























RG，GE WHETROR
Fernas dust acoatroi a orpy of＂Ham Ration＂，the Ipsuich RSGB
 tained theron regending tne FBGj qxitbition，Fo quote：－－＂Luch into
 could bo ertenced Ewothor year，so that we colild have more stands devoted to the hemdiwork of members，thereby making it even more ＂The Padio Arrteums Binibition＇？＂．

Ia，I socond tiat sugcestion strongly lyost amatour interest

 standing the jnturag antenest in trade stands，an axtended shor of amatous cobstruotiown vorerould prove to be the masterpiace of any future arn oiviou．

2－0vicua notos in this scries have mentioned vamious factors

 eronon tina achathes come in for nowe commont than ampother＂Qrp＂ forture，whon fies to prove the amount of interest mhich is at lewt betne Invinhed an cowial syatoms，And sightiy so，But to really

 jummed whth on the went．


115,
The electrical energy dissipated by a transmitter trarels at $a$ SPEED of $300,000,000$ meters per second (naar onough). It is, of course, alternating in nature and, if me know either of the values of frequency (f) or wavolangth ( $\mathrm{D}_{\mathrm{I}}$ ), wo can easily convert these values as necessary by the formula:

$$
\lambda=\frac{300.000,000}{f} \quad f=\frac{300,000,000}{\lambda}
$$

but here $f$ is in CYCLIS per second and we normally deal in lic/s. This can be obtained by deviding the above by 100,000, fiving us:

$$
\lambda=\frac{300}{f} \quad f=\frac{500}{\lambda}
$$

the values of f and $\boldsymbol{\lambda}$ being in $\mathrm{Mc} / \mathrm{s}$ and meters rospoctively,
Iow the transmitted oscil latory wave which strikes the recaiving aerial, sets up in tho aerial a very minute current which also oscillates in exact time with the wave. But avory oscillation of this tiny current gots bounced back by tha end of the aerial. This is callod "end-affect". In Tig l belom, wa have a $\frac{3}{4}$-rave eloment, one half cycle (or wave) of the currant baing shown above the line, rhile the second half mave bolom the line is itself cut in half by the length of the aerial. The effoct hare is to bouncs the curront back in opposition to the induced current, the overall result being a drop in efficioncy. Tig 2 shows a full-wave clement, The throw back still occurs, but it does so at the very instant when the current is changing anyway, so that the rosult is to assist zather than to retard the overall effect. Thet is CKin Miding it is possible to erect such a full-wave rig, but the lengen may bo too areat for practical purposes. Tor examolo, at 14 hos s full-rave mill be

$$
300 / 14=21.43 \text { metres } 2004
$$

and ono metre $=39.37$ inches, so thet $21,43 \times 29.37=34 \%$. 4 $=70.3 \mathrm{ft}$ long.

We could achiave the same slectrical effect by making our aerial equal in length to a half alternation, as in Eig 3, and this would give our $14 \mathrm{Mc} / \mathrm{s}$ antenna a length of $70.3 / 2=35.15 \mathrm{ft}$.

NOT TO can simplify all this calculation by reducing it to one formula which rill give us the ansmar in feet direct from any frequoncy range. Going back to the first formula me have:-
feet, But these are for full mavelengths, so, if me call the HAfr- WAVT longth $L$, $\quad$ have:-

$$
I=\frac{300 \times 39,37}{2 X 12 X f} \text { feet } \quad=\frac{492}{f} \text { feet. }
$$

But the ond effect which wo have al ready mentionsd reflects on on the final length of the aerial due toinsulation losses and to capacity sat up by tha nearby supports atc. This results in tho "actual" langth buing about 5\% less than the " 3lectrical" length. This nocessitates our formula being altered so that, finally:-

$$
I=\frac{492 X 0.95}{f} \text { feet } \quad=\frac{468}{f} \text { feet. }
$$

This is correct for any half wave aerial for any froquency, but it does not hold good for long wiro aerials where there may be several harmonics active.


Tig 1.
Fig 2.
Tig 3.

117:
A YAIIS O-V-7 BY ROI RITCF, G3YUT.
This is an oficiciont 0-V-I for GNP mork, usinf an 7750 detuctor, RC coupled to a KT33C, and has bean thoroughIy airo tester. I cali it the "Dx 270 " sinco it hess cortainly earnod the title, Yavins twad on l4 Mc /s men conditions $\quad$ mere poor, this little set brought in VQ4PRR at $S 5-0$ on the speaker as mell as II20A.

Boine a mains receiver I have had an eye to safety in the following places:
(a). Acrial capacitios in suries (One capacitor breaking dom does not dustioy tho isolation from potontial).
(b) Sorics chassis-carth decouplars (Tor the same reason as above).
(c), Phones tainon off sacondary of speakor transformer isolates risarer from direct potontial.

For tha BC listener, speaker reception at good s values is available from Australia, Ner York, Brazzaville and many others.

Selectivity i.s surerb and the signal to noise level high. (Hare I Tould maiso an addition to the attached diaeram -- that is, betndspread may bo fuxther improved by connecting a lopir mica capacitor in series rith the $25 p 7$ bandspread variable capacitor).

The "switchable" capacitor, Cl4, is included should readers require real quality listening on $B C$ stations. This capacitor is made switwhable since any tone device somwhat aftects the overall gain of the rocoiver.

Tith a simple $0-V-I$ (6J5 plus $25 L S$ ) using approximately the same circuit, IV sound was receivod at $\mathrm{S} 7-8$ and the receiver was tuneable to about $3 \frac{1}{2}$ metres. A far off harmonic of the whird Programne was received, and as this was deffinitoly a tuneabla carrior it was not break-through. There ig every probability that the same results can be achicred with this Rx.


HOTE: The KT33C has a split heater and if connected in a series combination it runs at 26 v at 0.3 amps . If parallol connected it takes 13 v at 0.6 amps.

119．


IIG $\frac{2}{750}$ ohms dropper．
$\frac{\text { FIG } 3}{22: 50 ~ K . ~}$
Cl： 0.1 rafd ．
C2：lo mfd（ 1 このちざく）
R3： 500 ohms approx（to prevent complete damping of $S G$ to $\mathrm{B}^{\circ}$
C3： 8 mfd （3l ？ctro）
c4： 4 mfd （ 31 ectro）．
Mote the serics connections of hoaters and the ORDJR in which they run．$=$ ote also that the point $z$ is a connection to chassis， not direct to aarth．

Referrinf to Fig 2 which shows the AC／DC power supply used for the＂Dx TTo＂，the actual＂dropper＂value required if the mains are 250 volts would be celculated thus：

| KH3EC hoater | $=26$ volts |
| :--- | :---: | :--- |
| 3 | $=6.3$ volts |

Total to be fed to the heators $=\frac{32}{3}$ volcs
 2l8．7／． $3=729$ ohns．
120.

If a medium wave coil be wound this set gives a tone (with the Cl4 in circuit) and gain comparable to a four valve commercial set.

The hoart of any efficient QRP RX is the tuning and really good SM dials are racommended both for bandspread and reaction. Furthemore, the aerial coil itself deffinitaly affects the gain to a very considerable extent and it is suggested that a little trial and error be used to achiave optirnum results.

My test mater having broken down prevents mo from accurataly assassing the output of the Rx, but I would say it gives about 2 to $2 \frac{1}{2}$ watts undistorted.

Fig 3 shows the modification necessary should a volume control be desirad for the KT33C.

## ACTIVITY.

I. Thorpe (2893), Richmond, Yorks, has been trying to find a raally good mains $0-V-1$ and has built and scrapped six circuits in the process. He has finally hit upon a cross betwean the "qiP" rig of Oct 1949 and the Radio Amateur Handbook's "Kit Bag Rx". This has given him good results using an EF50 and a 6J5. He still has some improvements to maka but has sont along a very prornising, list of prefixes heard so far, using l80v HT.

Ray Griggs (3387), Marfata, sadly notifies us that he will be QRT for sometime owing to pressure of work, but he says the rig is in good shape, so it will not take him long to get the phones on again when the cpportunity is thers. Besides a log (which was unusually short for tha same reason) he has sent in a list of calls heard during the ISWL contast on March l.3th。 This he did not subrnit to $H Q$ as his team mates, Alan Noble and Turry Hoffman (Hullo there, Alan!) were both unable to compete.
121.

Pacer Shom (3408), BAOR 25, kais recently met another ISWL mambr in sindern and they have already got three others interested and are now considering the formation of a local group. Good luck with that, Peter, and don't furget to contact Fib -they will eive you ail the help you need. Incidentally, Peter is baginning to corapile a chart to show the best listening times for various zones aind he aims to follow that up with a frequency meter since he feals that nny log would be more interesting if it showad a reliable frequency check. Those are both excellant ideas, Peter, and we shall be looking formard to further details.

Bob Brooker (3457), Herne Kills is very pleased with the certificate which he has just received for his win in the Janurry Q R P Fandicap Contest. Glad you liked it, OM -- you certainly deserved it! In his latter Bob acks if anyone can advise him of the best times atc to attack his outstandinf zones--17, 18, 19 23 and 26. He says the Russians sem completely blacked out and wonders if it can be due to shioldine, from the Iran Curtain.

Bob Jurray (3038), St Andrews, has completed his O-V-l using a KF35 and a KL35 and has heard quite a bit of $\mathrm{Dx}_{\mathrm{K}}$ on $1 t$. He has alsn erected thepp on the lines deecribed in our January issue. He sonds us ows of Georfe Parrott whom ha saw recently in hich spirits and full of ideas for improvins his Rx, Thanks for all the gen; $B 0 b$, it looks fb and will find it's place in these pares shortly.
jon Turnein (2985), Briciiy Hill, has kept his woid and sent us an excellan't account of his now wavemeter which will appear next month. Thank you., Ron.

IN Winchall (3172), Rarch, has built, and reports favourably upon, the $245 \mathrm{Fc} / \mathrm{s}$ Rotary Beam desirned by our presidont, Bill Overland, G2ATV, and cescribed in the oct SWN. He has also deletad the 6SG7 RF stage rrom his I-V-l, convertine it to a 6
 ed by the Fif atage.
${ }^{1}$ Q P P O O O O


Tre zesponse to this panel hew not bern ary extenctie aa I had hoped, but the entries vhich have come in certainty show plenty of pronise, and it looks as itt we shall ve seeing e tiyht strugghe for "double top" ( $C$ and $Z$ ). I think $D, G, G$ deserves much crefit
 ment to Ian tion his very opozting entry sisce ho it a comparative newcomer to the gume, A 20 may happen between now and Dec, Ian, so kep at it. I hove that the suppont ther this penel is coing to Inciease as I chink tian he truendiy rivaluy vhioh it will rouse
123.
should do quite a lot towards increasing enthusiasm generally.
Just a reminder on how it works: - The columns headed in lich/s are Countries Heard on those bands (and incidentally can you fill in the gaps here in your entry, Bob, for next month?). The "C" column is TOTAJ countries heard on all bands -- not jast the sum of the previous columns since there will bo duplications in these of the same countries heard on different bands. Tha "Z" column is the total zones heard on all bamds. A new entry this month is the figures in brackets which indicate the countries and zones which have be n VBRIFIMD BY QSLs. (What zonss are you claiming, Ian?).

## LOW - LOSS VALVE BAS.尹S, by F.A.Herridge.

This re-basing operation can be used with any valves amployed in RF and detector stages. The matarials used can be obtainod from any Denco stockists.

To remove the original bass from the valve, gently mork it back and forth until it frees itself from the glass envelope, Then unsolder the wires running into tho ping. Thesa ping are soldered only at the extrome tips and a quick shake when the solder is molten will remove it all leaving the wires fred Jefore removing the old base very carafully nota the relative positions of tha various leads. The pins, which are to be used for tho new base, can be removad undamaged by crushing the basc in a vice. The securing flanges should bu straightened.

To make up the new bass, a smalli pioca of polystyrore shast and a short longth of palystyrene tube of the same diamoter as the original basa are required. Square off both ands of the tube to the requisite length. This may be done on a lathe, by the wese of a file and square, or by making up a matal plug to fit tiphtiy into the tube and by rotating the whole with a drill bance hold in a vice
124.

The inside of the tubs should be tapered as shown in the sketch, to clear the envelope of the valve. A disc out from tho polystyrene sines is made a push fit inside the untapered and of the tube ard scoured with polystyrene solution. When set the positions for the pins can be marked out and drilled. The pins are cemented inside and outside'the base with solution,

The wires are now passed down the pins and soldered with a HOT iron, being careful not to melt the polystyrene with undue heat. Finally the base is cemented to the glass envelope with the solution and left asti. to set hard.

To get the best ounce out of a QRP rig this modification is well worth while in assuring the absolute minimum of loss at R and increased ease of reaction.


Sectional View.

drill chuck with motel ping if n. truing up polystyrene tuba.

## I X TOPICS,

Eeter Golledge (G3THD), Rayleigh, Essex, has lately been experimenting with Ciapp oscillators and his present rig is a 6SH7 Cleup and a 6 AG 7 PA running from an AC power pack which has four switched HI voltages. There are also variable resistors in the scresns of both valves for fine control of input. For fone he modulates with a xtal mike, 6SH7, 6J5 and 6V6. Aerials in use are a 260 ft end fead, a $7 \mathrm{Mc} / \mathrm{s}$ dipole and a $14 \mathrm{Mc} / \mathrm{s}$ dipole. On $3.5 \mathrm{Mc} / \mathrm{s}$ he has worked the following with an input of 1 watt since Sept '48; G. GC, GI, GM, GW, DL2, ON, OZ, OK, PA, $\mathrm{HB9}$ and LA.

Jaषk Cowles (G2AJU), Ipskich, has always been QRP on the 'IX side and, despite the availability of mains, uses a simple Hartley osc/PA with triode strapped Vrisis built around the tuning units $5 B, 6 B$ and $8 B$ for 160,80 , and 40 meters respectively with an input of 1 to 3 watts $\frac{1}{2}$ on the subject of 2 voll valves, AJU writes:"....I often used to ruis a 6I6-807 comoination as low as one watt, but then one day it dawned on me that for such an "input" (fi') I was wasting an awful amount of heater current. $6 \mathrm{~L} 6=5 \frac{1}{2}$ watts plus a heater, with 807 taking even more gave a total input (mith $\mathrm{H}_{\mathrm{L}}$ ) of over 14 watts all told! The present rig with two valves each taking, 2 amps at 2 volts consumes 04 watts plus 180 volits HT at 12 mA . Total = 2.16 watts $=$ grand total of 2.56 watts. A different picture indeed! And the Tx goes places fust the same, although when I first changed. to 2 v battery valves I didn't expect them to work so well." Jack has proved the efficiency of 2 volt valves by having worked 13 countries and 55 counties on top-band alone. He needs only Wastmoreland now for Worked All Inglish Counties,

It is hoped that we shall bo able to publish full descriptions of both these stations within the next few months.

Continuse uerand has nade it necessary to run off a ro-print of past iswues ot "O, R P". The time factor involved whilst still mairaainimg cuxaent editorial and printing work is axceedingly critical and can only be achieved over an extended period. At present a restricted number of Issues 1 and 2 are available (at 6 d each) and orders should be placed promptly as no further reprints of these issues can now be entertained. Reprints of Issues 3 onwards will become available as time permits, and all orders now on hand will be executsd directly the issues required are completed.

> D X HRARD.

127.
7.4.50 (0820/22.51): ZL4AW; VK2ZR; YSISS; YN4CB.
$9.4 .50(0833 / 2332):$ KP4TN, CK; PY4VX; VK3Mr; VR2HM; VPrMTJ, 9MI:; WBBM: HCIFG.
11.4.50 (2225/2328): C08RIP; ZC6DH; LUlAAP; 2BL; 5HAF, 7HJ; HK4\& TI2IA, OE, RC; VP3MCB.
12.4.50 (2213/2256): KPPAZ; PY2BK, CK, IAQM; HKIHK.
13.4,50 (2229/2314): YV5AY:; HPITG; CO8GH; ITLZ/IRE (passimg ithrough Straits of Gib).
15.450 (2210/2231): VEIFB, AH; VP6IS; PY6CO;, 4PI; OX3BD.

PETER SHORT ( 3468 ), BAOR $15,0-V-1$ ( 013 watts), $14 \mathrm{lic} \%$ fone:
$2.3,50$ (1713/1719): OH2VH, VI, 5NW.
3.3.50 (2015/2030): SVØAJ; VS7SV.
5.3.50 (1810/1812): OH6OH; OY2RD.
$6.3 .50(1815 /-):$ FA8JO.
10.3.50 (1926/1937): OH6OH; ZL3HL, AM。
14.3,50 (2050/2135): KP4AZ; OH6OH, NR; W4DCR, 3IMV; ISlRPA,

15,3,50 (1912/2050): OH5ITZ, NI; W4DCA; FA3FB; VK3HW, MI.
16.3.50. (0530/ -
(1919/2127): VK2AGU; OY3RD; PY7CJ; ZC6JM; SVØWWL TA3AES; OH80C (IOmiles insids Artic Circle).
17.3.50 (1700/1933): HKISA; TA3GVU; SVØAJ; ZC6UNJ; 3V8AT; RA3NC,
20.3.50 (1730/1936): FA8JO; UAIB\#; ZS6UT; TA8CF.
21.3.50 (0505/0516): 1D2AC; 4X4AD; YO7ML; ZLILA.
(1931/2056): ZL3FL; YO7WL; पHKTC; SVØUL; TA3EB; 3V3AI.
$24.3 .50(1607 / 2007)$ : SVপIB; PD2AC; ZC6DO; PIILC (R6); OR5CT.
27.3.50 (1825/2044): VQ4BI; CNRTO; VK3XN; FA3TK.

28,3.50 (1733/1823): UPRKBC; OH2TVF; ZBlAJZ; VUZDH; ZS6OY; VSYSV 3VAAP; PIILC (98).
29,3.50 (1820/2004): UAIKAT; SVSUN; PIILC (R9). (Yes, this last on is MM, Peter -- Dutch metcorological sunvoy).

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128.
                RaY GRIGGS (3387) Nargate, 0-V-1 (.5 watts), 14 llc/s:-
14.3.50
I5.3.50 (2000/2030): VK2AG, 3HW, INA, IAN, 4WT.
16.3.50 {063今/ - : 3V8BB; VK3HW
17.3.50(c) - - ): SPESG; 刊50Y.
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20.3.50 (2255/: - FA3DS
23.3.50 (22L5/2250): T4MTM: 4P7C, 2KG.
25,3,50 +5745/1800): DL5NA, SIT4KP.
26,3,50 {2130/2900}: VZIZS; THDSY, 3HA, 1CBV.
29.3.50 (2265/ *): CNTRTL.
31,3,50 (2,40/2350): PY6C0; CT1AK,
20.4.50 (1925/ *): OH2EU.
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6.4.80 (0645/[64C): 2L2JB; JA9%C, 8CT.
77.4,50 (1940/2200): BA9TV: PYISQ, 4XI, VX, 1ASI, RC; YSJJW;
    VP4PM, 3IECB; VR2XO, IZS.
12.4.50 (0Є45/0651): VK3JD, HW, AWIT.
    3ON TMURTER, 28 Mc/8:-
0.4,50(12%5/1830): HZiNB; ZB1AK; BA8CT; XPIPY; PY5AR, 6CN:
        N.J.BTOOKZR, (3457) Hamne Hill, SH 4 (1.2 watts), 14 Lc/s:-
23.3,50 (2610/1940): TA3KC; AT8BC; vS7SV.
24.3.E0 (1055/2245): PY5DH; TI20A; VE3MM; VK2KS; VO6AV; %RNTV;
                                    YV5AB; ZC6DO.
20.3.50% (%000/ - {: PIILC; VS6BS
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3%.3.50 (2.700/ - ): TNEOR; L.U5HI.
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129. 
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1.4.50 (0815/0825): PY7WO; URZAB; 䪦4FO. 
14.4.50 0545/0800): HC1 FG; YU3FTAA (Cप4); 3VミBB.
16.4.50 (0543/0722): HC2KQ; KH6GS; LU5CL, 6AJ; PZIE; TI2RC;
                                    UR2AB; VK3ADV; WTTHSK, TLD; YSIAS; 3V8BB.
17.4.50(2100/Z115): RABAW; Z32A. (0500/065): ARBAB; W5AHA; XHICQ; YKLAC; YINCB.
IOB.4.50 (0600/ - ): KH63A; W6VTR.
    R2J, BROOKRR, O-V-1 (.33 watts), 28 Mc/s:7
1.4.50(1335/-): ST2AII
16.4.50 (1235/1500): CX4AB; FClKN; KP4BY; IM2BFC; ZBlAK; ZSIT.
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D X WORKID．
The following are a selection of recent Q，SOs by G3ADW， Rayleigh，Tssex：－

| BAMID． | 50 FL |  | QSO |  | AFROX | तुipurir－ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| （ $\mathrm{INC/s}$ ） | 1 CW | INPUT | WITİ： | QPY | DX． | ON．FDW |
| 7.7 | CW | 0.5 | G3APO | Andover，Hants | 100 mil ． | － 459 |
|  |  |  | G2BRR | London，3． 18 | 25 | 559 |
| ＂ | ＂ | 1.0 | GI5ST | Belfast | 340 | 43／49 |
| ＂ | ＂ | 2.0 | PADLU | The Hague． | 180 | 559. |
| ＂ | ＂ | 1.0 | ＂ | ＂＂ | 5 | 5／3．4／29 |
| ＂ | ＂ | 2.0 | G3PU | Weymouth，Dorse | ． 150 | 569 |
| ＂ | ＂ |  | GMM3ATV | Benff | 450 | 449 |
| ＂ | ＂ | ＂ | CMBMM | Baingurgh． | 340 | 340 |
| ＂ | ＂ | ＂ | GWS时 | Prestatyn． | 200 | 559 |


| 130. |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\cdots$ | Fone. | 1.0 | G3TCT. | Favershan, Kent. | 23 | miles. | 2.4 | S4 |
| " | 1 | , | G6, ${ }^{\text {a }}$ | Pr. Clacton | 25 | " | 5 | 5 |
| " | " | 20 | G3DSW | Romford | 20 | " | 5 | 6 |
| " | " | 11 | GJ3PT | ? |  |  | 5 | 7 |
| " | " | " | GsBEU | Sevenoaks, Kent | 30 | " | 5 | $4 / 5$ |
| 3.5 | CW | 1.0 | DISEK | Nr. Hanover | 420 | 2 |  | 420 |
| 7 | " | 2.0 | DIIPL | Bremen | 390 | " |  | 479 |

Given sufficient support we feel that this feature could be one of considerable iaterest to both $T x$ and $S$ WL readers. Like all similar features it depends entirely upon that support for it's success, so send in your reports regularly, OIMs, to reach me not later than the 17 th of each month.

## ITOTES ON CONDX by Bob Brookar

This month 10 metres has sufferud a partiel eclipse. On some afternocns it has been possiblo to hoar a few weak Ws, and the South Americans have been skightly more prominent. On the whola the band was vary disappointing indeed, which is in accordance With what many people prophesied. In passing I must say how much I regret not having takon an interost in amateur radio during the winter of $1948 / 49$, the stories I hoar about the way 10 metres bohered then makes my mouth watar.

Frenty metres is tuming out to be the $D x$ band, which does not surprise anynne. The best $D x$ seams to be heard iust before dawn which is rather a disadvantage since $f$ ow of us are availablo. at that early hour! In my own ease tha advont of BST brought about a chanfe on that Sunday mnming and I was rewarded with thres new countries ( $\mathrm{PZ}, \mathrm{YH} 6$ and IS ). As a matter of interest, listonins at the same times on tho provious morning producad very worthy of nのta, exo.jpt ru3TMA (alon 凡 naw country for ma!).

I S I SUPPIJITS.
I have tr apologise for an unfortunate error which crept into tha list of ISWI supplies which appeared in the Feb iasue. I am not in the happy position of being able to say it was a "printer's error", but I fancy you will let me offelightly when I tell you that, in these days of rapidly rising prices, this correction means a reduction in the annual subs for SWN and RC. Tha rates for both these mags (through "Q $R P$ " only) are $1 / 1$ per copy or $13 /-$ per annum (iOOT $14 / 6$ as previously stated). The corrected price list is as follows:-

SHORT WAVT THWS and RADIO CONSTRUCTOR.....l/1, or 13/- by sub. OP-AID....I/4. RTPORI PADS.... $2 / 6$ ( 50 shedts) ISNL PRINIED NOT彐 HMADING, $\Omega^{\prime \prime} \times 5^{\prime \prime} \ldots .3 / 4$ (100 sheets). AITATEUR STATION RTCOND CARDS....3/6 (par 100).

Those nembers who have already paid in their aubs at $14 / 6$ will be receiving a refund of $1 / 6$ in the near futura.

ALE FHE ABOVF PRICHS ARE, OF COURST, EXCLUSIVE TO FTRADIRS


## GTAR CHANG里.

MXCFANGT: Tinfature button base pentodes, one sach of 1 IU 4 and 30,4 , in exchange for a moving coil mA meter, any range up to 10 mA . ? ${ }^{*}$ W. Rignall, 5 Cromwell Rd., March, Cambs.

Bỉ? : One reflex Klyatron Oscillator. Also one PX25 output triode (Both ured but OK). J. Whitehead, 5 ADoot's Tilt, Iersham, Walton-on-Thames, Surrey.

## QRP TX LIMITS.

The question has been raiscd by sevaral members of what is tho top limit of input for a nip transmitter.

Iong before my time G2SO, Mal Geddes (who, until recently, ran the RRP Club Notes for Short Vave News), settled this question to everybodies satisfaction, and I propose that, sublect to Eenarel approval, we continue his ruling which was :-
 VATVET TO TAKI NOLI.

WANTID - - YOUR COMAMTIS
What is the first subject you turn to when you receive your " $\mathrm{Q}, \mathrm{R} \mathrm{F}$ "? Is thera any faature you feel is $n$ wasta of time? Have you any particular intorest that wa have nat covered so far?

Let me have your comments on these points (and anything else rolative to the production of " $Q R P$ ") in your letters this month, OMs. I am always sag to improve both the quality of presentation and the interest of the mattar in cur own fiP mas, and you can help a lot by constructivo criticism.

Wiil you please try and got AJJ ynur ings in tha post not later thon the loth of May, please, OMs? This is important as I propose to introduca an improvad $D x$ Hoard faature noxt month and it may invoive some axtra arrangemant.

