

DEDICATED TO THE  
ADVANCEMENT OF  
LOW POWER RADIO.  
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2 OCT 1949

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No 2.

Q. R. P.

October 1949.

EDITORIAL.

First may I thank those who so promptly sent in appreciative comments on No. 1. It was very satisfying indeed to receive such enthusiastic encouragement and proves, moreover, that there is a very live sense of interest and an anxiety for co-operation among the Q.R.P. fraternity. Especially is this so as the first issue suffered seriously from being a rush job on which I was unable to get moving as regards typing and duplicating until the week before publication.

It was this unseemly haste which prevented me from explaining, as I should have done, the following points about the "format" of "Q. R. P."

Normally one's radio mags accumulate as loose copies, which lie around until the volume is completed (when they may or may not get bound), and they're always out of order when you want some special reference. Now:

(1): I have chosen the paper size because I believe it's handier for reference than the full sheet of foolscap.

(2): I've left a wide left hand margin with perforations so that "Q. R. P." can be put in a folder at once and will thus always be there when wanted.

(3): I propose to forget the question of "volumes" (in which I could never see much point) and run straight on

in numerical page order through consecutive issues.

(4): After every six issues I shall draw up an index designed to supersede all previous ones. That is to say, each new index will include ALL data from page I right up to date, so that reference to the latest index will give you everything you want to find.

(5): Only one face of the paper has been used incase some of you might prefer to clip out items of interest and keep them on a scrap book system. This is a very neat method but is doomed to failure where items appear on both faces of the page.

Finally I hope that still more of you will send im comments on No.2, and don't be afraid to criticise as very often improvements are born of criticism.

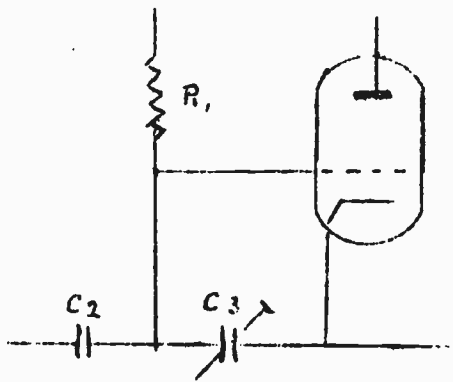
#### O-V-O FOR I42 M/CS: CORRECTIONS.

I have just received a letter from A.E. Stonestreet, who's set appeared as the first RIG OF THE MONTH. He points out two ammendments to my quotation of his layout. These are:

(1): The coil described was for 28 m/cs, NOT I42, he now says: "The coil for I42 m/cs is just a small loop, nearly a short, across the tuning condenser. The trimmer (C3) is taken out and it may be necessary to take out the 25pF condenser (C2) to get down."

(2): The RI/valve grid connection should also be joined to the connection between C2 and C3 as shown in the inset sketch.

Added to these most regretable errors I have to confess my own failure to mention that the valve used was an  $\mu$ C52.



Well, O.M.'s., I am more than sorry that this should have happened. I am anxious for "Q. R. P." to maintain a reputation for accuracy and the fact that I have failed in the initial issue is felt very deeply here. It couldn't have been a worse introduction.

I would ask anyone sending along circuit gen to make the description clear and concise, to keep such gen separate from the general terms of the letter, and to check

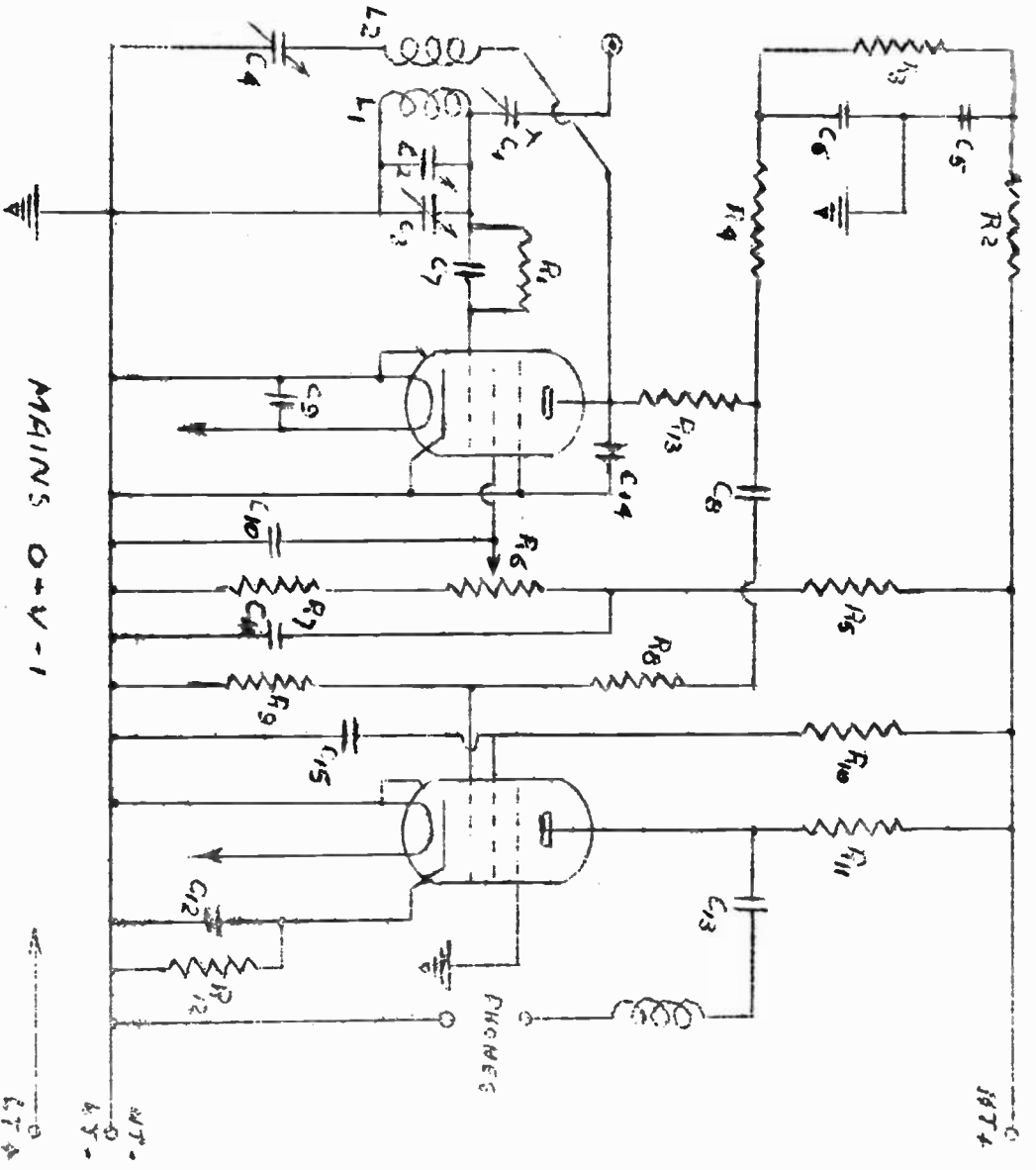
over before despatch. For my part I shall see that letters arriving late (as this one did) are held over till the next issue instead of being rushed through as a sort of stop press.

A MAINS O-V-I.

A description of the prototype of this receiver appeared in the S.W.N. of August 1948. Since then I have had several requests for further information and the intervening year has seen quite a few improvements.

There is nothing unusual about the circuit and the diagram should be self-explanatory. Four volt valves were used only because they were already on hand, although they are excellent bottles for V.H.F., but there need be no fear of making the necessary substitutions for 6.3v heaters.

Fulfilling the "Q. R. P." practice of providing a test report of circuits described rather puts me on the spot as I am unable to claim any vivid Dx. Prefixes received on 14 m/cs since the last modification are restricted to: CO, CN8, EK, FE8, ISI, LU, PY2, VE, VO, VK2, and WØ to W5, apart from the usual



Europeans, Scandinavians and Italians. But the antenna used was an inverted L, 8ft. long, indoors about 7ft. above ground level. So perhaps the log isn't too bad.

The real virtue of the rig lies in: (1), The remarkable silence of the background. Right up to the threshold of oscillation this could not be excelled by a battery set. (2), The smoothness of the reaction. This is "set" by R6 and "spread" by C4, the latter being controlled by a Muirhead drive. This combination gets maximum usable reaction with no more than a faint increase in background "rustle".

The coils are all wound on Denco four pin polystyrene formers ( $\frac{1}{2}$ " dia), with 30 swg enamelled wire, close wound (except the I5 turn winding which is 24 swg). L2 is always spaced I/I6" from LI except for 3.5 m/cs where it is wound over LI. Turns are: I4 m/cs, LI I5, L2 I2. 7 m/cs, LI 28, L2 I8. 3.5 m/cs, LI 63, L2 24.

Circuit values are:

C1, 3/38pF. concentric air spaced trimmer. C2, C4, 50pF.  
 C3, 5.0pF. C5, C6, C10, 0.1 $\mu$ F. C7, 100pF. C8, C9, C13,  
 .001 $\mu$ F. C11, .05 $\mu$ F. C12, 50 $\mu$ F. C14, 150pF. C15, 0.25 $\mu$ F.  
 R1, 4.7M $\Omega$ . R2, 47K $\Omega$ . R3, R7, 5.6K $\Omega$ . R4, 10K $\Omega$ . R6, 50K $\Omega$ .  
 R8, 25K $\Omega$ . R9, 1.0M $\Omega$ . R10, 100K $\Omega$ . R11, 20K $\Omega$ . R12, R13, 1200 $\Omega$ .  
 Choke, Denco RFC8. VI, V2, SP4I.

### LADDERS AND CONTESTS.

Last month I asked if anyone would like a special Q.R.P. Dx, ladder, but no body seems at all keen. My own opinion is that the space could be better devoted to more useful topics. But, if

you do want anything in this line, O.M's, just say so.

And what about various types of contest? Anyone interested?

### SECRETARY'S LETTER.

"Dear O.M's,

You will now have received No.1 of the "Q. R. P.". I should like to thank John, our editor, for all the hard work he has put in in bringing out this fine News Sheet. It is all due to his enthusiastic spirit. It is up to us, one and ALL, to give our editor our full support by sending to him any experiments or items of radio interest (however small). It is your paper, so let the editor hear from YOU, and that does mean YOU.....

Vy 73 & good hunting,  
Alec Jotcham, G, 936."

(Editor: Thanks for the bouquets, Alec. I hope that time will prove me worthy. As a matter of fact, as long as the sheet gives you chaps pleasure and satisfaction, it's a lot of fun to me to get it out for you).

### PLANNING FOR RESULTS.

The Carter Shield, you will recollect, is being presented to the member contributing the greatest advancement to Q.R.P. radio during the year. It has occurred to me that many, especially those new to the hobby, may not have any well defined object or aim to guide their endeavours. Without such a guiding influence the best in Q.R.P. radio is lost and there will be little hope of achieving any really useful purpose. I believe that there must be quite a large majority who use Q.R.P. receivers because they have an urge

to dabble in S.W. radio but can't afford the big "stuff". They experiment to the extent of "trying another hook-up to see if it's any better", and they never grow to appreciate the true potentialities of Q.R.P. receivers.

I think, perhaps, most of us start that way. Some lucky ones are endowed with an attitude of mind which prevents them from accepting a technical fault or a weak point in their current Rx. as common place and as inevitable. Instead of disgustedly stripping the circuit bare these few will concentrate on the defect until they master it. And only thus can be gained that sense of satisfaction---of personal triumph---from which is born the lasting love of Q.R.P.

Now such an attitude of mind can easily be cultivated. It entails, first, a critically observant element which can dissociate a fault from being "just in the nature of the beast" and, secondly, that infinite fund of patience which can follow an experiment through endless failures to ultimate success.

The cultivation of such an attitude is cumulative and with a little perseverance it will gradually be found that, instead of just hooking up a rig to see what it will do, the process starts from the other end. The required result is first decided upon and the designing and building follow along predetermined lines. In other words, **PLANNING FOR RESULTS.**

Difficulties will arise more frequently in these conditions since they must now be faced and can no longer be comfortably shelved. Those constructors who have club facilities are far more happily placed than are scattered members of our Section, for a quiet chat often goes a long way to easing the frustration of some abortive experiment and may even suggest the very solution.

But why should we not adopt a similar attitude, using our "Q. R. P." as the club room? I know it's a bit of a bind writing letters, but I'm sure the results would be worth it a hundred times over. Do you realise what a valuable Q.R.P research organisation



would be formed if we all pulled together to help solve one another's problems?

How can it be done?

Well, the first step is to draw up two lists: (1), An index of "Difficulties to be overcome", i.e. any details on which anyone has come unstuck in the construction of a Q.R.P. receiver. And (2), An index of "Developments required", i.e. any weak points in Q.R.P. technique which you may have noticed from time to time.

I will compile these lists from your letters and publish items from them as we progress. Our combined experience should solve many of these points at once and, if we attack the balance in unison who can say that, in the end, we may not put Q.R.P. receivers back in the forefront of radio technique.

In any case the more difficult problems will make an excellent groundwork from which to lay a challenge for the Shield.

### GEAR - CHANGE.

D.W. Autom, 117a, Commercial Rd, Swindon, Wilts requires the following valves, EF36, EF39, EK32 and EBC33. He has for disposal a large number of various 6.3v American types.

G.J. Fowle, 20 Magdalen Rd, Exeter is asking £10 or offers for his 4 valve A.C. TRF Rx covering 10/160 metres with plug in coils, complete with "self contained" speaker. Also an Exide 45 A.h. accumulator for 10/-, buyer collects.

### OPINION.

I never came across a less argumentative crowd, or is it that our first issue has convinced you all that QRP is worth while.

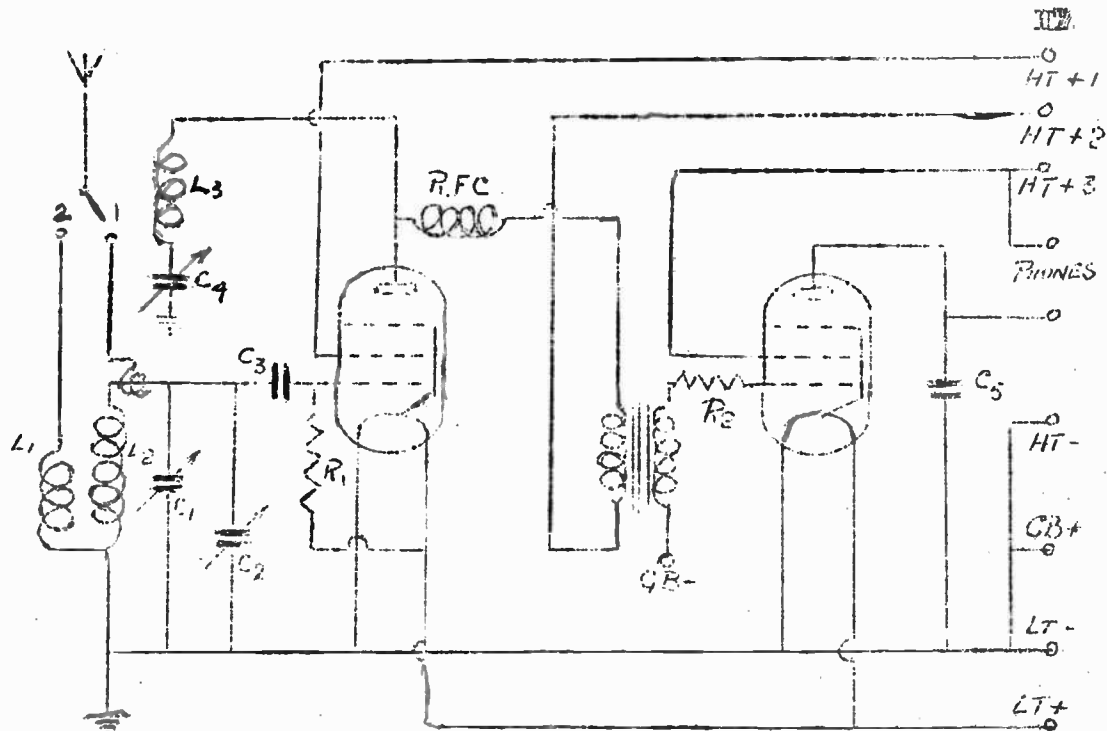
purely for it's own sake? Anyway no one has offered to dispute the point which may be is just as well as paper is running short this month. Perhaps some hardy type will fling out a challenge before our next issue.

RIG OF THE MONTH, No.2 -- C.E.Atherall.

This month I'm handing over entirely to C.E.Atherall of Tunbridge Wells who describes his O-V-I as follows:

As can be seen this receiver is very simple and straight-forward. The chassis is made up of aluminium 10" x 5" x 3½", with panel to suit, 7" high. Most of the components used were at hand from the spares box, but all are of good quality. Standard six pin Raymart coils are used. The bandset is controlled by a pointer with scale, while the spread has a "Utility" 100/I dial. Perhaps one of the secrets is the No.1 aerial coupling which is a piece of bare wire twisted one turn round the insulated lead between the grid condenser and coil. The other coupling of course goes to the loose winding on the coil. Valves are DL35's. HT is supplied by two 9v grid bias batteries connected in series. HT3 has the full 18v, HT2 has 16½v and HT1 is varied between 10½v and 15v to get the smoothest reaction. A point can be found where reaction is satisfactory over all ranges, although I seldom go above 40 metres myself. A lengthy aerial tends to damp the circuit too much so a short flex, 12ft to be exact, is slung up indoors. An earth is never used.

Various batteries have been used for LT and a gas lighter cell, at present in use, seems to be best. Grid bias is a UII cell. The phone jack is a double one and this receiver will operate two



pairs of phones on almost any station.

To conclude, I might add that this receiver started as a O-V-O, but the extra valve etc has been well worth while. If anyone is interested I can supply further details on this Rx. (Test report appears in this month's Dx Logs -- Editor).

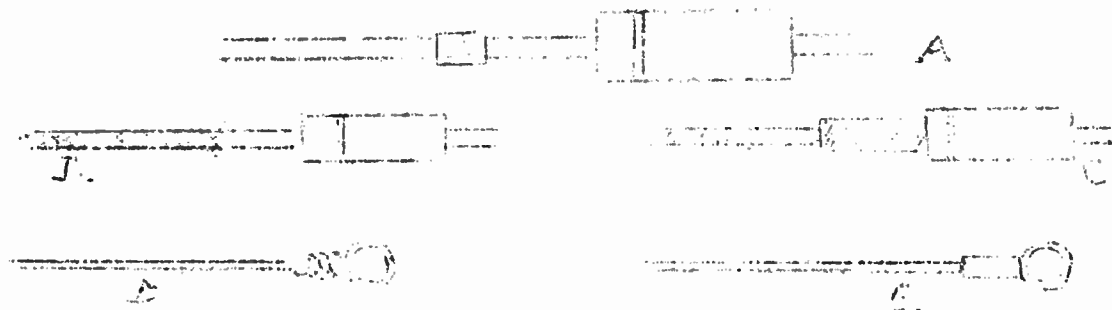
Circuit values are: C1, 160pF. C2, 15pF. C3, 200pF. C4, 300pF. C5, .001µF. R1, 5MΩ. R2, 5KΩ.

HINTS.

Alec Jotcham sends us three excellent ideas involving no more than a few odd ends of systoflex.

The first is about the neatest scheme for identifying battery leads that I have come across; One red band for HT 1, two for HT 2, one black for HT-, one yellow for LT, one green for LT-, etc

The second and third ideas are self explanatory and will add to the neatness of any layout.



- A : Systoflex identification of leads.
- B : Braided braid on flex to plug or jack.
- C : Systoflex slipped over 'B'.
- D : Untidy loop to terminal.
- E : Systoflex slipped over 'D'.

DX LOGS.

Again I would draw attention to S. Beharrell's logs. Perhaps I have missed the point somewhere but I do feel very strongly that the pages in contemporary radio literature, devoted to "Calls Heard" lists (or whatever other titles they run under) are so much waste paper, serving no purpose whatever other than to appease the pride and the desire for notoriety of the subscribers concerned. If we could compile logs similar to S.B.'s, from a variety of districts -- say, Scotland, Midlands, London and Devon as well -- we should be able to produce an authentic record of what "could have been heard" in England during the previous month, the accumulated record forming the basis for a really useful Q.R.P. "Period Conditions Chart".

S. BEHARRELL (York), I-V-2, I4m/cs.:---

- 4.9.49 (22.05/22.40): Very heavy storm. No Dx.  
 5.9.49 (22.30/23.15): ZBIBB, CX2CO, VP4TB. Bad QRM.  
 6.9.49 (22.40/23.30): VP4TB, VP6IS, LU6AJ, CXIVD, VK2MS.  
 7.9.49 (22.25/23.15): SVØAJ, HI6EC, VOIY. PoorDx  
 8.9.49 (22.05/23.00): PY7XC, CXICG, HI6EC, ZDIBD.  
 9.9.49 (22.00/23.30): W8RLT, 4X4CR, VO6B, VP6CDI, CXIVD, VP4TB, VE2CA, VE2DD.  
 10.9.49 (8.10/8.35): VK2ID, VK5RN.  
           (22.15/23.15): W8HLD, CXICG, LU4BJ, W8RLT, VP4AD, VEIGF.  
 11.9.49 (22.00/23.30): 4X4AC, ZB2A, HI6EC, YV5BZ, CXICG.  
 12.9.49 (22.18/23.09): LU, BY? CT etc, but no real Dx.  
 13.9.49 (22.18/23.09): CX2CO, LU6AJ, CX5CF, W8BM. Plenty of stations but poor Dx.  
 14.9.49 (22.09/22.55): VO2W, VO4HA, Bad night for Dx.

R. S. MURRAY (Fife), O-V-I, I4m/cs:---

- 2.8.49: VP9WW, Short Skip, not much Dx.  
 3.8.49: KP4BI, KP4CU, Little Dx.  
 26.8.49: VP9F. Fair Dx late at night.  
 27.8.49: Fb. sigs from OX3MC but no Dx.  
 28.8.49: MT2E, LU3BJ, Also CX?, CO?.  
 29.8.49: TI2AV, OX3GG, Bad QRM.  
 30.8.49: LU4BA, CN8BV, Good Dx between 0.00/0.30.

A. E. STONESTREET (London, NW.10), O-V-I, I4m/cs:----

- 2.9.49: CXIVO, CE2CC, LU4BJJ 5AO, 2BQ, 7DX, PY2CK, 4EJ.  
 9.9.49: WICX, 2IVW, 2MI, 2SAI, 2PPS, 4OPI, 8RHP, 9FUS, VE2OD,  
 8MJ, VK2JP.

A. E. STONESTREET, 28m/cs: ---

- Undated: CX4CS, IIASH, OK3ID LU7GD, PY4IJ, 2CK, W4AGS, 4EYN,  
 4NWR, 4OZ, 4HLG, 6OEI 8DPC, 8QXB, 9BSG, 9HEI, ØSEE.

R. NIXON (Stockport) O-V-2, I4m/cs: ---

- 19 Aug/14 Sept: CN8AI, 8BI, 8DI, CXIVD, 2CO, EKIND, LU4BH, 6AJ,  
 OX3BD, 3MC, PY2CK, 4EJ, 4HE, 4RJ, 6CA, 6CO, 7KG,  
 SVØWI, TF3MB, UA3DC, VE3QA, VP4TB, 9F.

C. E. ATHERALL (Tunbridge Wells) O-V-I, BC log:---

- 9785k/cs, OTC2, Leopoldville. I52IOk/cs, VLCII, Radio Australia.  
 I5320k/cs, CKCS, Sackville I17IOk/cs, VUD9, New Delhi.  
 I1760k/cs, VLA8, Rad. Australia. I1880k/cw, LRS, Buenos Aires.  
 I1970k/cs, FZI, Brazzaville.