



Affiliated with I.A.R.U.

Edited by

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Vol. IV. No. 5

WELLINGTON, N.Z.

MAY, 1931

Transmitting Valve

MARCONI TYPE T15

(Approximate overall dimensions: 115 x 55 m/m)

A Transmitting Valve, tested dissipating 15 watts at the anode, suitable for voltages up to 600.

Approximate Data:

Filament Volts	5.5—6.0	Anode Volts	600
Filament Amperes		1.0	Amplification factor		25
		Impedence (ohms)			50,000

Special Price to Amateurs 25/- net.

Amalgamated  Wireless
(Asia) Ltd.

P.O. Box 830, Wellington.

When writing Advertisers please mention "Break-In."

HEADQUARTERS ADDRESS.

Is Box 489, Wellington.

Subscription is 5/- per annum, due 1st January each year.

Letters to Headquarters should be addressed **impersonally** — Treasurer, Secretary, Editors, etc.

"Break-In" will not be sent to any member who is unfinancial at Headquarters.

WEAR an N.Z.A.R.T. Badge—3/6 each.

USE N.Z.A.R.T. stickers—1/6 per 100.

H.Q. NOTIFICATIONS.

All amateurs are requested to stand by or else see that their QRH is well away from 2AX when this station is making official broadcasts on behalf of H.Q.N.Z.A.R.T. on Sunday afternoons.

Notes for Break-In should be at Box 489 by the 20th of each month. Will members in all districts keep their representative note-suppliers posted as to their doings, please? Mr. Mark Churton is Auckland officer, the Editors in Wellington, 3CP in Christchurch, and 4CA in Dunedin.

All crystal-controlled stations are requested to advise their frequencies for publication.

The District Telegraph Engineer, Otago, has written conveying the appreciation of the Department and of Mr. Rollings and other parents and relatives, for the assiduity with which amateurs lent their aid in watching for the "Windward."

ZL2DW wants a sked with ZL4 on Monday at about 9.30 p.m. on 80 metres.

ZL2DX sends slow Morse every night from 7 till 7.45 p.m. on 84 metres. Anyone hearing this might send an acknowledgment, which would be appreciated.

STICKERS.

Through no fault of H.Q. we have run out of stickers and as new supplies have been unobtainable except in England, we cannot fulfil orders for a week or two yet. A note is being taken of all who order stickers and these will be despatched immediately upon their arrival.

QSL CARDS.

Why people complain to H.Q. we don't know, but there have been numerous complaints from local and overseas Hams and listeners that ZL Hams are lax in QSLing. How about your doing your bit to retrieve our good name?

We would particularly ask you to QSL our Listener Report Stations, as these chaps are all keen and will soon be Hams themselves. You can halve the postage bill by sending your cards through the QSL Bureau. Our charges are half ordinary postage rates.

"ON THE AIR."

By Old-Timer.

ZL stations heard during the past month:—

Tone 9.—ZL1AK, ZL2AY, ZL2GD. ZL3AI, ZL3AJ.

Tone 8.—ZL1AC.

Tone 7.—ZL1AR, ZL1BH, ZL1BN, ZL1FT, ZL2AB, ZL2AC, ZL2BE, ZL2BG, ZL2BY, ZL2CE, ZL2CP, ZL2DN, ZL2DG, ZL2GW, ZL2FU, ZL2FV, ZL2GK, ZL3AQ, ZL3BC, ZL4AD, ZL4BI.

Tone 6.—ZL1AP, ZL1BL, ZL1FG, ZL1CR, ZL2CU, ZL2FI, ZL2FM, ZL2GQ, ZL2GC, ZL2GP, ZL2FR, ZL3AE, ZL3AF, ZL3CK, ZL3CV, ZL4BT, ZL4CA.

Tone 5.—ZL1AJ, ZL1AV, ZL1AX, ZL1BP, ZL2CC, ZL2DW, ZL3AB, ZL3AX, ZL3CC, ZL3CM, ZL3BR, ZL4AM, ZL4AP.

Tone 4.—ZL1AF, ZL2CO, ZL2FA, ZL2GO, ZL2GT, ZL3AW, ZL3CX, ZL4AO, ZL4BE, ZL4BF.

Tone 3.—ZL1FB, ZL2CL, ZL4BG, ZL4BL.

Outside Allotted Frequency Bands.—ZL1AF, ZL2FF, ZL2GW, ZL3AE, ZL3AW, ZL3BD, ZL4BL.

SPECIAL JAPANESE 20-METRE TESTS.

The Japan Amateur Radio League proposes to try QRK tests between J and VK-ZL on 20m. A3 wave and 10m. A1 wave on the following SKED:—

20m. band fone test SKED: No. 1, 15th May, No. 2 16th May, 0730-0900, GMT., No. 3 17th May, 0100-0300, and 0700-0900 GMT.

QSO will begin by A1 sigs calling "QST QST de—." J stn will send record music, as well as speech. Report for Fone-QRK should be sent by A1 sigs. J stn will use "F" system (F1 to F9) for Fone-QRK, for example, "UR SIGS R8 F6," etc. "F," for A3 wave, is used as "R" for A1 in Japan. ZL stations contacting please do likewise.

10m. band signal test SKED: No. 1 7th June, 1931: 2150-2250 GMT (6th

EDITORIAL

As this issue goes to print we feel that it would not be complete without some reference to the numerous letters of appreciation that members have sent to Headquarters. From the general tone of this correspondence it is patent that our efforts are meeting with a most gratifying reception and have won the approval of most of the Amateurs in New Zealand.

As "Break-In" is the official organ of NZART, and in view of the fact that we consider the well-being of the one to be closely bound up with the interests of the other, we need scarcely emphasise the necessity for aiming at an NZART that is strong numerically and financially. A numerically strong NZART alone can support a really adequate magazine, and the magazine in turn will react upon the strength of the organisation. Every Association of any size depends upon an official organ to act as a leavening and a welding force, and NZART, scattered as it is throughout the length and breadth of New Zealand, has need of a strong "Break-In."

Every Amateur in New Zealand owes it to his hobby to join NZART. Only through strong combination can we Amateurs hope to hold together in the face of commercial interests that would fain encroach upon and usurp our Amateur channels. We cannot appeal too strongly to all Amateurs to support the only radio organisation in New Zealand that can offer them the strength that goes with unity and the freedom that accompanies strength. Every loyal member of our Association must make some sacrifice if NZART is to mean anything to him, and we suggest that he can do most by urging his fellow-Amateurs to sink their personal prejudices and combine with us in making NZART a truly national organisation.

S.H.P., C.R.H.T.

June GMT), our 7th, Sunday morning, 0150-0250 GMT (7th June GMT), 0450-0550 GMT, 0750-0850 GMT, 1250-1350 GMT. No. 2 14th June (from 13th 2150 GMT). No. 3 21st June (from 20th 2150 GMT).

Time-table For Call of Each Side.—

VK and ZL Call J	J Calls
50-59 minutes	00-09 minutes
10-19	20-29
30-39	40-49
Type of Call.—"QST QST QST	de—."

purporting his station to be ZLICO, which was already the allotted call sign of a registered Auckland amateur.

R. Harrington and R. C. Miller were each fined £10 for transmitting without a license.

All N.Z.A.R.T. members are advised to warn any prospective transmitters against going on the air before they are licensed. N.Z.A.R.T. H.Q. views this matter very seriously, and will do their best to see that the P. and T. Regulations are carried out, and any offenders brought to book.

THREE AMATEURS FINED.

Three men were charged before Mr. F. K. Hunt, S.M., in the Auckland Police Court with transmitting without a license.

In the case of F. R. Kendrick, who was fined £15, it was pointed out that he sent out from an unlicensed station and had printed identification cards

MORE CRYSTAL FREQUENCIES OF ZL STATIONS.

ZL1AK, 3535 and 3540 kc.; ZL1FW, 3555 kc.; ZL2CE, 3587 kc.; ZL3AJ, 3551.5 and 3633.5 kc.; ZL2BC, 3590 kc.; ZL2BI, 3505 kc.; ZL2DG, 3570 kc.; ZL2GG, 3585 kc. Further particulars of CC frequencies are desired.

ZFB 36:6 3CP 3533.1

QRA AND QSL BUREAU.

Reciprocal arrangements have now been made with U.S.A. and the Bureau will now accept W cards for forwarding. Rates for forwarding cards are 3d each for ZL cards and 1d each for overseas cards. Cards need merely to be sent in bulk to the Bureau and a P.N.

1AC	Button, C. L., Great South Road, Taupiri (also 1CT).
1BI	Turnbull, J. R., 18 Wicklow Road, Narrow Neck, Auckland.
1CT	Button, C. L., Great South Road, Taupiri (also 1AC)
1BL	Lynch, J. S., 31 Colombo Street, Frankton Junction.
1FL	Walker, J., 5 Selwyn Terrace, Parnell, Auckland.
2BK	Firth, E., 43 Roy Street, Wellington.
2CG	Franklyn, R., Massey Agricultural College, Palmerston North.
2CY	Francois, L. G., 72 Wilton Road, Northland, Wellington.
2DD	Boyer, J. P., Record Street, New Plymouth.
2FW	Etheridge, H. G., 87 Wellesley Road, Napier.
2GY	Wass, L. H., 506E Queen Street, Hastings.
3BB	Smith, W. T., Box 114, Greymouth.
3BF	Prince, E., 29 St. James Avenue, Papanui, Christchurch.
3BS	Mitchell, A. T., 142 Victoria Street, Christchurch.
3BU	Doherty W., Ward Street, Runanga.
3BY	Yeoman, J. C., 311 Gloucester Street, Christchurch (3CI re-allotted).
3CB	Whitelock, L. G., 27 Reeves Road, Opawa, Christchurch.
3CI	Kay, R. M., The Hermitage, Mount Cook (ex 2DQ).
3CU	McCurdy, G. E., Cross Street, Allenton, Ashburton.
4AJ	Jack, J., Janet Street, Invercargill.
4BB	Brooks, J. R., c/o Pharson's Radio, Invercargill.
4BO	Last issue should read, "4BQ."

to cover charges enclosed. The Bureau does the rest. Information regarding new or altered QRA's should be sent post haste to 2BC, who keeps W9FO fully posted with ZL QRA's. Any Ham desiring a full list of ZL QRA's should purchase a copy of the "New Zealand Radio Annual" and consult "Break-In" since February.

FONE NOTES.

(By "No Bias.")

ZL2FC can be heard most nights with the quality of any B.C. station; he has one of the highest percentages on the band; going QRO soon. ZL2BR has an rac. note and is not suitable for fone: get the note OK om, then the fone comes after. ZL2AP is over-modulating; speech cracks up and wave is shifting considerably when modulating. ZL2BE is the standard station and is now tuned up to concert pitch; great fone.

ZL2CE has been trying out a lot of fone lately; wave appears to be without definite peak. Sharpen up that wave, om.; speech rather ragged. ZL2AW has his fone very near perfect and has held a sked with ZL2BE every Sunday night for three years very rb; he is contemplating putting in a 204A and a condenser mike. ZL1BL heard testing with record, fone very rough and blasting; appears to be using mike for music; N.G., om, use pick-up. ZL3CW has a very clear fone, but has lost all his punch; will regain this when he puts up his 80-foot mast in his new QRA. ZL2BI has a very high percentage and utilises every watt to the best advantage; generally heard testing during week-ends. ZL2CR fone very rough and carrier-wave wobbling badly; considerable adjustment wanted. ZL2FF still comes in with great volume; he has a lot of new ideas and will soon be on the air with a new outfit. ZL2DB

is trying out fone; has a distinct ringing noise, speaking too loud and into the mike. ZL2CJ seems to have gone QRP; not nearly as loud as usual; this station was one of the best. ZL2GK testing out a QRP fone outfit; music clear, speech distorted. ZL1CR heard on sked with 2BE, but was not a success; fone not properly adjusted. ZL2DM has improved considerably, fone sounds much louder and clearer. ZL2AX still great; has an input now of 500 watts. ZL2FM coming in very clear; best fone from Gisborne. ZL2FY has a very fine fone output, and has plenty of punch; very clear. ZL3CA, fone been very ragged of late. ZL2BK heard testing with ZL2GM. Mod. good. ZL2DX, fone very rough when heard. ZL2GQ can be heard using the old loop most nights, fone still remains the same exceptionally good for loop. A number of fone stations besides these have been heard, but have been so indistinct as to be difficult of identification. Very few Third District fones. How about it, oms?

AN FB. FONE "MIKE."

The op. at 1BS has often suffered in silence whilst trying to guess what was being said at the "other end" of a phone QSO, and it has occurred to him that the following description of the "mike" used at this station might interest some of those hams who, like himself, cannot run to a first-class carbon job.

Years ago it was definitely decided that, if ever phone were attempted, it would be QSA5 or none at all. A very "back" back number of the "Wireless World" was dug out of the files, and with the aid of an article in it by Captain Round, a "mike" has been constructed which, by all reports, fills the bill. The instrument is known as the Marconi-Sykes Magnetophone, and was used by the B.B.C. for several years, although it has been replaced by the less bulky Reisz type. It consists simply of a light speech coil suspended in a strong magnetic field, which in this case is supplied by the 6-volt "pot" magnet of an old B.T.H. dynamic speaker. It was never a success as a loud-speaker and was obtained quite cheaply.

The speech coil is coupled to the amplifier by an audio-frequency transformer with the primary rewound to match. Two stages are used to swing the grid of the modulator, which consists of two Philips F704's in parallel, and the coupling between two of the valves is designed to boost the higher frequencies, because the "mike" itself favours the lower ones. The arrangement is apparently quite successful.

"Mike" never requires the periodical shake-up which is part of the station routine with the cheaper carbon types, and the frequency range compares very favourably with the double-button carbon instrument; there is no hiss or background noise of any sort, except when the field current is switched on or off. In fact, the only complaint is on the score of current consumption, which is about one amp. at six volts with the B.T.H. unit used here.—ZL1BS

OTAGO RADIO EXHIBITION.

We have to report that all previous traffic handling records at the O.R.E. were eclipsed during the three-day exhibition. ZL4XD operated a portable outfit at the stall and the bay was a centre of attraction, especially when it was learned by our "brither Scots" that they could radio for nix. Some were more alive than others and lodged about a dozen messages to Scotland and others, while more cautious, asked if they were "sent" over the air in the same way as the kiddies' YA birthday gifts, while others again declined to accept our services because they were sure their friends couldn't read the Morse code.

One or two points we would like to mention. We would like to express our

sincerest appreciation to the many willing Hams who worked the reception and distribution end of the game. They did so very efficiently and we trust the experience has been useful to them and may they soon become commercial men if they aspire in that direction. We have several in mind who could grace any ship.

To those in organised districts who also run annual exhibitions we desire to say that we will gladly do likewise at their forthcoming shows. (Gisborne and Christchurch, please note.) To those Hams in other districts or in the smaller towns and who are unfortunate in that we cannot (because of the lack of opportunity) reciprocate in traffic handling, we desire that they should not be out of pocket over the distribution of messages and we would greatly appreciate if they would please advise the secretary of the Otago branch of any expenses incurred in order that we may reimburse them fully.

May we again thank you all, especially the Guard Chain, for your kindly co-operation, despite our hurried arrangements and an odd dropped sked caused by pressure of business and internal QRM from dozens of loud-speakers. Cannons to the left of us, cannons to the right of us, and the public all around us. Hi! Hi!

THE CREAM OF THE GAME.

What a difference there is in a QSO when the man at the other end really has something to say! Nowhere is the happy art of conversation more welcome than "on the air." I think that when I take part in a real radio conversation—one not of the Q-list kind—I can even forgive a poor note and a chirpy wave! All of us amateurs have so much in common with the other fellow that there should be little difficulty in reducing the old stock to a pulpy mass! The "raison d'être" of radio is COMMUNICATION—there is our cue! Unless it really does beat letter writing it is failing us. While patrolling the air lane it is good to greet one of our fellows in passing but of what value is a friendship whose only bond is an occasional abrupt "So long, see you later,?"

—T. R. Clarkson, ZL1FQ.

PSE QSL OM's.

(Via ZL2GJ.)

VK5XK.—A. J. Hewitt, 233 Henley Beach Road, Torrensville, South Aus-

tralia, states that ZL stations are the worst he knows for failure to QSL. He says he has sent out 210 cards and only 82 have been acknowledged. He sends a list of ZL stations that have failed to QSL, but it should not be necessary to reproduce the list in "Break-In."

STRAY.

There was a young man in Siam
Whose HT leads got in a jam,

He saw a brief puff

As the volts did their stuff,

And exclaimed in a rage: "How very
annoying!"

CHESS MATCH PER SHORT WAVE AMATEUR RADIO TELEGRAPHY.

(By "Otakau.")

On Friday, March 13th, a most engrossing and interesting chess match, between distant chess enthusiasts, was conducted by means of the co-operation of two amateur radio stations. The match, which was arranged by the Headquarters staff of N.Z.A.R.T., was contested between Giles (Wellington) and Coombes (Otago).

Mr. S. R. Perkin operated his station ZL2GK at Wellington, where Mr. Giles sat at the board, and in Dunedin Mr. Coombes manipulated the checkered board at the station of Mr. L. R. Stroud, ZL4AP. The eighty meter band was used, and though dozens of other amateurs were operating telegraph and telephone stations on approximately the same frequency, remarkably few repeats had to be asked for, though in the early stages the operation of a violet ray apparatus on one of Dunedin's bald-headed fraternity caused some QRN!

ZL4AP used a portable transmitter with a couple of 245 valves in circuit, and a power of about 20 watts.

Messrs. Giles and Coombes were very satisfied with results achieved by radio telegraphy.

There were seventy separate messages exchanged in the 170 minutes with very few repeats due to interruption beyond the control of participating stations. The average time taken by movers was $1\frac{1}{2}$ minutes, and half a minute for each telegraph message—a very creditable performance.

ZL2BG.

STATION DESCRIPTION.

The circuit employed is the well-known L. C. Hartley (shunt feed). Ant. used is a full-on-40 affair. Aerial wire consists of nr. 14 dcc heavily shellaced to prevent sea-air corrosion.

Various types of tubes are tried out as oscillators from the UV 199 to a UX 210. Input varies from a fraction of a watt up to about 75 watts. The D.C. emergency plate supply of 576 volts is drawn from home-made "B" accumulators. This block of 12 forty-eight volters is given a charge-up over-night once a week to keep it in trim. The D.C. filament for the oscillator is supplied from a large C.A.V. 10 volt 120 amp. hr. battery.

For A.C. working a tapped plate transformer delivers 375, 750, 1125 and 1500 volts on each side of the centre-tap. The four rectrons are ux 281's. Filter consists of a 110 ma choke and 8 mfd in condensers (two 2000 v. tubes and two 1500 v. T.C.C.'s). The R.F. chokes in negative and positive leads consist of 100 turns of 24 dcc on 2in. formers. The rectifier filament transformer delivers $7\frac{1}{2}$ volts to the 28's. For stability of input each rectron is supplied from a separate secondary winding. The oscillator filament transformer delivers up to 10 volts. Variable iron-core chokes are used to regulate filament voltage supply. These chokes appear in the primary leads to the transformers. The grid-leak and condenser combination is variable. The grid condenser being variable helps in the clearing up of note per medium of the monitor. The monitor, I find, is invaluable not only in the clearing up of the transmitters note, but as a means of placing the wave within the band, and also in finding spots from from QRM. My method is to tune receiver to the centre of the band, then tune monitor until the whistle is heard from it on receiver. Switch off receiver and tune transmitter to resonance with monitor. Constructing the monitor before building the transmitter is strongly advisable.

I have been QSO 65 countries to date, two-thirds of these being worked on the good old 14 mc band. Succeeded in working all continents about two years ago. Have clicked with all stations heard here on 28 mc—VK3BQ and VK3PM!

I am generally found on 14 mc for dx and 3.5 mc for local rag-chewing.

Rarely venture on the 7 mc band. QRM too solid for my liking!

As regards 20 metre working this season I have found it to be pretty dud. It is really a most inconsistent band. Last season was excellent for dx. Signals were coming in here very fb. ZL2BX keeps regular sked nightly with G2LZ. Well, om, sorry I was unable to get what dope I was able to scramble together in before now, but better late than never, I suppose. Hi! Will say cheerio for nw es vy 73's.

HAMFEST IN OTAGO.

(By ZL4CA.)

A Hamfest was celebrated in Dunedin on Wednesday, March 4. The real idea of the affair was an informal welcome back to Ham circles of our globe-trotting brother, H. N. Shrimpton, who had shortly before returned from a trip with the Byrd Expedition from the South Pole, via America, England, France, Belgium and Australia. We assembled at the Savoy, and had a couple of hours of very exciting midget golf, during which several close finishes were recorded. The addition of totals on some of the cards proved so disgraceful that we have not concluded who won, but we are assured that the club bogey is held by at least ten members.

Eats provided an exciting time for some of the younger Hams who seem to thrive on such tantalising dishes as chick-weed (Hi!) and trifles. Every one wanted to talk at once and QRM² was terrific, so we adjourned after supper to our own clubhouse near Blaney's, where seating accommodation was at a premium. We listened-in for quite a long time to the wave-length of 4AO, who told us of his venturesome travels down through the ice-cream regions in the roaring sixties (Hi!) on the grand old tub Eleanor Bolling, and his subsequent trip to the States. 4AO was very interested to QSO such minor personalities as Hoover, etc., and also to meet his magnificence, Hiram Maxim, the uncrowned king of Hams. He also visited the Ham H.Q. WIMK, at Hartford, and had a look round the dump which Nev. assures us in very fb. He was also introduced to the Wouff Hong and the Rettysnitch, and in turn he handed over the Otago Club's autographed presentation quay (Hi! Hi!) which is now reposing in Hartford.

The radio heads in America, who have the habit of speaking plainly and solemnly, assured our representative that New Zealand would have to send a pretty good man to the next radio conference (probably in Madrid), because there is the possibility that commercial interests, which are likely to be dominant at European conferences, will probably move strongly for a restriction of amateur privileges in regard to power and wave-length. In England, Nev. visited G5SW and several amateur stations with whom he had QSO's previously from New Zealand. The British amateurs are very fine fellows, says Nev., but are greatly hampered by the authorities in a red-tape net and power limitations. Just to prove that the ZL Hams never sleep, 4AO called up ZL4 from an English station and immediately ZL4BT (our genial Cal) came back and a very long QSO was enjoyed by these two bosom pals. Prior to his return to New Zealand via Australia, a short visit was paid to Belgium and France.

We thoroughly enjoyed the chat, and we hope that 4AO will be good enough to recapitulate his varied experiences first hand to "Break-In" at an early date. It is rumoured that several Hams were late for work next day, but what's that once in a while?

CORRESPONDENCE.

(The Editors, "Break-In.")

Dear Oms.—I have a few words to say re QSLing oms. There are over 35 ZL cards which have been owing to me for months, and most of them are Second District Hams, and while I am not a card-hunter, I expect a card in return for one sent.

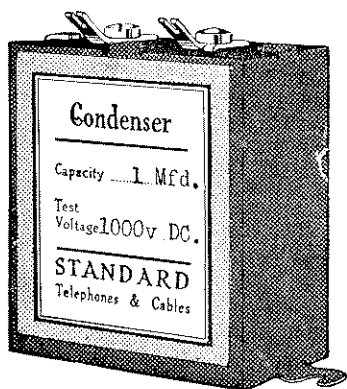
I look at it this way oms—although I am only doing two days a week on relief work, I can afford a penny a time to send away cards, yet there are those who are in fairly good jobs who can't, or simply won't, QSL. Once they get my card its—"Why QSL now—I've got his?"

This letter may sound absurd oms, but at least I've got it off my chest. 73's to the HQ gang.

FRANK REARDON, ZLIAV.

Note.—Fair enough Om. With the QSL service run by HQ, now at the disposal of all Hams, there is little excuse for not QSLing. Everyone ought to QSL—it's as much a matter of courtesy as giving a fellow a report.—Editors.)

Standard Fixed Condensers



Manufactured to the specifications of the International Standard Electric Corporation, Standard Condensers are absolutely dependable. A complete range is now available from .01 mfd. to 4 mfd.; test voltages 500 to 2500 volts. The prices are right.

Standard Telephones and Cables (Asia) Ltd.

24-26 Ballance Street, Wellington.

EXCELSIOR !

BY VK2MS, VIA ZL2FE.

(With Apologies to Longfellow.)
(Picturing a Ham's Experience on the
Opening Night of the Recent International Tests.)

The shades of night were falling fast
As to his radio den there passed
A Ham; his heart was filled with zest
To join the International Test. Excelsior!

His brow was sad as round the band
He turned the dial with trembling hand.
There weren't too many Yanks about.
But still he said: "I'll give a shout."
Excelsior!

Up in his home he saw the light
Of radiators warm and bright.
Outside, the night was cold and bleak.
He shivered, and could hardly speak.
Excelsior!

"Stay not up late," his O.M. said,
"Take my advice and go to bed.
Come in and let the message slide."
But still the young Ham's voice replied:
Excelsior!

"Oh, stay," his Y.L. said, "and rest
Your curly head upon my breast."
At nine o'clock the poor chap grieved,

For not a message he'd received. Excelsior!

At ten o'clock, as on their beds,
His parents laid their tired heads,
The Ham still sat out in his shack,
And called at Yanks who ne'er came back. Excelsior!

As to eleven the clock's hands turned,
To gain some points the poor Ham yearned,
Still grasping in his hand of ice
The key—the dot and dash device.
Excelsior!

By midnight hour, cold and grey,
There nigh to half-asleep he lay,
Tired and weary, but full of thanks,
For in that hour he'd worked ten
Yanks. Excelsior!

TRANS-TASMAN FONE RECORD.

What we believe to be a trans-Tasman fone record was put up when ZL2BI was QSO VK3ZX, of Melbourne, from 1 a.m. to 5.20 a.m. on 26th April. Both stations were using fone during the whole of this period—ZL2BI using Heising and VK3ZX using the Telefunken system of modulation. ZL2GK and ZL2BC shared the vigil with 2BI at his shack, and each had several interesting chats with Oliver 3ZX and his

friends, Tom and Pat. Has anyone beaten this "record"?

LETTERS TO THE EDITORS.

THE ELECTROLYTIC CONDENSER.



Hitherto these have been difficult to obtain, but they are now available at a fair price. So Hams will be glad to have some data about them. Their peak voltage per unit is 430 volts, but 300 is the safe conservative figure. Each unit is 8 mfd., and a bank of 7 in series across 2000 volts filters it beautifully. The leakage current, contrary to common belief, is very small — from .0001 to .0006 of an amp. The units are compact and convenient for installing, and as their life is measured in years; and,

short of huge overloads, they are puncture proof and self healing, electrolytic condensers are sure to be popular. The illustration shows the model obtainable now, at a price that puts a 1000 v. filter within the two-note figure.

Dear Oms,—It seems to me that the following suggestion might be both feasible and advantageous. Whilst the 80 band is unpleasantly crowded on some evenings all the rest of the territory for 25 metres either side is empty, and there is no reason why our band could not be extended for domestic work.

International band allocation, notwithstanding, our own Government, could quite easily widen our band or give us an additional one between 50 and 75 without causing the slightest inconvenience to any other country.

J. Lynch, ZLIBL.

Dear Oms,—Re N.Z.A.R.T. Guard Schedules, I have a weekly "sked" with VK2HM at 10.30 p.m. each Sunday evening and am open to arrange one with any ZL for 10.30 p.m. each week night, also Sunday mornings at 11.30 a.m. on 40 metres.

ZLIBN.

Dear Sirs,—May I offer a few suggestions about operating—particularly to the beginners?

What are fingers for? The budding mathematician of PI will immediately answer "To count on, of course!" Well, without insulting a ham's intelligence, I

AMATEUR TRANSMITTERS

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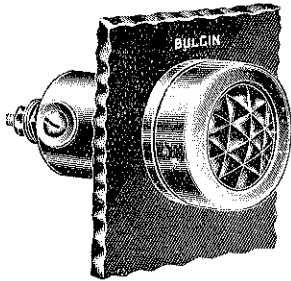
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would like to suggest as a very convenient procedure for calling that "CQ" be sent not more than five times, and the call sign twice.

When you do "click," why everlastingly repeat those phrases of the type "ge om sure vy pseed to meet u om over air for first time om unni tks fer call om—etc.," ad nauseam? I think the two letters "ge" cover all that, so why repeat it? No one is listening anyway—the other chap is probably writing up his log.

Then get on with the report—not a stereotyped "QSA 5 R8 dc." but a candid and helpful one. "QSA5" is not the only report which can be given; "QSA3" is quite readable and nothing to be ashamed of. If someone asks you to QRS or QSZ, do so, but as long as he reports you "QSA3" or above, and says "R" each time, you can take it for granted that everything is all right.

When signing off, perhaps "QRU73 gn" may seem too abrupt and commercial, but it is nevertheless a very handy procedure when one has to leave in a hurry. I have worked some hams who have spent half an hour or more just saying how pleased they were to QSO, and hoping to QSO again soon (only more wordy than that).

Another tip: If you copy on paper, an old exercise book is very neat and con-

venient, though many Hams still seem to adopt the system of writing up the log about a month later from sheets of loose paper straying around, on, or in the transmitter. (No wonder the postman forgets to deliver so many cards!)

Best wishes for many happy hours to all new Hams.

ZL3BH.

Dear Oms,—There are one or two things I want to get off my chest. First is the present condition of the 80m. band. There are dozens of new Hams on, and it is pleasant to chew the rag with them. But having had several QSO's spoilt by certain phone stations, I want to suggest that we follow A.R.R.L. practice and confine phone operation to one-half of the band. Then the QRP man on code will have a chance. Also, the 80 band is coming back into its own for DX, and I think the QRP man has a right to a part of the band being kept clear of the fierce local QRM we hear now. Some of the fellows using fone must be indifferent operators, or else have the cheek of Old Nick. Some of the carriers they try to modulate with pinched mikes would disgrace a CW station. I won't suggest C.C. and buffer stages, but I do think nobody should use fone until he gets reports of "steady pdc" on his CW sigs.

My second point is not a howl, but a suggestion. In 1932 another International Conference is being held in Madrid. We all know what the commercials did to our bands in 1927. And they will be after our bands again this time. As the ranks of amateur radio are increasing by hundreds every year, we can't afford to lose any more territory. In fact, we could do with some more. Now, what are we going to do about it. The amateur radio bodies in other countries are already organising, and some are collecting a "war chest" to pay delegates' expenses. We must do more than sit back and hope that our Government will continue favourable to us. We must get public opinion behind us, and join our voices with those of other countries to raise a howl that will make the greedy commercial companies weak in the knees and soft in the heart. Let's hear from the rest of you gang. Go to it.

C. W. Parton, ZL3CP.

(We invite some opinions on the latter part of this letter—it is indeed an important matter.—Eds.)

(The Editors.)

Dear OM's,—It will probably be of interest to you to know that Mr. Clin-

ton de Soto, of the staff of QST, is compiling a history of amateur radio.

I would like to suggest that the NZ ART should appoint an old Ham to furnish details of the growth of radio in N.Z., and also the development of the NZART for inclusion in Mr. De Soto's work.

R. J. TAYLOR, ZL1BA.

[We think ZL2AB, our vice-president, is the man for the job.—Eds.]

BEGINNERS' PAGE.

"The Listener of To-day is the Ham of To-morrow."

Having covered in last month's issue the general requirements of the "Ham" ticket, we propose to now give our prospective Hams a few practical hints as to the way they should work up the requisite practical and theoretical knowledge.

First and foremost, make "Handy's Handbook" your constant guide and companion. This book, which contains all that is best in QST, is truly the amateur's Bible on matters radio. The book can be obtained post free from our H.Q. bookseller, Te Aro Book Depot, Wellington, for 5/6. Those

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QRP CONTEST---May 23rd to 31st

This contest will be held from 12 noon on 23rd May until 12 midnight on 31st May. The maximum plate voltage will be 45 volts. Code words must be transmitted and received and these will be obtainable from H.Q. **Stamped addressed envelopes must be supplied.** The sealed envelope containing the actual code words should not be opened till the contest commences. The TROPHY is a really handsome N.Z.A.R.T. Competition Shield to be held for one year. Entrance is free and only financial members may compete. We want a really good response to this contest, as QRP efficiency will prove our worth in an emergency. The rules are appended, but any amendments or further information will be broadcast from ZL2AX at 5 p.m. on the Sunday evening preceding the test. GO TO IT—you have three weeks to prepare.

RULES.

- (i) Four code words will be supplied. When working the First District give the words in the order supplied. When working the Second District give the second word first (i.e., 2, 3, 4, 1). When working the Third District give the third word first (i.e., 3, 4, 1, 2). For the Fourth District give the words in 4, 1, 2, 3 order. All four code words must be successfully sent and received.
- (ii) The plate supply must not exceed 45 volts from battery supply at any time during the progress of the contest.
- (iii) Only one tube is permitted to feed the antenna. This disallows tubes in parallel or push-pull, but permits MOPA, as only one tube is feeding the antenna.
- (iv) The contest is confined to the 80-metre band.
- (v) Log sheets must be forwarded immediately after 31st May to Headquarters. Sheets received after 12 noon on 8th June will not be permitted to count.
- (vi) Contacts with the same station will count as one QSO only.
- (vii) Points will be allotted on a mileage basis, but any station less than 50 miles distant will nevertheless count as 50 miles.
- (viii) Headquarters Committee to judge the contest.

who know nothing of the elements of current electricity must obtain the rudiments from a high school textbook, such as Gregory and Hadley's "Electricity and Magnetism." "Handy's Handbook" is too compressed for immediate assimilation.

You must work up your Morse and for a simple practice outfit refer to page 15 of the 1930 Handbook.

For those who have a working knowledge of electricity, the fundamentals commencing on page 26 of the Handbook will serve to brush up your DC theory. This part of the book should be systematically studied—not skimmed and forgotten. The text requires little amplification until the electron theory of current is mentioned on page 27. Do not worry about the direction of the electron flow at present—it will only confuse. You may also leave the question of resistances in series and parallel until you understand Ohm's law. To learn about cells, take an old torch battery or a No. 6 dry cell to pieces. In general there will be a carbon rod surrounded by a black mixture containing among other things manganese di-oxide (the depolariser). This mass is surrounded by cloth or cardboard which has been soaked with sal-ammoniac. This sal-ammoniac (the active agent) acts chemically upon the zinc case. This is merely an adaptation of

the Leclanche cell, the carbon is positive and the zinc negative.

Now for Ohm's Law.— I (current)= $\frac{E}{R}$ (Voltage)

R (Resistance).

You must be able to juggle this round so that you can calculate any factor if you know the other two. Practise doing this. Do not take too much notice of the mechanical analogies, as the analogy can never be pushed too far and is often confusing.

Voltage drops must be thoroughly mastered. It is merely one view of Ohm's Law and is continually used in practice.

There is no necessity at present to worry over the heating effect or its formula, but you must remember that watts (power) is volts multiplied by amps and that alone. If you have a 25,000 ohm resistor and you put it across a 250-volt B eliminator the current passed will be

$$I = \frac{E}{R} = \frac{250}{25,000} = \frac{1}{100} \text{ amps}$$

$$= 10 \text{ milliamps.}$$

Therefore, the watts consumed equals volts by **amps** equals 250 multiplied by 1

$$= 2.5 \text{ watts.}$$

Therefore your resistor must dissipate $2\frac{1}{2}$ watts. If you feed 500 volts at 50

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 - “How to Understand Wireless Diagrams”
 - “Wireless Valves”
 - “Wireless Communication Broadcasting”
 - “Seeing by Wireless” (Television).
-
- “Practical Radio Repairing Hints,” by Rider, 13/- (Don't miss it.)
 - “Principles of Radio,” by Henney, 23/-
 - “Modern Sets, 1931,” consisting of 2, 3, 4-Valve Battery and A.C. Sets, L-W Ampir. and special S.W. set, designed N.Z. conditions, by A. K. Box. 1/8
 - “Radio Sir,” 72 pages—Don't miss this. 8d. posted. Great value.
 - “Practical Radio Construction and Repairing,” by Moyer and Wostrel, 15/6
 - “Radio Times” (English weekly), 4d. per copy.
 - “Radio Retailing” (U.S.A.) monthly, 1/9 per copy.
 - “Radio Manual,” by Sterling and Kruse. 26/-
 - “All About the All-Electric.” 1/9
 - “Practical Testing Systems,” by Rider. 6/3
 - “Radio Physics Course,” by Ghirardi. 14/-
 - “Radio Operating Questions and Answers,” by Nilson and Hornung. 14/-
 - “Radio Amateur Handbook” (Handy's) latest edition. 5/3
 - “Radio Amateur Call Book,” latest quarterly, 5/3 (March 1931).
 - “Radio Log and Lore” (U.S.A.), 2/-
-
- “Theory of Radio Communication,” by Filgate. 12/-
 - “Principles of Radio Communication,” by Morecroft, 41/6
 - “Elements of Radio Communication,” by Morecroft. 19/-
 - “Direction Finding,” by Keen. 27/-
 - “Technical Telegraphy: Answers and Solutions,” by Roberts and Burrow. 2/3
 - “Thermionic Vacuum Tubes,” by Van der Bijl. 26/-
 - “Radio Receiving Tubes,” by Moyer and Wostrel. 14/-
 - “How Radio Receivers Work,” by Roberts. 8/-
 - “Radio Design.” 1/- per copy.
 - “Radio Engineering” (a monthly issue). 21/- per annum.
 - “Projection Engineering” (monthly). 21/- per annum.
 - “Radio Citizen's Call Book,” latest quarterly, March, 1931. 2/9.
 - “N.Z. Radio Guide and Call Book, 1931.” 2/10
 - “1931 N.Z. Radio Handbook.” 2/10 posted.
 - 6-Valve Neutrodyne Blue Prints and instructions with one transformer and 2 resistance coupled audio stages. 1/8
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milliamps to a transmitting valve, the watts input will be 500 by

50

1000 = 25 watts.

The second column, page 29, from “Part C” to “basic discussion here,” is too deep to worry over. The finer points of electromagnetism are really unnecessary here, but the underlying principles are vital and must be mastered. Learn and understand the terms “magnetic flux,” “magnetic field,” and “permeability.” Keep your eye on the diagram showing direction of magnetic field on page 31. Before starting on AC, have a go at the following questions and work out similar ones for practice. Do not spare any effort in mastering these fundamental principles.

Questions.—A: If the voltage in a circuit is 15 and the current 2 amps, what is the resistance? If $I = 5$ and $R = 50$, what is E ? If $R = 999$ and E is 111, what is I ? If a valve takes 5 mil-

liamps at 150 volts, what is the DC resistance of the plate circuit? (Remember that this is **not** the **impedance**.)

B: If a valve takes 2 millamps and there is a 100,000 ohm resistor in the plate circuit, what voltage drop is there across the resistor? If the valve requires 100 volts on the plate to pass 2 milliamps, what is the total voltage required at the input end of the resistor to give this voltage on the plate of the valve?

Advanced Questions: Describe three well-known systems of modulation. Draw a complete diagram of the “constant current” system of modulation, showing the transmitter from mains to antenna. Draw a diagram of a combined wave-meter-monitor and explain how you would use it in your station.

(N.B.: These questions should be answered on paper under strict examination conditions and check your answers back against the Handbook.)

HAM ADS.**FOR SALE.**

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FOR SALE—FOR EXCHANGE.

Under the above Headings, Hams may now advertise any junk they wish to dispose of. Charges will be 3d per line of approximately six words. Remittances must accompany the ads. in all cases. Replies to ad. should be sent direct to the person advertising. It is hoped that Hams will make good use of this column and that it will be a permanent feature in "Break-In."

AUCKLAND NOTES.

Several field days have been held by Auckland Hams recently, and on March 29th quite an enjoyable time was had by those who participated. Three separate gangs took part: ZLIAN, ZLICE and ZL1BP strung up their antenna on the beach at Cockle Bay and, from what they tell us, this spot is just the thing for a field day. ZL1BC had with him two listeners at his bach on Waiheke at Rocky Bay; the other party comprised ZL1BE, 1BL, 1CS and Mr. Miller, who were at the mouth of one of the caves near the Three Kings. This latter party were using the Amateur Signal Corps outfit with the call FP5. Xmitter uses 90 volts on 2 PM4's, and notwithstanding the fact that their antenna was only 15 feet high the signals were vy fb. It is interesting to note the complete receiver and xmitter are housed in a cabinet measuring 12 inches x 5 inches x 6 inches.

On the following Sunday, 1AN, 1BP and 1CE again took an outfit to Cockle Bay, and were successful in working several of the Auckland Hams.

The Leys Institute station, ZLIAD, is on the air quite often now, and they have a very enthusiastic gang under the control of ZLIAC. At a recent meeting ZLIAC gave a very informative lecture on crystals and crystal control.

Rumour has it that ZL1AX intends starting up again with a couple of 852's. He has been off the air for over

two years and will probably be glad to renew old acquaintances.

1BC has been working fone with the Western Electric station ZL2XX, and has been quite useful to the latter in the way of listening to their test xmissions. 1BL has been heard on the air with the Signal Corps station FP5 and his fone and cw are both fb locally. 1BN is giving his fone a rest and is after the DX on 7,000 k.c. He says 14mc. is N.G. at present—why not come and live in Auckland om? He puts 40 watts into a 210 tube in a Hartley circuit. 1BP is still parked on 14 m.c. and reports DX vy fb there. 1BS, who used to have the call 1AS in the early days of Ham radio, has returned to the fold and has a good phone outfit on 80. He and ZL1BC have been working phone on 80 during the mornings—until 1BS blew his thermo-ammeter, hi!

1CE is more than satisfied with 14 mc after working 25 Yanks in a week. 1CH has now got his 7 and 14 mc. permits and it will not be long before he is working on these bands. 1CR is still pounding away on 80 and getting his share of QSO's. 1FN got a report from F8PZ, who hrd his 3.5 mc. sigs. Mac was only using 16 watts at the time. 1CS is a new Ham and his QRP fone loud and clear around Auckland. He is using a loud-speaker for a "mike," hi. Best of luck, om. Glad to see ZL1FW's letter in last "Break-In." When are you coming back on the air, Eric?

—From Mark Churton.

In the Bay of Plenty, by ZL1CP.

Considerable interest is being taken in Ham radio in Tauranga. We hope to have three or four new Hams hr in near future. 1AF hrd occasionally. 1AI on fone fb, wkd VK too hi! 1AQ off the air. 1AV not heard on 80 fer few weeks, gess he is among DX on 40m. 1BL still ragchewing on fone vy fb hr at times. 1BN rebuilding his fone, so at present onli on c.w. 1BO not hrd nw. Hw, om? 1CA also ragchewing on fone. 1CB not hrd so often of late. 1CC, have heard him onli once lately; think he is among 40m. QRM. Hi! 1CE, where, om? 1CF has a gud note. 1CG off the air for a time; too many yl's, hi! es 10 per cent. cut. hi! 1CH has 1914 QRI; wat's happened, om? 1CI hrd more often than not on fone clear, but not so strong as a few months ago, hw? 1CN fone, wid grid mod., vy fb; hrd wkg fone Bk in one nite. 1CO, think the RI got him. 1CP still QRP wid 201A es tring heising mod. wid 3½ watts in-put; works OK, too. 1CR lands a

strong sig hr, real 1931 sig, fb, Wal. 1FA in parallel wid 1AQ. 1FG just recovering fm stroke occasioned by 1FV's note in last Bk-In, hi! still going. 1FK on 80m. wid cw es fone. 1FL not hrd for a month or two. 1FR used to be hrd often on fone, nw not at all; hw cum? 1FX did good wrd during the earthquake. Well, chaps, QRU, so cheerio.

WAIKATO NOTES FROM ZL1BL.

1CA, Huntly, now has Heising modulation and puts out some fb fone on 80. He is keeping a regular sked with OH5NG, and will take any traffic for Finland. 1CI, Paeroa, is having trouble in getting his fone clear, but is still experimenting. 1BW, Hamilton, is off the air at present. He is building an M.O.P.A. outfit and we expect to hear some T9 sigs from that direction shortly. 1BL has shifted his QRA and at present is operating with an ant only 10 feet high. Seems to get out as usual, though.

Now that the 80-metre band has become so popular it is up to our QRO stations to look to their tuning. The broadness of the waves of some of the more powerful fone stations and also some of the CW stations does not speak so well for their owners, who, in practi-

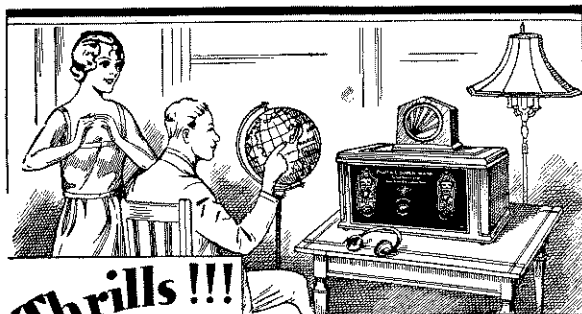
cally every case, are experienced men. This phase of the system is one to which we usually give least attention, concentrating on more important problems, but now that QRM is becoming serious what about it. Oms?

FROM ZL1BN.

1BG, Rotorua, works Yanks most evenins and demonstrates X-ray to visiting Hams. 1BB, 2FE and 1BN spent a fb afternoon with him recently. 2FE left his loaded camera near the operating table during a demonstration. How's the fogging, om? 1BQ continues to put over excellent fone. 1AJ has a splendid sig and loop fone. 1CI is experimenting with rectifiers. Has the borax crept yet, om, hi? 1FT puts a fb sig through here. 1CA heard DXing on forty. 1FR heard well, but seldom these days. 1CL, Rotorua (ex 2DR) intended having a forty-watt outfit on the air by Easter, but has been delayed owing to the 10 per cent. salary cut hi. (No donation too small to accept.) He worked in parallel with 1BN and put in some fb work handling traffic during the earthquake. 1FV works DX on twenty. Local conditions consistently good on forty.

The guard system is working fb so far as this district is concerned. Skeds

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being kept on the tick.

The weekly N.Z.A.R.T. broadcasts from 2AX have created quite a healthy interest around here and it is probable that a few more members will result.

SECOND DISTRICT NOTES.

2AB: Since acquiring his baby car, Dan seems to be neglecting radio. We only hear him about six nights a week now. How's the golf, ob? 2AH: Vern is getting married about the end of June. Hopes to be back on the air again some day. 2AJ: Val was helping the Army the other week-end—contact station on the Janie Seddon, which was towing practice targets. 2AM: Dr. Buist is rebuilding and hopes to renew acquaintances over the air very soon. 2AW continues to act as locum tenens to 2YA—fb fone, om. 2AX broadcasts official N.Z.A.R.T. news every Sunday afternoon—vy fb, om. 2AY: We haven't heard much of Ferdie lately. 2BC working too hard to be on the air much. 2BE: Excelsior is his motto—QRO his slogan. 2BG still pegging away on 20 as far as we know.

2BI getting very keen on duplex telephony. Held a continuous two-way fone QSO with VK3ZX for 4½ hours one Sunday morning. 2BM, an old P. and T. op., and a keen supporter of N.Z.A.R.T. works fb DX on QRP. 2BX has still a 20-metre sked with G. 2BY: Chas is raking in the shekels for N.Z.A.R.T. in Wanganui and holding down his guard skeds as well. 2BZ is now in Palmerston North. Those Continental and South American Hams wonder where you have got to, om.

2CA is at present taking 2GK's guard sked on Mondays. Handles his traffic as well as the assistant communications supervisor could hi! 2CC seems to be fairly active just at present. 2CD says he has an antenna that is 80 feet high at one end. 2CE helping the guard scheme along. He and 2CJ took Wellington traffic from the Dunedin Exhibition. 2CH is at present swotting for a commercial ticket. 2CI has shifted QRA to Belmont—full QRA next issue. 2CJ still entertains BCL's and others with fb fone. 2CO has succeeded in scaring all the BCL's off 40—he keeps his sked with 2GQ before breakfast each morning now, so that he will not be interfered with. 2CP is still putting out a nice steady pdc sig on 80. 2CQ has at last been heard on the air—congrats., ob. 2CR now has 2GY with him—don't you believe half of what 2GY tells you about loop on a 50-

watter, om. 2CS has just shifted QRA—unknown so far. 2CT still QRP, but has worked VK on fone—fb. 2CU, our local secretary, heard occasionally. 2CV is second op. on the "Maori," and an fb one, too. H.Q. very pleased that he is learning typing. 2CX now in Blenheim and keen to get going. 2CY swotting for commercial ticket.

2DC is now 3BS. 2DG has a fine sig now—if it were much finer we would have a job hearing it. (Hope he doesn't spot this before printing, hi!) He is CC now on 3,570 k.c.—fb. 2DK: Still threatening to build, om? 2DL back again, but still QRP. 2DQ now at Mount Cook and has his old call of 3CI back again.

2FF, 2FC, 2BE work fone together and sound very fb in Wellington.

2FM can handle traffic like a real old-timer and is teaching the OW the intricacies of Morse. 2FR: H.Q. is cyclostyling a form that will answer the hundreds of enquiries asking for the address of the "YL op."

2GG QRP CC on 3,585 k.c. 2GH: Norm does a little fone at times, but very QRL printing for Hams. 2GJ swotting at the "Varsity and not heard lately. 2GK had the misfortune to have one of his 50-watters go soft and this put him out of the guard scheme, etc., for a while. However, he is back again now with MOPA—"Omnia vincit—," hi! 2GM is fb these days—good operating, good fist and rotten fone (thanks!). 2GO has been heard back on 40. 2GP had a portable push-pull job working off batteries during his three weeks in the wilds of Oterangu Bay—a bit QRP after ZLF. "Sic transit gloria mundi," hi. 2GT seems to have found a prehistoric note somewhere—give it away, om. 2GY, now in Hastings—now then, om, no loop! 2XK active with a very efficient little QRP job.—By ZL2BC.

TARANAKI NOTES (By ZL2DN).

ZL2DD has been QRL work and not able to be on the air much. He has shifted his QRA to Record Street, New Plymouth. 2CB has been busy rebuilding his power supply. Still gets out with very nice fone. IAL, Stratford, is off the air temporarily, but says he can't resist the key! 2FH is QRL swat for medicine at Wellington, but hopes to get on air whenever home on holidays. 2BZ has left our cow country for Palmerston North. Sorry to lose you, om. 2AM, Doc., of Hawera, is threatening to build a 'mitter and stage a come-back after a considerable period

of silence. 2DN still going. Received a report of R9 from France and now the hat won't fit! Worked Y16HT, too! UO1FH and UO2OP asked me to tell ZL's that they are keen to QSO, especially on 28 mc. They say best time is 0500 to 0600 GMT. Quite a few new Hams are expected to sit for their tickets soon up this way.

GISBORNE NOTES.

ZL2AC gave 80m. a little flutter on low power—this time fb, om. He is also aerodrome station and has been keeping three skeds daily. He had some fun in international contest, hi. ZL2GD has installed crystal control, and says results are certainly fb. His 852 also makes a big hole in the band, hi, hi. ZL2GQ keeps the boys at 50 per m. Has his second-class commercial ticket and can take any speed from bugs or side-swipers, hi. His "celebrated" loop modulation is also very fb. He uses two 210's in PP Hartley, with 500v. on the plates on 14 and 7 mc., and a single 210 3.5 mc., so you see what's making the wheels go round, hi. ZL2DM is experimenting with a new xmitter and aerial—single-control, as described in "QST" some time back, with TPTG arrangement, using one 210 as oscillator and two 250's as modulators. Results so far are encouraging. His part in the celebrated "Board of Directors" is also very fb work. ZL2DW is doing good work with his TB 04/10, with 18 watts input. Skeds with ZL1CI are also good work—he suggested that he is going to write a book on QRM in general—I wonder? hi! ZL2DX—his new QRA now 347 Childers Road—says that having a power-house right at your back door is not to be laughed at, hi! He uses HC Hartley with one 210 at 52 watts input. Slow Morse will be given as from the 1st of May. ZL2FA has a very fine station, using WE 205's, with TPTG and half-wave rectification. He gets a CC note—can u beat that? hi! ZL2FB is on low power for the present, but intends using a 250-watter, with 2,000v. tickling the plate and a 160-meter crystal. I think somebody suggested that we find a new band to work in, hi! ZL2FD has been fluttering on, but seems to have trouble in adjustment. Will make quite a noise when he gets going, hi. ZL2FE, one of the most consistent amateurs, does fb work on about five watts. LC Hartley is his speciality and is working VK's and a W6. ZL2FF has super QRO station and uses two 210 in PP TPTG, with two 4k.w. tubes as modulators. He uses the condenser mike from

the BC station 2ZJ. Sure has plenty of punch and quality. A question arose on how to control some of the QRM through having so many stations so close together and, as a solution to the matter, the following wave-lengths were allotted to the respective stations, with the right to shift half a metre up or down:—ZL2FF, 75 metres, marker station; ZL2GQ, 78 metres; ZL2FD, 78 metres; ZL2DW, 80 metres; ZL2FE, 81 metres; ZL2FA, 82 metres; ZL2FB, 83.19 metres (using C.C.); ZL2DX, 84 metres; ZL2GD, 85.22 metres (using C.C.); ZL2DM, 85.6 metres, marker station.—**By ZL2DX, Via 2QG and 2CO.**

(Note.—This is a really fine scheme and should be copied in other centres.—Eds.)

ZL2GN is still on low power, but raked in the W's es VE's during the recent contest and put up an excellent total for the few days he was able to be on the air—fb, Ernie.

ZL2GW also got some fun out of the contest, but, sa, can't sumthing be done about those fourth district sigs. Their notes are terrible in most cases, hi.—**From ZL2GW.**

Marlborough and Nelson now boast three Hams again on the active list, with more going up for their tickets soon. ZL2CQ is an ex-Navy op., and wd take ani speed hi! ZL2FI has been on fer abt a month and has already come to light with some fb fone. ZL2CC is using home-made pwr from Western Electric lighting plant and dynamotor. Pwr supplied is from 75 to 80 watts to CX 350. He says that anyone thinking of coming down the Sounds fer holiday should first consult him, hi!—**From ZLCC, Via 2GJ.**

THIRD DISTRICT NOTES— ZL3CP & ZL3CK.

The first Christchurch y1 ham, 3BT, is now on the air with a 245 in the Elsie Hartley circuit. The present rig and aerial are temporary until a new shack is built. 3CP had the first QSO at 7.30 a.m. Hi! 3AB is in a new QRA and is off the air for some time. 3AC will soon be on again on the 80m. band. 3AE is doing good work on 80m., with a HQ. sked. 3AF is back with a good sig once more. 3AM, who had given his key away, had to get it back. Hi! Hi! 3AR is now thinking of abandoning his mighty array of slop jars for a pair of 866's.

3AT has renewed his licence. Get her perking, Laurie! 3BB is moving to a Greymouth QRA. Good luck,

Wal! 3BC is certainly a champion QRP DX artist. 3BF has changed his QRA, and will be on the air once more soon. He has a lovely big tree in the yard. 3BG has blossomed out as an AMIRE. Congrats., Les. 3BJ is rebuilding to get a bit more power. 3BM and 3BO have the fone craze at present.

3BR's note needs passing through a sugar solution. What about it, Vic? 3CA puts out some quite good fone. 3CC is overloading his poor 210 on 40m. to work DX, and puts out a loud overtone on 80m. So don't answer his CQ's on 80m. Hi! 3CK is talking of building a receiver. The plumber's tap always leaks! Hi! Hi! 3CM will soon be carpeting his floor with cards. Or, get a bigger room, Bill. We were honoured during Easter festivities by a visit from 2BC and 2DG. Unfortunately, the latter had prior claims on his time (hi!) and was not able to attend the various doings. However, 2BC made up for him. 3CN has given up 40m. DX as a bad job, and says he will stick to 80m. Borrow one of 2BE's 250w. bottles, Ian. 3CP says the world must be becoming topsy-turvy, because he can actually work DX on 40m. R9 in Calif. and R6 in France! The old TB04/10 is not so bad after all! 3CT and 3CN had a 48-hour shift looking for DX, but only raised five countries, so 3CP is a bob up. Hi! 3CY is using a one-gnat power set at present. 3CZ has added a few VK's to his list.

Precis of Minutes of Meeting Held, 29/3/31.

Twenty-six present. 3CM congratulated Miss Esme Herrick on getting her ticket, and welcomed Mr. A. Mitchell, 2DC, to Christchurch. It was decided to hold a field day on Mr. Shipleys farm at Easter, followed by a social evening in the 'R.S.C. rooms.

Precis of Minutes of Meeting Held 12/4/31.

Sixteen present. A msg from K6DV re the Wilkins Polar Submarine Expedition was received. 3AE, 3CK and 3CP were appointed to handle the Dunedin Radio Exhibition t/c on April 22, 23, 24th. 3CY moved that all Hams on 80m. pick one spot on the band and keep to it, to avoid QRM.

Lovers are hand in hand.
This is the happy band.
Here comes the sun.

—(Song of the DXer).

Well, boys, here we are again. Many apologies for missing the page last

month, but you will all agree that these notes are worth any wait. (Hi, Hi, and apologies again to a certain Christchurch Ham.)

First and foremost, of course, is the advent into Hamdom of our very popular YL. Space does not permit of my recording all the feverish activities which accompanied the successful debut of our one and only. Those of you who miss the ZL3's on 40 should come up to 80, then you will find the true reason for the sudden national interest in this band. There are, alas, some who would have it that this amateur business is still solely a masculine preserve, and it is gratifying to see that insofar as Christchurch is concerned it has been a case of those who came to scoff remaining to pray.

Next comes the field day and Hamfest. Some time back the local branch decided to hold a field day and Hamfest during Easter. It was hoped that several of the lads from afar would be able to be present, as well as a goodly number of the locals. Easter Saturday was the day fixed for the great event and on Good Friday 3CM, 3AM and 3CK went forth into the wilds of the Waimak, and proceeded to erect HQ. When the main body (bodies?) arrived next day they found that our three hearties had provided the following:—

One antenna system complete with lead-in.

One six-thousand volt AC supply, with transformer attached.

One large woolshed with outbuildings, etc.

One river (in flood).

One pump (for use of those members who made sarcastic remarks at the last meeting re milk for the day).

One cricket field, and sundries too numerous to mention.

The question of man's descent from certain animals to whom small boys delight in giving peanuts is often hotly debated; it is a pity that some of these sceptics did not have the opportunity of seeing 3AM when he put up the antenna system. Sa, Dave, you should have been a sailor. During the afternoon, rain came on and the erection of a Beverage antenna was not possible, although this was the intention had the weather kept fine. The day of the event dawned fine and the various members of the expedition proceeded to the scene of action in a variety of ways. 3CN went per motor-cycle, but came to grief at the water splash. 3BH put his trust in his velocipede, but was fully extended when 3CK forgot that he

was following close up to the rear of his chariot so as not to miss the way. 3BG decided on a short cut, but the distance he got was much shorter than he expected, so after taking a snap of his car in the middle of the water a successful attempt was made to tow it to dry land. At last the goal was reached and a few words of welcome were given by 3AM over a specially-installed public address system. Suitable musical items were then broadcast for the entertainment of those present, who included 3BT, 3AD, 3CK, 3CY, 3CT, 3CN, 3CC, 2BC, 3CP, 3CA, 3BJ, 3BG, 3BH, 3BS, 3CM, 3AB, 3BB, 3CZ, 3BM, and Messrs. McLennan, Dunn and Marks.

The HQ station was soon put on the air and several local contacts were made per key and voice. Instructions were given to two Hams regarding the best way of getting to the event and, strange as it may seem, the two finally arrived. When the roll was called it was found that 25 were present, a very satisfactory number. The guest of honour was ZL2BC, whom everyone was extremely pleased to see. A small portable transmitter was taken out into the wilderness and gave fb results, a small portable receiver was also in use so that contact was made with HQ at will.

A cricket match was played between two teams consisting entirely of ART members, so the often-made charge about Hams not taking part in any sport should not be taken seriously in the third district. After a very pleasant day all the lads and lassies packed up and adjourned to the Hamfest. When the inner man had been satisfactorily quietened we had the pleasure of hearing 2BC tell us what fine fellows we were, etc. Of course, we all knew that, but it is not the sort of thing that we easily tire of. The rest of the evening was spent at the R.S.C. rooms, where the various prizes donated by members of the radio trade were competed for. The winners of the various prizes will probably be mentioned elsewhere in these notes, but should they be omitted I will get them in the next month. Notes regarding the activities of individuals on this band will also have to be left over till then (3CK)

WEST COAST NOTES, FROM ZL3AX, VIA 2FM.

ZL3AA is studying superhetrodyne receivers, trying to QSO England, on fone. ZL3AG quite delighted with her

first DX cards and fotos still coming to hand. ZL3BB, now with us, he expects to get on air soon with QRP. Welcome to the sunny West Coast om, ZL3CW has shifted his QRA to new abode, met a lot of trouble. ZL3AE over here for Easter, staying with ZL3CW. ZL3BQ has his mitter on forty, and can be heard calling CQ at 2 a.m., has not papered his shack yet, has got very cold tho' hi. ZL3AX has been very busy with portables and pupils, has another ready for his ticket. 3AX is well prepared for emergencies. Besides his main transmitter, he has an emergency outfit supplied from a dynamotor driven from a 24-volt storage battery, and giving 300 volts. That lot will keep him on the air for 40 hours. After that he switches over to a 300-volt bank of accumulators, which will keep him going for another 50 hours. Let's hope his accumulators aren't flat when they are needed, hi. ZL3AA was down from his gold mine for a visit to the coast at Easter.

FOURTH DISTRICT ACTIVE.

A visit was recently made to the shack of ZL4AO. A brief description may not be amiss. The tranny is 1,500v. aside and supplies approx. 500 watts. Rectifiers are UX 866's, mercury vapours, transmitter a push-pull T.P.T.G., using two UX 852's in a H.C. tank. A novel feature this, is the anti-capacity phone switch for continuous monitoring. The antenna at the time of visit was a full wave 40-metre Zepp, but varies with requirements. Receiver is a modified Schnell to a doublet receiving antenna.

During the American tests 4AO was successful in working the handsome total of 133 Yanks and two Canadians. The 40 band accounting for 131 QSO's, as compared with two on 20 metres. A QRP 80-metre Xmitter is also used as a standby and is capable of putting on a very fb sig. A notable feature of the station is a left-handed bug, and a left-handed operator.

4AP has proved himself at last. He recently turned in his morning swim to White Island in favour of early morning DX, the result being fully recompensive, a Jap falling for the new bait and this gives us another WAC man in our district.

4BM down at Pussie Point, one of the most southerly SW stations, uses a lighthouse as his pole and to it he hitches a Zepp 40 half-wave on 40 and a counterpoise on 80, with the dead-end

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feeder thrown off. Xmitter is a split Colpitts, using cotton-covered plug-in coils; battery power is 0-240 volts drcs to a Philips 509X. Receiver is standard Schnell. The outfit, size 10 x 12, puts over a R7-8 sig on 80 and gets great DX on 40.

We were all pleased to see Jim 4BA at our last meeting, the fact that he brought us a spare filament tranny made him doubly welcome hi. 4BG is very QSA locally, but very rac. Yes, very. 4BI is getting things going vj fb after several residential changes, and he should soon be back with the gang.

When we visited 4BO we were aghast to see the notice "For Sale" posted on the door of this well-known shack. Being mindful of a recent QSL from J3CL. "To my lovely 4BO PS. I am Japanese girl 19 year old!" we at once conjectured that Mac was collecting the brass for a trip to Japan, but the secret soon came out. Our vice-president is installing a "Supertronic" (super-sonic) super het. ten in an endeavour to click with his sixth continent. An 852.1.500v. aside tranny, numerous power and filtering packs, Xtl holder, etc., are available for disposal, so hop in quickly gang.

It is also rumoured that two other high-power xmtrs are on sale in this

district. It is alleged that 4BK may dispose of his outfit and join the benedicts, and that 4XC is scrapping everything in favour of a 500-cycle generator. Hi. What's the matter with high-power? VK2HB used to trouble CQ and the broadcast band with key thumps until he devised the following key thump filter. When keying in the negative he has a 10-henry choke in series with key, which is shunted by a one-mike condenser and a variable carbon resistance in series. We respectfully suggest that 4CB, 4CD, 4AP and 4BT should try a similar experiment for the benefit of their brother Hams.

4BN, QRA required, please. 4BS, though confined to bed with a broken leg, is getting a great kick out of radio. He has a T.G.T.P. QRP outfit, with 60v. on a 415 Philips receiving tube. Have heard him at all hours of the day and getting very fb results from outside. Hope to see you on feet again soon, om. Your operating has improved greatly since your leg has been bad. Hi.

At the time of writing, 4BT is having great fun with some sort of automatic bug, known as a waddler. 4BU is operator and technician at a new B class station. This is another case of an operator's amateur certificate being worth much more than the 5/- paid for it. We wish you success, om, but whatto if there's any harmonics within Ham hands! 4BV has had some intimidation from his B.C.L. neighbour, who, whenever he see's Mac's studio light on, phones to say "Key clicks, etc." 4BZ has dispersed his first hundred QSL cards, so is getting out fb. Of course, he has not received the full hundred acks yet, but, like the rest of us, he keeps hoping that every QSO with a fresh station will be acknowledged.

4CB puts on a midday slow Morse sked for a neighbouring learner. Have any other Hams heard it? Is making a very good secretary, and is a noted midget constructor. 4CC is working on his donation to club and we will have a tradesmanlike breadboard for Xmtr. 4CD reckons 80 is the DX band. His antenna is somewhat screened, but puts an R7 sig into Aussie pretty consistently and has raised an odd Yank. 4BQ from his Highgate Studio still gets time for an odd QSO.

4CA is appointed fourth district group control station. Any station desiring a shot at guard or traffic duties need only whisper his desires and a night or so will be arranged.—ZL4CA.