

**JOURNAL OF THE
Q R P
RESEARCH SOCIETY**



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.....: EDITORIAL :.....

Apologies for the lateness of last month's mag, CMS. I hope that this and future issues will reach you in better time. While it was, of course, disturbing to get so many letters anxiously enquiring "where's my mag got to?" it was, also, rather encouraging as it did prove beyond doubt that "QRP" is an eagerly awaited "event" each month.

The cause of the delay was one of those infuriating pastimes where one's family goes sick in turn -- and, as each of us has some hand in the production of the mag, the result was complete disorganisation.

The HQ Rx has gathered dust and cobwebs, but, while convalescing, we did manage to get most of the "bits" wired in the holiday portable. I don't recommend this process -- the size of hole that an Adcola will burn in the bedclothes is quite fantastic!

One lesson emanated from this spasm -- don't try and miniaturise with standard components! A quarter watt resistor looks tiny enough by itself on the bench, but it is peculiar how much space it takes up in a deaf-aid size chassis. If air tests indicate a change of value somewhere I can foresee a 90% strip down on the agenda to get at it! We shall certainly make a point of building the HQ Rx on a sizeable experimental chassis in the first place. Compactness comes later.

MEMBER ON HIS 145 Mc/s TRANSMISSIONS. Proof must be provided in the form of the report that CNC gives to the station he is working, any remarks he makes and, of course, QTR etc. Monty is on CW, 145.13 Mc/s, mostly 1910/1930 hrs.

Ray Butcher, GC3FSN (Jersey) has sent apologies via Monty for his long silence -- reason, impending matrimony! (Well, we'll have to forgive you, OM, for never let it be said that we nag!) We'd still like to hear from you, though.

W.E. Stephen, GM3IVZ (Methil, Fife) has taken over his brother John's membership, the latter having changed his QTH, and is anxious for contacts on 80 (4 watts, VFO) and on 20 (up to 12 watts rock bound)

Fred Bailey, G3HJL (Boreham Wood) is carrying out a "finalising" rebuild, whereby all those ideas that have been tried out in the past few months are being made permanent. This includes a foolproof BK cum switching system that will (it is hoped!) be operated entirely by the key, doing everything except write the QSL!

Allan Herridge, G3IDG (Balham, SW 12) has had 374 QSOs with 190 stations in 6 countries and 29 counties and has now got going on 80. Ever hopeful, Allan remarks that he has only another 94 countries to go for DXCC!

Jack Harris, G2BOF (Sutton, Surrey) sends us another nice list for the "200" and an introduction to a number of the Sutton & Cheam RS members who are interested in QRP (Thanks, Jack -- of course I'll send them the gen with pleasure). Jack and the Sutton lads are very busy preparing to do battle with the Thames Valley ARS for the Cullen Cup on April 26th, so, if this reaches you in time OMs, do rally round and give them a contact.

Fred Stonestreet (Willesden Green, NW 2) is busy again on Two, and has added a 2 metre calibrated wavemeter to the shack equipment.

Den Auton, G3IHI (Swindon) has at last got the QRP Tx rigged to his satisfaction. It now runs a 6AC7 Clapp/ECO, .8 watts input to Top band or 80, EF50, 2.5 watts on 80 to 40 metres (class 'A'), TT11 on

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80, 40 and 20 metres at 8 to 10 watts. The pi-coupler can be connected to take the output from any stage or the whole thing used as an exciter for a QRO rig.

Peter Huntsman (Hexham-on-Tyne) asks for information on KF3AA. He was heard to tell a W9 to QSL via WIPGG. Peter has a new antenna rigged now which seems to giving good results in all directions.

Ian Cley (temporarily West Hartlepool) managed to get five days at home in the shack at Easter but his antenna, which got itself earthed in the big storm in Feb, is still grounded so that he didn't get much joy. He's hoping for a longer leave at Whitsun however.

Norman Basch (Poel, I.O.Man) points out that the new SET-BAND contests would be a valuable means of recording varying condx throughout the country if we could get enough of our members to "play" regularly. Norman has had a very "dead" spell with his rebuilt Rx owing to a dud AF tranny. Reversion to KCC has livened things up again.

David Mairhood, G3HZW (Chelmsford) has joined us this month and will, I hope, give us plenty of interesting points to "chew" over as his particular enthusiasm is propagation condx on freqs up to 30 Mc/s. His present gear is a Franklin VFO with a pair of 6J5s running about 1 watt on 3.5 Mc/s.

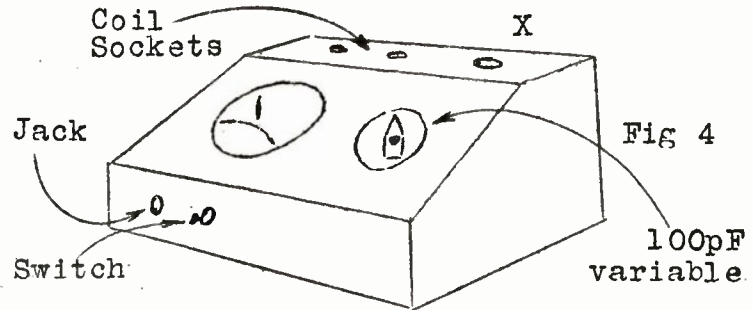
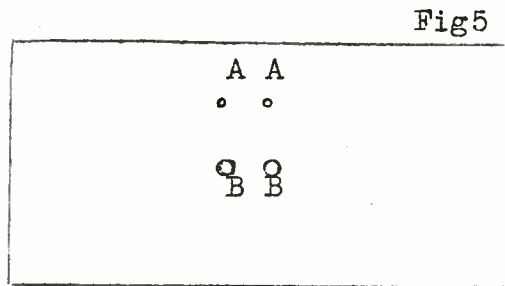
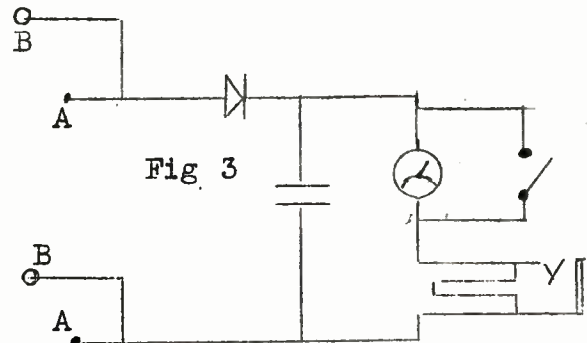
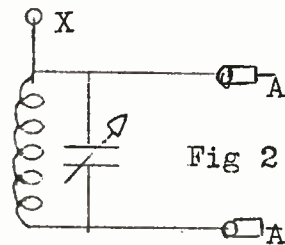
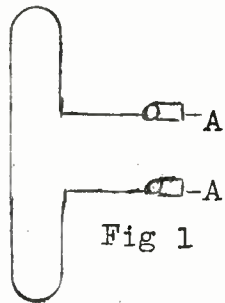
Foy Church (temporarily Cirencester) is yet another of our members who has been forced out of circulation by the RAF, though his interest and enthusiasm remains undimmed. He is planning to pay Den Auton in nearby Swindon a visit shortly.

Sam Hall, G8AOL (Otford, Kent) is finding "200" contest going becoming slower and prophesies that he may be claiming a certificate in about Dec 1954! (You'll prize it all the more, OM!) He has been busy on the VHF gear lately and has managed some contacts. He remarks on the high percentage of phone on the band now. G03EBK gave him his first G0 contact on Two, and he heard Monty, G02CNC, but did not manage to work him.

----- WHAT ABOUT DALLING NOW. OM? !! -----

.....: RADIATION METER :.....

The simple but very useful little rig which Monty, GC2CNC, has been using to check his antenna radiation (as mentioned in the Society News above) is, basically, a modified crystal set. A number of other uses will occur to the reader at once -- for instance, monitoring telephony transmissions, absorption wavemetering, and RF signal tracing. The crystal used is an 1N34 or similar, the meter a 0.500 micro-amp and the jack a closed circuit type. The fixed condenser is .0001 micro farad and the variable 100 pF. The coil of course should be suitable for the band in use.



In the sketches on the previous page Fig 1 shows the antenna for 145 or 435 Mc/s, the dipole being a half wave on either band. Similarly Fig 2 is the antenna arrangement for other bands. Fig 3 is the circuit itself, and Fig 4 an idea of the final assembly. Here the sockets for plug-in coils are shown on the top of the cabinet and also the socket X for a vertical antenna for use with the Fig 2 scheme. All the plugs marked 'A' are taken to the two sockets AA on the back of the cabinet which is shown in Fig 5, which also carries the sockets B which are provided for use with a pair of probes.

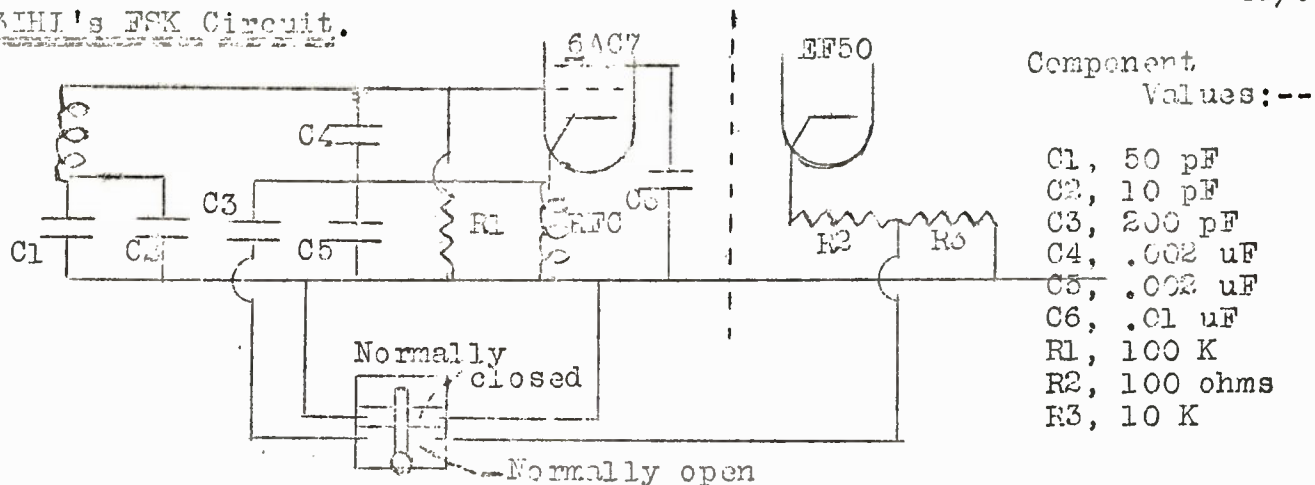
.....: SUPER - REGEN :.....

A month or two back we published an article on self-quenching super-regenerators and included a couple of suggested circuits to illustrate our points. Although both of the circuits shown were what may be truly called "old-timers", they had not actually been airtested by us. The present description of a very similar layout has, however, had some five years of pretty continuous use in the shack of our old friend Ted Stonestreet. The prototype, as a matter of fact, was the first Rx which we ever described, appearing in our first issue in Sept 1949.

As always with a super-regen we must underline the standard warning regarding re-radiation. This must surely be known to all users and prospective users of the type by now but it is a fact, nevertheless, that these receivers will cause interference over wide areas if used without a buffer stage. Therefore great discretion is required in testing such a set and an RF stage should be added before any regular use is made of them.

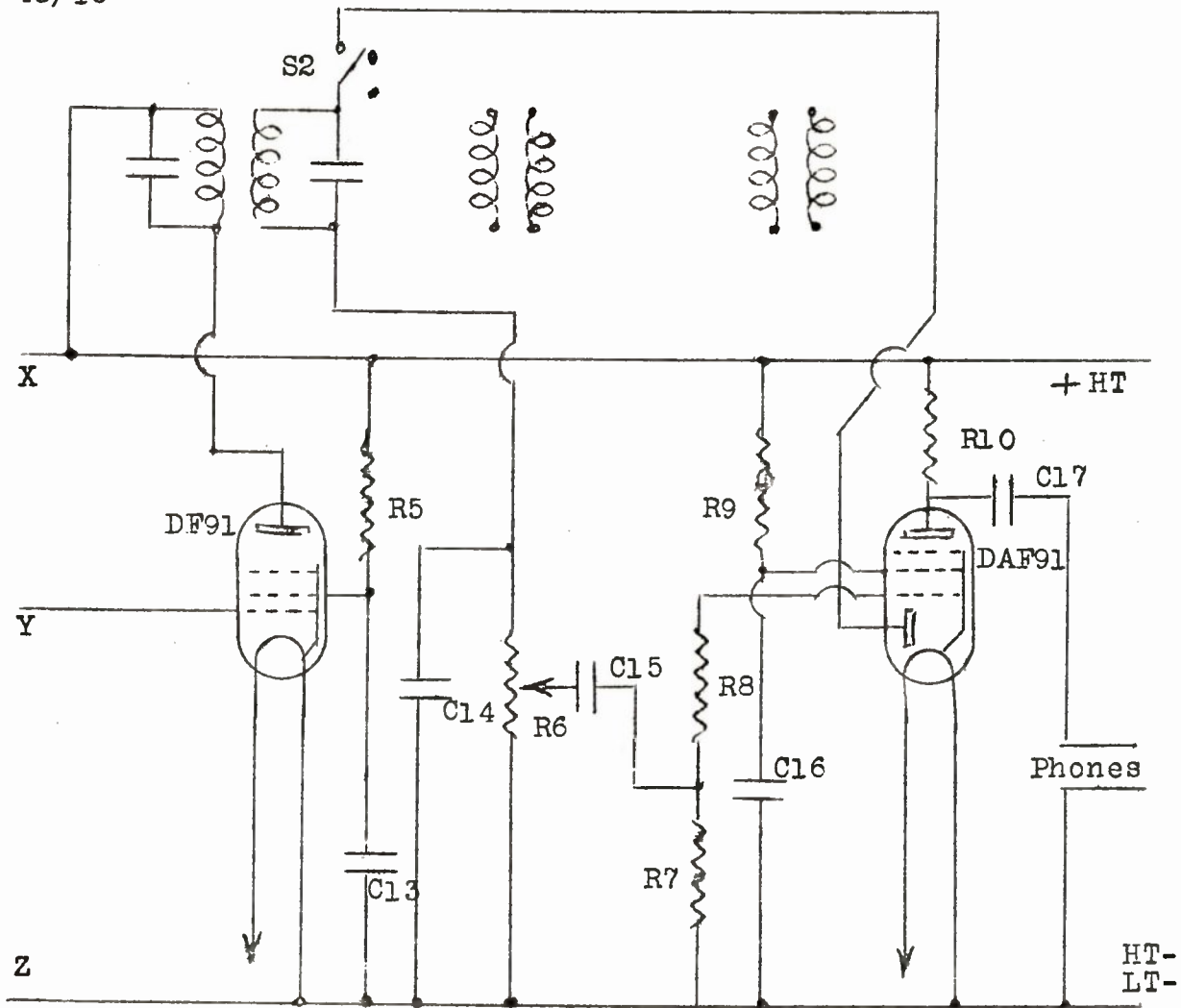
Despite this unfortunate tendency the S-R type is undoubtedly the simplest and least costly means of affording the SWL a start on VHF and Rx discussed here is a proved success.

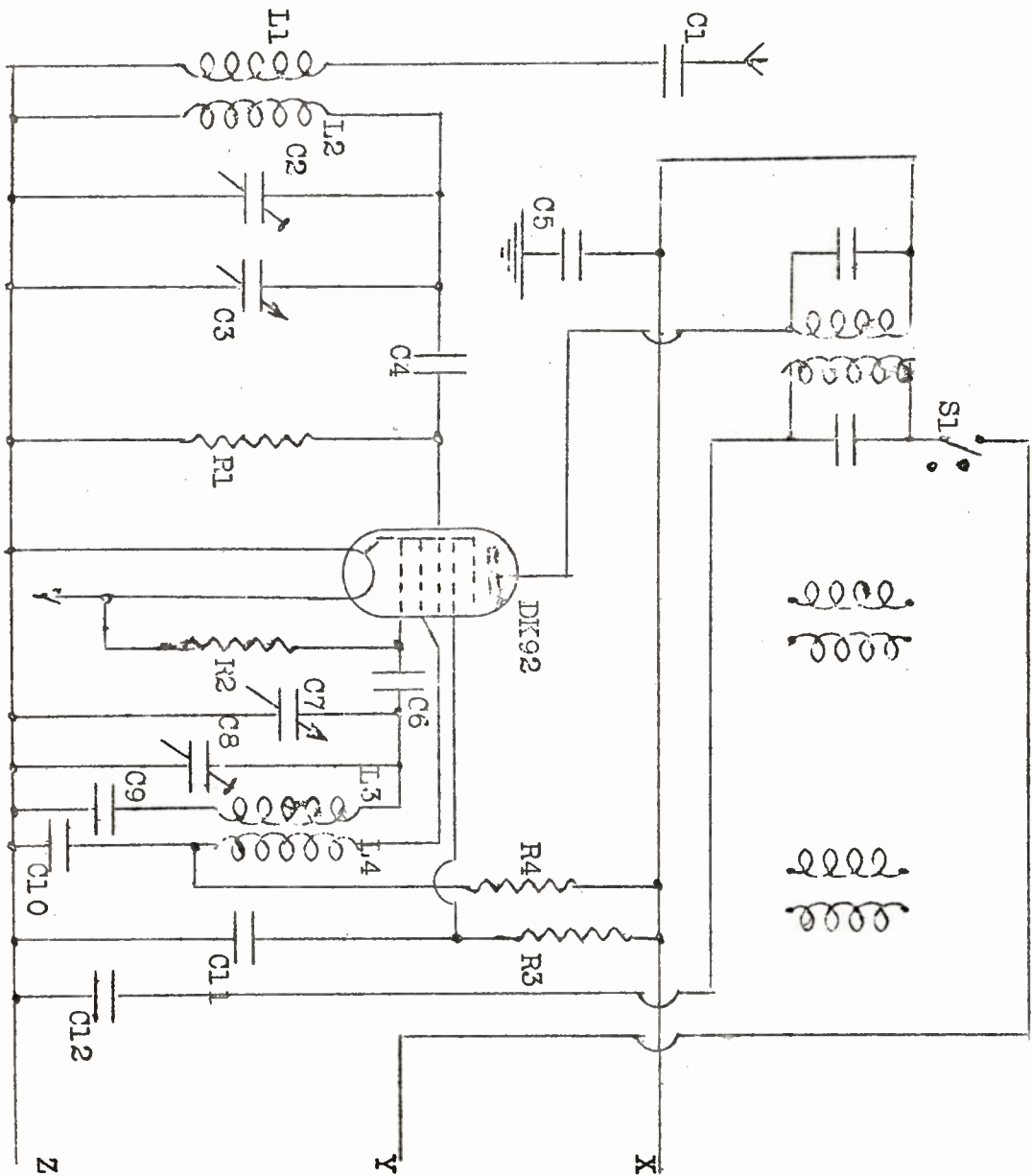
The valve used is an EC52, supplied from a 65 volt HT and a couple of 800 cycle lamp batteries. Probably the most important note to make

C3IHI's FSK Circuit.

.....: THE H-Q Rx :.....

Well, we've had our moan about this in the Editorial! So far this year the family have produced spasms of (1) erysipelas, (2) mumps, (3) pneumonia, (4) pleurisy, (5) tonsillitis. So of course the H-Q Rx has had to wipe it's own nose! Actually, however, we have made quite a bit of progress, having acquired a set of six 465 Kc/s IFs (of somewhat dubious service origin) which will enable us to make a real step forward within the foreseeable future. Also in the Editorial we had a piece to say about miniatureisation and, having learnt our lesson that for a purely experimental undertaking you must have enough room to swing an iron, we got busy between spasms 3 and 4 above and knocked up a nice rigid chassis 10 $\frac{1}{2}$ " x 8" x 2 $\frac{1}{2}$ " deep with a panel 7 $\frac{1}{2}$ " x 8". The pieces for this came, actually, from the cabinet of a semi-stripped IFF unit which we "won" for 3/- from a local junk sale and the whole thing went together in it's new form without any cutting at all. What





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is more, all the edges are nicely flanges which gives a most professional appearance and extra strength. This chassis and the ex-service IFs are, let me repeat, solely for the experimental stages of the job. Once we have the prototype perfected we shall rebuild it into the form we have already considered, with the egg-box screening and double deck chassis and, perhaps, with home wound IFs. But to wind IFs at this stage, and under our present difficulties, would take us far too long.

Having thus got within sight of all the necessary components (and hoping that our junk box will produce the remainder as we progress) we have given some thought to the BASIC circuit diagram. This has resulted in a perfectly normal and entirely standard FC / IF / Demod layout, the diagram of which appears on pages 10 and 11. It will be seen that the appropriate leads are switched so that one, two or three pairs of IF transformers can be used as desired. The first pair of IFs are, of course, permanently in circuit as they form part of the basic circuit, while the second and third pairs have been drawn only as skeleton components. It is here that YOUR experience and YOUR designing ability can come in to play.

THE BEST SUGGESTIONS RECEIVED FROM ANY MEMBER FOR THE LAYOUT OF THIS SUBSIDIARY CIRCUIT WILL QUALIFY AS AN ENTRY FOR THE CARTER SHIELD AND WILL CARRY WITH IT ONE YEAR'S FREE SUBSCRIPTION AS WELL. Points to be born in mind are the inclusion of a crystal filter, S-meter and any other details which will give our QRP single signal Rx the advantages of the best commercial products. The "basic" circuit need not be reproduced in full, but circuits submitted MUST be clearly drawn especially as regards the points of contact with the basic circuit if the latter is skeletonised. Please do draw your circuits on paper separate from other correspondence and do not try and reduce the scale to note paper size.

Note that in the basic circuit diagram the IFs have been taken out ABOVE the HT line in order to clarify the layout and give room for the following IF sequence. It makes no difference to the circuitry.

(Editor's note:- I shall really have to sack that printer. I see he has got the two halves of the diagram on pages 10 and 11 round the wrong way. Unfortunately it is too late to change it round now so, on his behalf, OMs, I must apologise and hope that you will be able to imagine it as it should be).

Component values:--

C1, to be determined by trial. C2, 3, 30 pF. C3, 100 pF. C4, 100 pF. C5, 0.1 uF. C6, 100 pF. C7, 100 pF. C8, 3/30 pF. C9, 150 pF. C10, 0.01 uF. C11, 0.1 uF. C12, 0.05 uF. C13, 0.01 uF. C14, 100 pF. C15, .005 uF. C16, 0.1 uF. C17, 0.01 uF.
R1, 1.0 Meg. R2, 27 K. R3, 180 K. R4, 27 K. R5, 27 K. R6, 1.0 Meg. R7, 6.8 Meg. R8, 22 K. R9, 2.2 Meg. R10, 470 K.

Incidentally the new IFs have centre taps to both primary and secondary windings.

.....: PLEASE! :.....

Please, OMs, when writing to us do remember the following points which add surprisingly to our peace of mind here:-

- (1) Date your letters
- (2) PRINT your address
- (3) Keep contest entries separate from other correspondence.
- (4) Put your name on all contest entries
- (5) Submit contest entries in the same form in which they appear in the mag

.....: THE CARTER SHIELD :.....

This is the oldest trophy held by the Society and is presented annually for the most meritorious development in QRP technique published in the mag during the year. We have mentioned it this month in connection with the H-Q Rx, but ANY QRP gear is eligible.

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.....: THE QRP "200" CONTEST :.....

	COUNTIES WORKED (Mc/s) :--			TOTAL
	1.8	3.5	7	
1: G3AGQ	54 (-)	47 (-)	9 (-)	110 (-)
2: G2BOF	50 (50)	37 (37)	18 (18)	105 (105)
3: G2AOL	55 (47)	45 (10)	3 (-)	103 (57)
4: G3HJL	-- (-)	35 (16)	-- (-)	35 (16)
5: G3FAU	16 (-)	-- (-)	-- (-)	16 (-)
6: G3HCW	12 (-)	-- (-)	-- (-)	12 (-)

Another of our printer's errors crept in last month when we credited 3HJL with a few too many in his All Time score. Thanks for pointing it out, Fred. So 2BOF has got there in theory at least since Bob will not be able to compete from Vancouver (unless, perhaps, he strings up a few hundred Yankee transistors!). No doubt BOF will be there if fact by next month. Come on, Sam, don't let him get away with it, OM!

.....: THE 1953 QRP C-Z PANEL :.....

	COUNTRIES					C Total	GRAND Zones	GRAND Total
	3.5	7	14	21	28			
1: P.Huntsman	12	33	82	7	-	89	27	116
2: E.W.Gardiner	23	8	71	22	-	82	24	106
3: A.E.Stonestreet	18	23	54	-	2	70	21	91
4: N.Bason	8	14	50	1	-	55	19	74

