christmas, see you next year, 2AKX.

BLUE MOUNTAINS SECTION

Preparations for the section field day were finalised at the October monthly meeting where eleven members attended with Vice-President Bob 2ASZ in the chair. The lecture for the evening was cancelled due to the many members on annual holidays. A good night was had by all, although the meeting closed early. 2AWW, from St. Mary's, a new member, was welcomed into the club and apart from normal d.c. and v.h.f. operation, is keen on Amateur t.v.

The Scout Jamboree of the Air went off quite successfully with stations Bill 2TS operating at Katoomba, Bill 2HZ at Springwood, Ken 2AVN at Blaxland, Don 2ART at Glenbrook, Al 2AUX portable at Penrith, and Bob 2ASZ at St. Mary's, and yours truly at Camden. Although the QRM was very bad, all stations were kept busy Saturday afternoon. Most of the Scouts enjoyed for the first time talking with neighbouring and distant Scouts. Many addresses for pen friends were exchanged and advice on various hikes, etc., was given by the mountain troops to several neighbouring district troops. The Camden troop received front page publicity including a photo of the boys and equipment used. Publicity for the Blue Mountain troops is still being organised. A note of thanks to all who helped out.

The field day held on 5th Nov. at Lawson Swimming Pool was well attended with 54 registrations, including two VRs. The fox hunt was unusual and confusing in that it had two foxes on a similar frequency at the same time. This event was won by Les 2RJ and Dave 2AWZ. The 144 Mc. scramble was won by Dick 2ZCF, second was Dave 2AWZ. The 7 Mc. scramble: Harold 2AAH and John 2WJ second. Other prize winners were Noel Walker, Sid 2SW, Peter 2JX, Mrs. 2DR, Mrs. 2ZFW and Mrs. 2QA. The bus trip for the ladies in the afternoon was to Blackheath to see the rhododendron show which proved most enjoyable. Yours truly would like to take this opportunity on behalf of the Blue Mountain Section to thank each and everyone who participated and hope to see you and many more for a bigger and better event next year.

Heard Wal 2MZ and Ken 2AVN (at Blackheath) and Norm 2QA (at Blaxland) demonstrating bush fire mobile 2 mx equipment to the Blackheath Bush Fire Brigade. By all reports the demo. was effective and successful. Alec 2EX is still looking for a rock for his 2 mx converter; his tx has a 6/40 in the final which I was unable to hear the other night. Must have a bug in it Alec. Jack 2ADF is back from holidays and although the weather was unfavourable for the first week and cold the next week, it appears he had a most enjoyable holiday. Our mate, Noel Walker, had not finished his rx on the l.f. bands. Apparently you have been listening in on the local 2 mx gossip, Noel.

Al 2ZFB is back on 2 mx with a new National rx for his l.f. and his 2 mx mobile tx, also it looks like Al will have to do a bit of horse trading with his present car so as to make use of his new transistor power supply. Sid 2AVK has been heard at good strength with his portable rig from Forster. It appears that Sid's first couple of weeks have been full of accidents—cut toe, poisoned finger and nearly shark bait. Good to hear you, Sid. Warwick 2ZMS is back on the air with his cheery voice after a long spell, study being the main cause. Cheerio, 73, 2ADA.

BOORAGUL HIGH SCHOOL RADIO CLUB

No 14 Mc. activity yet although we have been on the air regularly on 40 contacting many VK2s and even getting pleasing reports from VK4 when conditions have been favourable. The main cause of no loading on 20 is the length of the 20 mx dipole which has proved to be too short by several inches. This should be put right by the time these notes appear.

A number of new members have joined the club and our numbers have increased to around 20. Most of the newcomers have finished basic electricity and are now puzzling with resistance and capacitance.

After the final exams. have finished there will be another Sunday trip to Dural to see 2WI in action. The visit earlier in the year caused a great deal of interest and arrangements are in hand to let some of the new members join the party this time.

OBITUARY

JACK PIKE, VK2JP

Tuesday, 17th October, saw the passing of one of the real old timers of Amateur Radio. Jack Pike, VK2JP, suffered a sudden heart attack and now must be numbered as one of the growing band of immortal pioneers in the radio art, who all too rapidly are passing beyond our ken.

Jack was one of the Foundation Members of the Wireless Institute in 1910, having commenced experimental work several years before that date, operating a spark transmitter with which he exchanged traffic with commercial and naval vessels in Australian waters. His pre-world war 1 call sign was XDY.

In association with Chas. MacLurcan, 2CM, and Basil Cooke, of Sydney Observatory, Jack constructed vital parts of wireless gear to permit reception of time signals on very long waves from overseas, and was one of the first to receive long wave transmitter signals from Joe Reed, who unofficially experimented with the Collins House Post Office Station in Melbourne in 1921.

Using a multi-stage t.r.f. receiver on 200 metres. Jack was successful in 1923 in receiving signals from Major Mott, of California.

For many years VK2JP had concentrated on 14 Mc. operation and had many friends throughout the world with whom he kept regular schedules. On the week-end prior to his sudden passing away, Jack was conducting experimental work on the erection of a vertical radiator to secure that low angle radiation vital for long distance communication. He will be sadly missed by Amateur operators in practically every country of the world.

Our deepest sympathy is extended to his widow, Mollie, and his family in their sad bereavement.

ERIC McCREADY, VK2EV

The death occurred recently of yet another of our members in Eric McCreedy, VK2EV, latterly of Brighton-le-Sands.

Eric will be remembered by many of the Amateurs of yesteryear as one of the original members of the Lakemba Radio Club. The sympathy of members is extended to his family.

If Ian 2AJF does not take a job before the end of the year he is to start a new project rolling. It is the building of a new tx for the club using the AT5 v.f.o. presented by the Institute. The final will be an 807 with about 40 watts. There is also mention of a 2 mx rig being built up next year, so watch out you 2 mx boys. 73, Bruce, for 2ATZ.

VICTORIA

The lecture arranged for the November meeting had to be cancelled at the last moment but it was indeed fortunate that Kel 3ZFG, the editor of your favourite Amateur Radio magazine, was able to come along and tell us the story of his one-man expedition to Alice Springs early this year.

Although the main object, that of providing contacts with VK8 on 50 Mc., was achieved only in part, because of poor conditions, it was evident that Kel enjoyed the trip. His description of the plane journey showed that air travel off the main routes has little in common with the advertisements. The photographs taken from the air made the city dwellers realise how little they know about their own country. Incidentally, Kel mentioned that although he packed the minimum of clothing, his baggage was 60 lbs. overweight! The ground staff were curious about the collapsible beam and obviously doubted the sanity of its owner.

Kel discoursed in his cheerful ironic style, with an apt choice of words, a dry wit (well suited to the subject), a sharp eye for detail, and the raconteurs knack of making the most of a good story. (I hereby swear on a stack of A.R.R.L. Handbooks that I am not being paid by the Editor to write this.) Thus we were enlightened by his dissertation on the effect of isolation on the social and economic life, the problems of the Aborigines, the supreme importance of "The Bitumen" and so on. On the radio side, it appears that the difficulties caused by heat and dust are compensated by the lack of man-made noise and the advantage of being a DX station. In addition,

Kel is an expert photographer which was shown by the colour slides which illustrated the lecture.

The President, David 3ADW, thanked Kel for a most absorbing talk which was both interesting and instructive.

The following new members were approved by the meeting: A. Langer and M. Tarrant as associates, and G. Richardson (3AWT), J. Wallace (3VVI), A. Johnson (3ZMK), K. Nisbet (3ZKK) as full members.

The December meeting will be devoted to the family social night with entertainment suitable for the children. It is expected that the ubiquitous Father Christmas will be there as usual.

The first meeting for next year has been set down for February 7, 73, 3AEL.

MOORABBIN AND DISTRICT RADIO CLUB

The above club made history at the third gathering of Senior Scouts at Clifford Park on the week-end of 21st and 22nd October, 1961. The week-end in question coincided with the fourth Jamboree on the Air, an annual event which is becoming more popular each year. Clifford Park, near Croydon in Victoria, is a magnificent property some 25 miles to the east of Melbourne in the foothills of the Dandenongs.

The Moorabbin and District Club was approached by the Scout organiser, Mr. Keith Walter, and the members were extremely pleased to be able to help the 500 or so Senior Scouts gathered at Clifford Park by going portable for the week-end. Thus, in addition to their other activities of canoeing, rock climbing, archery, "operation impossible" and caving, was added the Jamboree on the Air, the ability to speak to other fellow Scouts in Australia and overseas.

Some weeks prior to the event a group of members travelled to the Park and preliminary siting arrangements were made. This visit was followed on the week-end before the Jamboree for members to erect antennae and to test out the equipment under operating conditions. On the Sunday in question, Bert Rodda, of newspaper fame, took a snap which subsequently appeared in the evening Melbourne newspaper, and Harold 3AFQ got himself in the papers! On the Wednesday evening, following, we saw our President 3AWO on t.v. in the Scouting programme. Thus, by this time quite a bit of publicity had resulted and on the air under their own call signs, club members had spread the word around and many QSOs had been teed up.

In all fifteen members formed the operating team and separate equipment, both receiving and transmitting, was provided for all bands down to 144 Mc. The operation was split two ways. One group consisting of Arthur 3AWO, Bob 3NZ, Ken 3ACS, Stan 3TE, Graham 3ZMQ and A.O.C.P. candidates Hal and John were set up for 3.5 and 14 Mc. in a marquee near the main scene of Scouting operations. The gear consisted of a Type 9 Mark 2 for 3.5 and a 60w. home-brew tx with a Collins 75A4 rx. Antennae consisted of two long wires (200 ft.), a couple of Windoms and a vertical. The equipment was powered from S.E.C. mains.

The second group consisted of Harold 3AFQ, Peter 3ARD, Alf 3LC, Kevin 3ARD, Ray 3JI, Graeme 3ZIF, Don 3AGQ and helper Doug. This party was situated on top of Boomerang Hill over looking the other activities and was powered by two motor alternators, petrol driven. The frequencies worked were 7 and 21 Mc. in the h.f., and 50 and 144 Mc. in the v.h.f. range, and the gear consisted of another 60w. home-brew/AR88 converter/AMR300 combination. 144 Mc. was served by a 522/converter/Eddystone 880 set up, but unfortunately the gear failed at the last moment. The antennae was a multi-dipole h.f. and beams on the v.h.f.

On all bands a total of 102 contacts were made. This may not seem a lot but with many QSOs going for an hour or over this number represented a lot of transmitting time.

From the Scouts' end their organisation was first class and each half hour throughout the period of activity a fresh group of lads appeared at both operating sites. In general, preference was shown for Q5 R8-9 contacts so that the Scouts were not distracted by background. This was not always possible of course but several times 5/5 contacts were made whose glamour value compensated for poor copy. This applied especially to overseas contacts such as those with Hong Kong, Bangkok, California, Oslo and G land.

Band conditions were a very mixed bag. 80 mx was full of QRN until late on Saturday night when it cleared. As a consequence the 80 mx tx didn't go QRT until 2 a.m. on Sunday! 40 mx was in good shape—as were hundreds of stations who were using it—with the early forenoon being the best for good copy. 20 mx whilst quiet was open mostly for short skip and not too much DX was worked. 15 mx on

the other hand was mostly dead but a very good opening on Saturday evening gave us the real DX contacts. At no period were we able to raise a contact on 10 mx, and we were very sorry not to contact the Headquarters Scout Station in Montreal, VEJAM. 6 mx carried a surprising amount of traffic (VK6 was worked too), while 2 mx produced only one contact—a 4/4 effort over a five-mile path! We heard a lot more but the 522 went sick and was not repaired effectively in spite of some pretty intense effort on the part of all concerned.

Apart from the great amount of fun that was had by all, the Scouts themselves showed a great interest in the workings of Amateur Radio and expressed their appreciation of our efforts. We in our turn learned more about portable operation.



★
Photo taken of Scout Group at Kallangur, just outside of Brisbane during the Jamboree of the Air. Equipment lent by R. H. Cunningham P/L for the occasion. The arrangements and installation were made by Peter VK4PJ.

QUEENSLAND

Here in the Sunshine State, the Scout Jamboree of the Air was well supported by the active Amateurs and in doing so we received a lot of valuable publicity and goodwill. A State-wide coverage was obtained and due to the efforts of those participating I think the basic principles of Amateur Radio sown in the minds of today's youth will produce Hams of tomorrow.

Thanks goes to Peter 4PJ who arranged for our Governor and State's Chief Scout, Sir Henry Abel Smith, to record a speech which was replayed over the air three times on Saturday and twice on Sunday. Peter also arranged the loan and installation of a Gelsco Transmitter/Receiver for the Kallangur Scout Group. The individual Hams in Queensland were too numerous to mention, but the following are some who received local newspaper coverage.

In the South Coast area the Coolangatta Radio Club, 4AR, was heard going great guns. Also a portable tx and rx were installed in the den of Southport No. 1 Troop by the Southport Radio Club. Quite a number of Scouts attended there on Saturday and Sunday afternoons. Unfortunately, due to an oversight no operator was on duty on Sunday morning, but the Group found plenty of interest in logging stations heard on the BC348 in the den. The Scouts also paid visits to the shacks of Neal 4WW and also Bill 4WS.

In the Ipswich area, local Hams taking part were AKO 4JR and 4AV. In Rockhampton our old friend and active participant in civic affairs, Frank 4FN, with H. Hobler, did a worth while job in establishing a station at the Fitzroy Scout Headquarters. Our best wishes go to Frank who took sick on the Saturday night of the Jamboree and had to be assisted home. H. Hobler kept the station operating on the Sunday. Facilities of 4UX were extended to the Scouts of Ayr and Home Hill and from report many interesting contacts were made.

As for the feelings of the Scout Group, I think the following extract of a letter from Jim Mayfield, S.M. of the Kallangur Group, will clear this point:—

"Many of the boys were not too keen at all to begin with, but it is a credit to the operators and the Amateur Radio movement generally that by the end of the day most of the Scouts were quite interested and indeed some were most enthusiastic about the whole venture and would have liked to go on all night. At this stage I would like to pay tribute to the Amateur Radio movement and to the Queensland Branch of the W.I.A. for the work and enthusiasm which they put into the Jamboree in order that it should be successful. To me, it was quite evident that a spirit of brotherhood and friendship exists in Amateur

Radio which conforms to the ideals of Scouting."

The October Council meeting was held at Peter's (4PJ) QTH and those attending were 4PJ, 4CI, 4DG, 4RL, 5ZBZ, 4AO, 4JF, 4KB, 4VM, 4EF, 4AW and associate John Brimblecombe. There were four applications for membership. There has been a general move to streamline procedures for the Council and the following items are results of this move. Ballots for disposal equipment will be drawn at the Council meetings and this will insure a rapid turnover of disposal gear. For this reason, all correspondence for disposal gear only should be marked "Disposals" on the envelope. Also, the trustees and councillors have decided to dispose of some of the items held in the technical library. These items are ones that are seldom used and they will be disposed of by tender to the members.

The QSL cards provided by the Queensland Tourist Bureau will be on hand soon and Jack 4JF has been appointed distribution officer. These cards will be provided free and will be available upon request. These cards were supplied and designed by the Tourist Bureau as being the most suitable for depicting Queensland overseas. Cost prevented the cards being printed in more than two colours, which ruled out the possibility of printing multicolour scenes of the Barrier Reef, etc., which would have been better received. The normal printed QSL information is on the card with space left for insertion of the individual Amateur's call sign.

Also discussed at Council was the cost of sending a delegate to the next Federal Convention at Perth. There have been few agenda items submitted to Council for this Convention, so if you have not sent in that one you have been holding, do so now. The constitution is being reprinted and will be available free upon request. Clerical procedure is being improved within the Council which will mean a rapid reply to your correspondence. Steps are being taken to form a Listeners' Group and details will be supplied at a later date. There is a vacancy in the position of Class Manager so if you feel competent, let's have your name. The visit to Amberley Air Base was enjoyed by the 25 present and all voted it as an interesting experience.

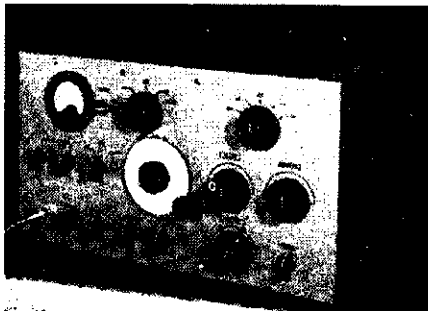
We had a good attendance at our October general meeting, general business being quickly despatched to make way for an interesting lecture by Mr. Harry Brown, 4IA. He gave a very informative lecture showing that he really knew about "Ionospheric Predictions" and how little we knew about the subject ourselves.

A discussion took place on the new frequency allocations and concern was expressed by some of the more experienced members on the present position. No matter how much a person has, continual removal of minor portions will surely whittle him down to nothing. This is a democracy and our own personal views can only be brought before the governing body through our elected government representatives.

SOUTH COAST ZONE

The mobileers to and from the Sunshine State are now either at their homes or very close to them. Meeting up with Sid 2SG ex-4SE was quite an occasion. His company would raise the depressed to high levels and his brief stay was very enjoyable. Eric 4XR is back in Queensland and ere these notes are completed he will be back at home, while Jim 4HZ is approaching the border. Apparently all had a most enjoyable trip and the friendliness of Hams on the air and in person added to the enjoyment of the holiday. The Coolangatta Radio Club are starting A.O.C.P. classes. May success attend their good work. 4WS has been in contact with 2ABZ—originally OA4AB. Being an old Queenslander, 2ABZ is anxious to contact any VK4s especially 4WR, 4WO and 4RJ.

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★
We extend to all Amateurs our best wishes for a Merry Xmas and a Prosperous New Year. May you achieve that DX contact in 1962!

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CHANGE OF ADDRESS

W.I.A. members are requested to promptly notify any change of address to their Divisional Secretary, not direct to "Amateur Radio."

WIDE BAY AND BURNETT

The monthly meeting of the Wide Bay and Burnett Group was cancelled due to a lot of the members being on holidays. The whisper has it that the Gympie gang have been bitten by the 50 Mc. bug with 4HZ spending a lot of time looking and listening. 4HZ has now returned from a holiday in Victoria, where he attended a Convention there. Members of the Group taking part in the Jamboree of the Air were 4LM, 4HD, 4GH, 4CK and 4ZHG.

Congratulations go to the Bundaberg gang in forming their own club and it is good to hear some of the new call signs on the air. Hughie 4HE, having completed mobile gear, will be using same soon. Stations 4PU, 4HD, 4ZBS, 4ZAG, 4LN are now working 50 Mc. regularly at 7 to 9 p.m. each night. To member, Mrs. Leakin, out at Urundangle, congrats from the gang in obtaining your ticket. Gympie associates are still plowing through their lessons under the whip hand of 4XR and local b.c. tech., John.

PERSONAL PARS

QSL cards are waiting at the Bureau for VKs 4SJ, 4SQ, 4SR, 4TW, 4UN, 4WW, 4XF, 4XM and 4XS.

Del 4RJ has recently come out of hospital. Jim 4PR is to go into hospital for a minor operation on his hand. Bob 4RW is on an overseas trip. 73, 4JE.

TOWNSVILLE

It was very refreshing to see so many participating in the Scout Jamboree, although conditions were not so good for overseas. Quite a large number of stations were heard working, till real late on the Sunday night, VR1G and VR4CB, the latter station having the Sea Scouts present. The local Sea Scouts were heard at Mick 4WT on the Strand in Townsville talking to all and sundry. Other locals taking part were 4MF, 4FS and 4BQ. I was listed to receive some Rovers but they failed to arrive.

Claude 4UX certainly had the game sewn up for the Lower Burdekin, in all 47 Scouts talked to 210 Scouts at 37 different stations and had made arrangements to swap 107 badges and a large number of scarves.

Sunday, 29th October, I think must have been the worst on the bands because in the morning no stations were heard on 14 Mc., even 4WI relayed news to 4FN on 7 Mc. Do not know how the southern boys made out with weekly morning skeds.

As I will have left on the S.S. Strathmore on November 9 for a tour overseas, including the Far East, I will take this opportunity of wishing you one and all the Compliments of the Season. Claude 4UX has promised to do the notes until I return. 73, 4RW.

AMATEUR RADIO ON DISPLAY AT TOWNSVILLE FAIR

Once again the Townsville Radio Club participated in the Trades and Industries Fair, which was held in Townsville during the last week of September. Quite a pleasing spectacle was achieved and thanks must go to the boys who participated in getting the radio gear ready for the occasion.

As seen by the photograph on the cover of this issue, Bert 4LB was the lucky operator in charge of the equipment when the photographer was doing his rounds.

Although conditions this year were not as good as when the last one was held a few years ago, a large number of stations in Australia were contacted plus a few of the Pacific Islands. It is intended that the QSL cards will be sent out promptly this year.

At all times there were quite a large group of onlookers. The Amateurs of the future were fascinated by the oscilloscope which was used as a modulation checker, while the speaker attached to the monitor allowed the audience to hear all that was said to the various Amateurs who were called in for QSO. The local paper had a nice column on the Radio Hams and special mention was made of Eric 4EL, who has had 22,000 QSOs since he came on the air in 1929. Leaving out the war years when we were off the air, this works out at an average of 22 contacts a day for 28 years. Certainly a mammoth performance! —4RW.

SOUTH AUSTRALIA

The monthly general meeting of the VK5 Division for October was held in the club-rooms to a more than capacity house, in fact I got the impression once or twice that the members were hanging from the ceiling. It just goes to show how unlucky I can be, because last month I was hoping for a full

house to throw up against Bill Moore ("R. & H.") and only succeeded in getting a "no seating available" house. Oh well, 'twas ever thus.

The meeting took the form of a buy and sell night and once again proved without doubt that this type of entertainment is just what the doctor ordered, for the VK5 Division anyway. In trying to find the reason for this type of night being such a success, I am reluctantly forced to the conclusion that the auctioneer, with his funny ha-ha's, his gay repartee, his ready wit, to say nothing of his gay demeanour and extreme modesty, more than does his share toward the evening's entertainment. Of course it is hard work for me being the auctioneer, and if it were not for the fact of my shyness and natural modesty, I would be forced to give myself a pat on the back! However, I have decided to let my actions speak for themselves and will make no reference to my obvious talents. Modestly, thy name is Pansy!

Very little can be written about a buy and sell night, except to say that the gear for sale was only fair in quality, the one or two good articles bringing a satisfactory price, and the junk being gaily battled for by the unusual large collection of youthful front-rowers, who tossed their fourpence's and eightpence's around with reckless abandon despite the refusal of the auctioneer to accept less than a shilling rise in bids. However, until these youthful bidders ran out of shekels, they contributed immensely to the night's entertainment, egged on by the auctioneer who, whenever a piece of junk received a no-bid, managed to throw the said junk in their direction, accompanied by the enthusiastic applause of the audience.

Toward the end of the auctioneering, I was insulted, humiliated, and embarrassed by a practical joke played by the three members of Council who were assisting behind the scenes with the gear for sale, and in view of the fact that everybody said that I would not be game to mention it in the monthly notes, I will say no more here but will give the sad incident in detail later on. Norm Coltman, after an absence of several buy and sell nights, turned up again and assisted me no end in disposing of the gear, and made my task much easier by holding all the heavy pieces, thus saving my frail form from bending under the strain. Summing the night up, I felt that it was one of the most successful of its type, proving beyond doubt that buy and sell's are still holding their place on the popularity parade.

The Chairman, John 5JC, pulled his usual canny trick out of his hat at the beginning of the meeting, by saying that as Keith 5KH-5WI was not as yet present, and had all the money with him, perhaps some business would be possible until he turned up! Aside from some discussion on the proposed field day to be held at Clare, which, incidentally, was put back on the lap of Council to finalise, very little business was handled, either from a Divisional or Federal angle, and then by a very strange coincidence who should walk in, his coat and pants all dusty from where he had been leaning against the wall outside waiting for his cue to enter, none other than Keith complete with money and cheery grin. The audience scowled and muttered at him, which wiped the grin quickly off his face and he took his seat at the table firmly convinced never to be a partner to the Chairman's foul schemes again.

Several new faces were seen at the meeting and several apologies were received from those unable to attend, which was all to the good because I don't know where we could have fitted them in. One apology brought the house down; it was from Frank 5MZ who regretted his inability to attend because no cups of tea were served at the meetings! Council has the matter in hand Frank, and will probably purchase a thermos flask!

The meeting closed at the witching hour of 11.15 p.m., although when I left, at 11.30, half the meeting were still ear-bashing each other.

Gil, 5GX took me aside at the meeting and gave me a talk on the birds and bees. It appears, according to him, that I am the only one who calls him Gil, and as it sounds like Bill, he gave me a schoolmasterly talk on the subject. Well, Gil, sorry Gilbert, I won't make the same mistake again. I will behave myself Gil, sorry Gilbert, because I had a faint suspicion that the hand behind your back Gil, sorry Gilbert, was holding a cane, all reserved for me. Was it Gil? Sorry Gilbert.

Doug 5DW was heard and worked, fixed portable at Barnera, several times this month and considering his low power the signal at times on 7 Mc. was incredible. The last time that I wrote about Doug, in this magazine, was to the effect that he was giving the game away and I said then that time would tell. Considering all the contacts that he had with Inter-

state and local during his two weeks' stay at Barnera, if that is giving it away, then I hope he never takes it up seriously!

Leith 5LG, after reading last month's letters to the Editor, on c.w. and s.s.b., sat straight down and wrote several sheets of asbestos to me on the subject. He enclosed a separate note telling me to censor it and then forward it on to Ye Ed. Two days later he rang me and asked me to hold it as he had thought of some more to say, apparently the fire was not completely out, but five days later he rang me up and asked me to tear it all up as he did not see why he should feed other people's ego. Good philosophy Leith, no fuel—no fire!

If by any strange chance anyone happened to read last month's notes, they will remember that a narrow opening was to be provided for me to stand in on the stage whilst carrying on my duties of auctioneer at the buy and sell night. Well, you should have seen the so-called narrow opening, you could have driven a road transport through it. That's Council for you, promise one thing and then do the opposite. If it had not been for the fact that I had a bit of difficulty moving around in the opening I would have waived my arms in protest!

Congratulations to VK6 on the R.D. results and a pat on the back to VK7. It was a pleasure to lose to VK6 and sad to finish in front of VK7. Next year we hope that it will be a sadness to finish in front of VK6 and a pleasure to keep VK7 where they are. This all adds up to the fact that we give three cheers to the winner, two for the losers, and one for the umpire.

A visitor to VK5 this month was none other than the prodigal son, "Roop" 7RM (ex-5RM). "Roop's" association with VK5 goes back to the old 200 mx days when his dulcet tones and music used to entertain the b.c. listeners on Sunday mornings and after midnight. He noticed a big change in our fair city and a bigger change in the radio fraternity.

With respect to my biting the dust at the meeting, I can only say that I was fairly and squarely caught, and all because I make it a practice to read slowly and distinctly the tube letters and figures marked on the box. I always say a six vee six, or a six bee kew ave, etc., etc., and when I was handed a box with "PS 1 Ass" naturally I said loud and clear, "and now we have a tube, complete with box, a PS one Ass." When I said it, I was thinking that is a funny tube, I have never heard of that one! Anyway, in the hope that someone in the audience would know all about this tube, I again said slowly, loud and clear, "Now here is a funny tube, it is a Pee Ess one Ay Ess Ess." Then with a thud, which could have been heard in VK6, it hit me, and when I turned round and looked at my three disreputable helpers, Doc 5MD, Ian 5QX and Pat 5US, I knew that they had caught me at last. In sheer disgust I threw the box to the floor, but instead of the tube breaking in a thousand pieces, there was a dull plop and only straw came out. The jeers, catcalls, hoots and general pandemonium that then existed had to be seen to be believed, so much so that it woke Keith 5KH up, he was asleep at the table, and there stood I, humbled and humiliated, and by three members of Council at that, whilst the general membership revelled in my downfall. When I arose next morning, I discovered that one half of my aerial had fallen down during the night so you can see the devastating effect of my crash. Never mind, little apples will grow again!

The wedding of Joe 5JO went off with a bang this month and a number of the local boys turned up to wish him well. Frank 5MZ, Gil 5LL (Luke to you), Dave 5DS, Arthur 5HY, Grandpappy Reg 5RR, and several others were noticed in attendance, and in keeping with the VK5 tradition for a good roll-up, the church was standing room only (Bill Moore please note!), of course, blotted my copy-book with my KYL by kissing Joe and shaking hands with the bride, but when the correct procedure was explained to me, I went back and had several demonstrations with the bride, the bridesmaid, and any other females who were unwise enough to stand too near the bridal party. I thoroughly enjoyed the evening and am in the market for any other weddings that might turn up. However, I am finding it a bit cold in the kennel in the laundry these days, but a reprieve is in the offering. I understand that my dancing was the talk of the gathering. La Pansé they call me!

Had the pleasure of meeting Harford Scott at Joe's wedding. Although not a licensed Radio Amateur, he is a keen follower of all things Radio, is mixed up with the E.F.S. in Currency Creek, all of his sons are keen on Radio, and I would say that the distance of his QTH from the city, and consequent lack of opportunity for specialised study, is the main reason for his not yet possessing his call sign. A long-time mate of Joe, he was in his element

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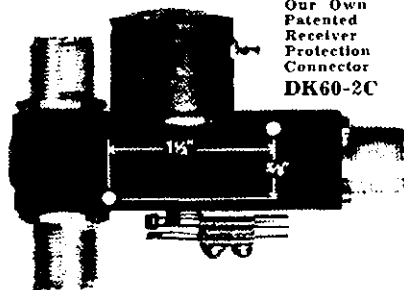
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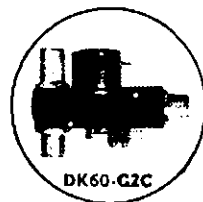
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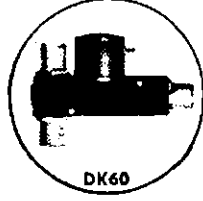
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at the wedding joining in the ear-bashing of the Amateurs present. Nice to have met you Harford. And so say all of us.

Stuart SMS has been fairly busy at his vocation but has managed to get the s.s.b. going and is quite happy to report his first contact using some 10 watts to his exciter. He has a two-band quad on 10 and 15 mc. with the centre of the quad about 70 feet off the ground. His three element yagi is still used on 14 Mc. Ron 5VH is a very busy man in his chosen profession at the moment, but is giving thought to 80 mc and the building of gear for that band. Erg 5KU is busy getting his portable gear ready for the summer months and is looking for xtals in the c.w. portion of the 80 mc band. It would seem that he means business. What about the gliding Erg?

Leo 5GJ has been bitten by the t.v. bug, but the latest bulletin states that he is slowly recovering from the symptoms as his interest stemmed from a desire to learn more about the art. He has promised to let all interested know when the Adelaide and Melbourne t.v. signals start coming in and then they will all make a rush for their 2 mx rx's. How low can they get in the Mount area? Claude 5CH has gone somewhat into smoke this month and cannot be contacted for a statement. It could be that he is busy at his vocation, that he is in the throes of building some gear, that he is in VK3 buying all the available disposals gear, or that he is just having a temporary rest from Radio. Your guess is as good as mine. Col 5CJ is keeping skeds on 7 Mc., as I well know, having contacted him on that band this month. He almost lost his voice from shock, and is also very busy preparing his v.h.f. gear for the coming season. Dale Aslin, one of the Mount Gambier s.w.'s., sat for his ticket on October 17 and is now eagerly awaiting the results. Hope the news is good Dale.

Talking about the S.E. area, Joe 5JO asked me to say that he appreciated the many kindnesses shown to his XYL and himself whilst on their honeymoon. He tells me that they thoroughly enjoyed themselves whilst down there, and the hospitality from the gang had to be experienced to be appreciated.

Fred 5MA has recently acquired a tape recorder to help with his language studies. According to my spy, Fred will soon be bilingual, and after looking it up in the dictionary, I was a bit dubious about that one. I now look upon Fred with some awe. Language study, whacko, it is a pity that you did not have that recorder when Tom 5TL jammed his finger in the door, you would have heard language, and how!

Incidentally, Tom 5TL was down in the city recently, but unfortunately it was to attend at the funeral of his father. We extend our sympathies Tom. By the way, that was a nice sort of an act you put on when you contacted me on 7 Mc. the other day. People will think that I never am on the air. A nasturtion on my character, that's what it was. Anyway, keep your ears open on that band in the future, it's marvellous what you hear on that band when you have not got a gun!

Reports have been filtering down to me that 5KS, christian name unknown, is domiciled in the Renmark area and will soon be bobbing up on the bands. He borrowed a stack of "A.R.'s." from Tom to bring himself up on things, so it won't be long before he joins the army of my detractors.

I barged into a round table hook-up on 7 Mc. the other day to remind my espionage agents to put on their false beards and black cloaks and deliver the goods, and thereupon threw the said round table into complete chaos. If it had not been for Pete 5FM jumping into the breach and bringing Tom 5TL, Ses 5GP, Col 5CJ, Snow 5NW and myself into some semblance of order, the round table would have been a square one with five legs. My apologies gentlemen, but I am a stickler for duty, and believe me, all those flattering remarks about my rudeness will get you nowhere.

Ian 5QX, by the time that this is being read, will have taken up his abode at Woomera for an undisclosed period. This means of course that his association with the VK5 Council must come to an end, and I say without fear of contradiction that the Council has lost a keen and sincere worker and we all hope that should he one day return to the city of Elizabeth, he will again give of his utmost on the

Council again. I really should not say all this because he was one of those dastards who assisted to hold me up to ridicule at the last meeting, however the truth must out, dastard or no dastard. For you evil minded folk, a dastard is one who commits a dastardly deed and if that was not a dastardly deed, what is?

My nautical espionage section came to light this month with the true story as to how Luke 5LL acquired his now famous tower. It appears that Brian 5ZBI of Maitland put Luke on to a tower that was available over that way and hurriedly mustering the Admiral 5ZAH and Alan 5ZC, he set forth for Maitland. Arriving at their destination, Luke immediately appointed himself as works manager, found the shade-est tree, and at once fell off to sleep, only waking up when the tower had been dismantled and tied on to the truck. Both of his slaves worked their fingers to the elbows, were both refused a tea break by Luke because as he cunningly put it, there was not any tea, and now both refer to Luke as the Simon Legree, and there is no mistaking the underlying tone of bitterness and scorn as they mention his name. Man's inhumanity to Man!

On the trip home from Maitland, Alan 5ZC fell asleep, Luke knew that at the place where Alan signs the time sheet they have a Klaxon to warn of a fault, and with this in view he dug one up and gave a loud blast on it and Alan woke at top speed, went twice through the car roof and once through the windshield, and it took the gang about ten minutes to unwrap his legs from around his neck. Again I say, Man's inhumanity to Man!

I put up a new aerial this month and if it had not been for Col Stevens, one of the associate members, who fortunately dropped in at the right time, I don't think I would have finished it. No doubt about it, I am getting old. We only made one mistake, one of us tied the halyard to the garden roller and up she went, looked quite cute dangling from the pulley. I suggested to Col that I would go inside and get my mother-in-law to mount her broomstick and fly up there and cut it loose. He thought it was terribly funny until he saw me go white as my XYL came out and heard the lot. He left in quite a hurry as I was being escorted to the laundry. Apparently he knew where the dog kennel was kept!

Well, Ye Ed. has his red pencil poised, so before he can use it, I will say on behalf of the VK5 Council and the membership of the Division, "A Merry Xmas to all Divisions, both Council and membership, and may you all get all that you wish for." To those with whom I have quarrelled all the year, I hope that we quarrel all next year, and if I have said anything that I should be sorry for, I am glad of it. 73, 5PS (PanSy to you!!!).

TASMANIA

The Jamboree of the Air has passed for this year and it can be truly said that congestion on the bands was worse than during an R.D. Contest, due to the fact of course that contacts were of longer duration. Many VK7 stations took part this year, but few contacts outside Australia were made. On the other hand, many good contacts were made and the Scouts had a great time as well.

Charlie 7KS was mobile marine with the Sea Scouts and Jack 7JB went into camp with them, as did Brian 7ZE. Michael 7ZAV manned the base station at the 13th Hobart Scout Hdq. and did an excellent job there indeed. It is not possible to thank each station individually for help, but Council congratulates you one and all on your excellent job.

The VK-ZL Contest has also passed, and conditions were very changeable during it. 21 Mc. band did produce some very good contacts however and those stations who took part were well rewarded for their trouble, as some quite rare DX from the Pacific area was to be worked. Conditions during the "CQ" phone contest were deplorably bad and virtually no contacts were made from Southern Tasmania.

T.v.i. has reared its ugly head for the first time in Southern Tasmania and a T.v.i. Committee has been formed to assist, and we all wish that committee the best of good fortune in its delicate but important work.

Remember the outing to South Arm on Sunday, 10th December. This function will be our Christmas Get-together, so all XYLS, YLS, and harmonics are most welcome. Bring along your mobile gear, both transmitting and direction finding, and be in the fun too. Watch the Bulletin for full details.

We welcomed Ken ex-7KM back from the States at the November Divisional meeting and we confidently expect a most interesting address from him before he returns to M.I.T. Ted 7EJ delivered the lecture at the November meeting, the subject being "Getting on 2 Mx

Cheaply". As a result of his lecture, some new call signs can be expected on that band. Speaking personally, I thank Barney 7ZAK for lending his 2 mx gear to me. I have had lots of fun talking to the boys on 144 Mc.

With best wishes to all readers for Christmas 1961, from Ian 7ZZ.

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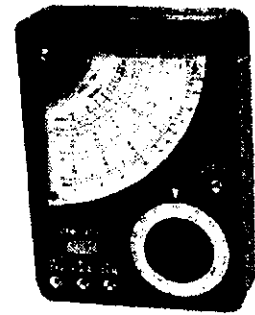
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FT 3195	FT 4445	FT 5005.6	FT 5655	LP 6032	FT 6550	LP 7450
DC 3320	FT 4465	FT 5110	FT 5660	LP 6040	FT 6560	DC 7400
DC 3332.5	FT 4483	DC 5145	DC 5700	FT 6050	LP 6561	FT 7406.6
FT 3340	FT 4490	DC 5166.6	FT 5706	LP 6110	DC 6572.3	FT 7425
DC 3440	DC 4495	DC 5170	DC 5710	LP 6130	LP 6640	FT 7440
FT 3690	FT 4535	FT 5180	FT 5740	LP 6210	FT 6650	FT 7600
FT 3828	FT 4540	FT 5205	FT 5744	FT 6225	DC 6700	LP 7890
DC 3830	FT 4549	DC 5210	DC 5770	FT 6235	DC 6750	DC 7890
FT 3830	DC 4660	FT 5237.5	FT 5773.3	DC 6240	DC 6783.3	DC 7925
FT 3885	FT 4672.76	DC 5250	FT 5775	LP 6243.3	FT 6815	LP 7930
DC 3930	FT 4676	DC 5285	FT 5780	FT 6265	FT 6840	DC 7962.8
DC 3970	FT 4695	FT 5295	FT 5782	FT 6300	FT 6890	DC 7810
DC 3995	FT 4730	LP 5300	DC 5810	DC 6350	FT 6935	DC 8036.2
FT 4010	FT 4735	FT 5360	FT 5815	FT 6355	LP 7010	DC 8171.25
FT 4025	FT 4750	FT 5365	FT 5852.5	FT 6375	LP 7120	DC 8176.9
FT 4065	DC 4750	FT 5397	FT 5855	DC 6420	LP 7171	DC 8182.5
FT 4080	LP 4765	DC 5410	FT 5897.5	FT 6462.5	FT 7175	DC 8460
FT 4180	FT 4780	FT 5437	FT 5910	LP 6470	FT 7200	DC 8469.23
FT 4235	FT 4815	DC 5515	LP 5910	FT 6515	LP 7205	DC 8645.45
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MULTIMETER Model 200H

20,000 ohms per v. d.c. 10,000 ohms per v. a.c.



Specifications:
 D.c. volts: 0-5, 25, 50, 250, 500, 2,500.
 A.c. volts: 0-10, 50, 100, 500, 1,000.
 D.c. current: 0-50 μ A, 25, 250 mA.
 Resistance: 0-60K ohms; 0-6 meg.
 Capacity: 0.01-0.5 μ F. (at a.c. 5v.c. 0.0001-0.01 μ F. at a.c. 250v.c.)
 Decibel: minus 20 db. plus 22 db.
 Output range: 0-10, 50, 100, 500, and 1,000.
 Battery used: UMC 1.5v. 1 piece.
 Dimensions: 3 1/4" x 4 1/2" x 1-1/8 in.

Complete with internal battery, testing leads and prods.

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FT 3535	DC 3560	DC 8016.5	DC 8023	DC 8030
FT 3536	DC 3562	DC 8017	DC 8023.5	DC 8030.5
DC 3537	FT 3564	DC 8017.5	DC 8024	DC 8031
FT 3534	FT 3573	DC 8018	DC 8024.5	DC 8031.5
DC 3547	FT 3575	DC 8018.5	DC 8025	DC 8032
FT 3549	FT 3580	DC 8019	DC 8025.5	DC 8032.5
FT 3552	FT 3587	DC 8019.5	DC 8026	DC 8033
DC 3552	FT 3595	DC 8020	DC 8026.5	DC 8033.5
		DC 8020.5	DC 8027	DC 8034
7 Mc. Ham Band:	114 Mc. Ham Band:	DC 8021	DC 8027.5	DC 8034.5
Crystals of any frequency, £2.	DC 8000	DC 8014	DC 8021.5	DC 8035
	DC 8010	DC 8014.5	DC 8022	DC 8028.5
	DC 8013	DC 8015	DC 8022.5	DC 8035.5
	DC 8013.5	DC 8015.5	DC 8029	

SAKURA CIRCUIT TESTER

Model TR-6S

Sensitivity: d.c. 20,000 ohms/volt, a.c. 10,000 ohms/volt. Ranges—d.c. volts: 6, 30, 120, 600, 1,200v.; a.c. volts: 6, 30, 120, 600, 1,200v. D.c. current: 60 μ A., 6 mA., 60 mA., 600 mA. Resistance: 10K, 100K, 1M, 10M ohms. Capacitance: 0.001-0.2 μ F., 0.0001-0.01 μ F. Inductance: 30 3,000H. Decibels: —20 to +17 db. (0 db.—0.775v.; 600 ohms). Dimensions: 4 1/2" x 6 1/2" x 2 1/2". Weight: 1.3 lbs. Price £9/10/0 inc. tax.

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Type R89/ARN-5A, 300 Mc. Valves: seven 6AJ5s, two 12SN7s, one 12SR7, one 2N197, six relays, and three crystals of 6522.9 Kc. As new, £5 each.

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