

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

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Q R P

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JOURNAL OF THE Q R P SOCIETY

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THE ONLY SOCIETY IN THE WORLD CATERING EXCLUSIVELY
FOR THE LOW POWER AMATEUR RADIO ENTHUSIAST.

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.....: NO JULY ISSUE :.....

"Time flies", the philosopher remarked; "We can't, they move too darned fast!" the scientist replied. Of course the philosopher was really thinking of the fact that it had come round to hoilday time once again, and so are we here at HQ -- during the two most vital weeks of next month the bug-shack-office-trap will be empty, and that means that as for several years passed there will be no issue of the mag for July. Our older members will be used to this bit of secretarial-sabotage by now, but for those who have joined us during the year I must explain that it has been found quite impossible to produce a mag during the month when Horrace, the office boy, is away at the sea-side. But we shall be with you again in August with our batteries topped up and a new tip to the finger we use for typing.

.....: A CHAT ABOUT REPORTS WITH BOB IBALL :.....
(continued from last month)

The formation, or layout, of a report calls for great care. The method of presentation is important. At all times try to be neat. So let us have a look at what really goes into a detailed report shall we?

A sheet of typing paper (foolscap size) is handy for this. Starting at the top left hand we put the DATE. On the right side put the frequency -- if you are able to give the exact freq (ie, 1830 Kc/s) do so, but if not just put "In 1.8 Mc/s channel" or as the case may be. Underneath the date comes TIMES (always in GMT), and then you can commence to write details of the transmission -- for example, "19.30 GMT, calling W7ZZZ". Leave a space, then put "Signal, RST - - -" (whatever it is). If there is any QSB give type and the strength he faded to -- ie, "with a quick and deep QSB to 339". Full details of QRM must be given, and in doing so try to identify source of QRM; above all give

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its strength and how far to the HF or LF it was, also if you had difficulty in copying etc. Carry on like that till you have completed your listings. When you have done so the next item is KEYING -- how many of you have thought to mention this? Very few, I think, and yet it is important. In mentioning keying don't be afraid to be critical or complimentary -- give your reasons. Next heading is RX -- state type of receiver, mains or battery, and type of valves in use; also state if the reception was on phones or speaker. After this comes ANTENNA -- the usual details such as length, height & direction. This is followed by LOCAL WX -- some think it is not essential, but I have always found it to be of interest to the amateur. Then, CONDX -- details of strength of noise level (whether high, low, etc) whether QSB is prominently noted, all helps to convey a clear picture. Finally give a selection of signals heard, with RST and QTH of stations if known. The object of this is to give an idea of what you heard during the session and it is a good idea to cover at least one hours listening. If you first heard the station you are reporting to at 19.30, try to make your list of signals heard cover from 1900 to 2000. Use your discretion according to existing circumstances. Why one hour, you ask? Well, conditions can change even on 160 several times in an hour -- skip can lengthen or shorten at will. For your remarks (where necessary) you could mention that he was the first GM/GW or what have you to break through, or that he was the only one heard that time. . . . OK, then. New ideas will present themselves when one has got the hang of this type of report, but don't overdo it.

Go to it, lads! Lets see if a better standard of reports can be made. No need to destroy your cards -- you can always make out a condensed report on one and include it with your detailed report.

When reporting to a phone station make remarks on quality of transmission, but unless you have the equipment to give an accurate reading on modulation you should not state definitely that he was

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fully modulated. A tip passed on to me some time ago was that, to give a reasonable estimation on modulation, tune to zero beat with the station and engage reaction on the receiver. If the speech stands out above the carrier then the modulation can be termed as "good". Be sure to inform the station why you think the modulation is good. I should think that switching in the BFO would also be in order to carry out such a test, but am not sure about this.

(The final instalment of this series, in the August issue, will give a complete sample report -- Ed:)

"STRAIGHT FROM THE STATES" ::::::::::::::: REPORTED BY BUD RUGEL, WØPRM.

This month we welcome two new members into our fold. First we have "Alf" Wilson, W6NIF/4 in Cocoa Beach, Florida. Alf is at present with the U.S.A.F. Guided Missile long range proving ground down there. The rig consists of a 1626-6AG7-807 combination, Rx is a Super-Pro with Q5er. The antenna is a close spaced 20 metre rotary and activity at present is limited to 20 CW. In all 85 countries have been worked since last Feb. Maximum input is 30 watts. Alf's location is very fine with the shack located on a salt marsh and the antenna is actually over sea water when the tide is high. Alf has been Hamming for 20 years with 10 watts to Kw input, but is now a confirmed QRP man -- finds more satisfaction in using low-power.

Our other new member is Charles C. Larcom, W5WZV of Lawton, Okla. "Chuck" is a retired Army man and enjoys amateur radio and fishing as hobbies. His amateur activities date from 1923 and has operated rigs from 1 Kw input to $\frac{1}{2}$ watt. Main interest is construction and experimenting with low-power rigs. Chuck has just finished an all-band Tx using a PP 3A4s in the final at 4 watts input. Companion Rx is a compact 6 tube battery powered job. The Tx is also battery operated. Past calls

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include NU7IW, W7AOQ, W7JWX, W6PGW and KALUS. Home operated rig is a TBS-50 running 30 watts input.

Hank, W1ZPA writes in to let us know he has enlisted in the U.S. Air Force and at present is in training at Sampson Air Force Base in New York. Will try to get into Radio and will be on with low-power as soon as the work schedule permits.

Al, W8FRD, writes in that he is somewhat of a stamp collector and would like to swap with some of the fellows. He also would like to write to one or two of the boys in G. Al is at present very interested in Transistor Tx's and hopes they have a diagram or two in future issues. For any interested parties he will send, free of charge, the following: Call book, Summer 1949, Fall 1950-51 and winter 1952; also a 1949 Handbook. So how about getting in touch with Al (A.Vasko, W8FRD 208, South Main St, Swanton, Ohio, U.S.A.)

New ones at WØPRM are JA6AR and JA6AD -- new country, zone and continent!! Very little improvement in conditions as yet.

Till next month, 73, Bud WØPRM.

EDITORIAL NOTE:-- The following extract from Bud's personal letter to me may be of interest to members about to go on holiday and to those who are also members of RAEW. Bud says -- "No doubt you have read of the bad tornado at Udall, Kansas, night before last (May 26th) where 74 were killed and 200 injured. Udall is 50 NW of Independence and the town was completely destroyed. Population was 410 so you can see it was terrible. There was absolutely no building left standing at all. The emergency phone net on 3910 Kc/s with WØREP as NCS has been doing a wonderful job furnishing communications. Had nice rain here last night, 2 inches in 45 minutes! Also some hail. There were 38 separate and distinct tornados sighted in Kansas and Missouri last night but no lives lost. (Maybe the Wx other places is almost as bad as our own variety after all which may be a back-hand sort of consolation -- Ed.)

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TRANSISTOR GROUP NEWS ::::::::::::::: REPORTED BY ROGER TAYLOR, G3JAL

Not a great deal of activity to report this month. 1.8 Mc/s is very noisy (QRN etc) at this time of year and most people don't feel inclined to listen for very weak signals at the risk of being deafened by static crashes.

The best news of the month comes from "Monty" Banks, G02CNC, who has been informed that his QSO with HB9T (532 miles) on 1.8 Mc/s is now BEING OFFICIALLY ACCEPTED AS A WORLD RECORD. All members of the QRP Society will join me in congratulating our President on this outstanding achievement.

Recently Monty has been too busy with the Sark expedition to do anything with his TTX.

Since we are getting quite a large membership in the States I am wondering if "Bud", W0PRM, or one of his colleagues could send us some details of Amateur Transistor activities in W-land. It would be very interesting to compare methods and results. What say, OMs?

Finally, if any reader wants an inexpensive guide to Transistory, I can recommend "Practical Transistors and Transistor Circuits" by J.S.Kendall, Assoc.Brit.I.R.E. -- No 123 in the Bernards Radio Book series, price 3/6.

For myself, I hope to resume my attempts at making transistors shortly and the book I mention gives many hints in this direction -- no, hints is not the word! It describes the construction from start to finish.

Do let us have more news for the next issue. Send your letters to 63 Colliers Water Lane, Thornton Heath, Surrey.

Transistors are now available from BRIMAR -- For data sheets write Standard Telephones and Cables Ltd, Publicity Dept; Footscray, Sidcup, Kent, or phone F00tscray 3333.

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V. H. F. GROUP NEWS ::::::::::::::: REPORTED BY TED STONESTREET.

Some VHF news at last! Monty, GC2CNC, has been active for a short period in early June and worked F8TZ/P, F8ME, F8MW and F3QE. He also heard F3ER, F8TD and F9OK -- all Fs, AND NOT A SINGLE G was heard -- where are they all?

John Cusdin (as reported in Society News last month) has been very ill. He has all our best wishes for a speedy recovery. He has had a couple of letters from George Stokes re the 'Cusdin Special' 1-V-1 and George is apparently thrilled with the rig. It was described in the August 1954 issue of the mag.

George Stokes himself says that he has heard the usual stuff so far with the 1-V-1, including Police, 'Fire', Taxi, London Airport, etc but up to date has not found the 144 Mc/s band. This is not to be wondered at due to lack of activity. There is going to be such fun sometime or other -- George threatens to send a reply paid telegram for me to send grongrats when he does locate Two, and Norman Bason promises to "Blow his top" when he eventually hears a sig on the band.

Norman Bason, while he may be having no joy with Two, is certainly doing well on other bands as proved by his climb to the top of the C - Z Panel!

For myself, I have very little to report as I have given Two a temporary miss in favour of the LF bands (hoping to get a bit up that Panel), but I do check the channel at least twice a week.

Alec Clark, G3BII, is in the same boat with nothing to report, but by the sound of things his gear is going through the mill when he has got things fairly settled in his cottage.

I wonder what excuse Bob Iball can offer for the Tx men who do not QSL to stations worked. Alec, '3II, is thoroughly disgusted with these types as he is still unable to claim VHFCC, not from want of working stations but from the lazy attitude of stns in replying.

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I wonder if any of the boys heard our old friend G2DHV who was working G2DHV/A/P/E up in the Norfolk Broads during his fortnights holiday. Nothing was heard here although I listened for George.

Cheerio, '73, Ted.

.....: SOCIETY NEWS & ACTIVITY :.....

"MONTY" BANKS, G2CNC, is after me with a gun! In reporting the proposed Sark expedition last month I expressed some doubt of the existence of a "pub" on the Island. Monty says there are SIX -- and he was going to patronise the LOT! Had a visit recently from G3IIT who was most impressed with the '2CNC Top Band antenna (galvanised wire fence).

JOHN CUSDIN says that he is "up to his eyes in work" which sounds as if he has well and truly recovered from his illness. John very kindly offers us the gen on his new FM rig. Unfortunately it eats 80mA at 250 volts so it cannot be regarded as strictly within the QRP category, but we should like to have full data for strictly personal use, OM, if nothing else.

GEORGE PARTRIDGE, G3CTD, has been suffering from laryngitis and missed NFD in consequence (Hope you are fit again now, OM). Says he had a very pleasant visit at Whitsun from Vic Brand, G3JMB, who was on a cycling tour of Thanet. George has acquired a Marconi TV10 Tx which is a QRP ECO/PA using 7193 & TT11 in PA with provision for MCW using L63. Tests showed the L63 inadequate though MCW note was fb. He is now testing with 6L6 in mod socket and has had quite encouraging results. Snags at the moment are QRG drift on higher freqs and inability to work BK. Bands covered are 80, 40, 20, 15 & 10 metres. Cost was £4!

R.L.G.KEMP is in the RNW(W)R in which he uses a B28. He finds it leaves little time for amateur radio but, nevertheless, he has plans for a small battery superhet for Top Band and, possibly, a converter for Two.

BILL HARDIE (Oshawa, Ontario) is in the process of moving to a

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to a new address and has already got a 100' long wire in place and is thinking around the construction of a QRP Rx. Seems it will have to be highly selective as CKLB, in Oshawa, has moved from 250 watts to 5 Kw on June 1st.

CLIFF LEAL, G3ISX has been most comprehensive in his recent activities. He says "Apart from finishing my harmonic indicator have not done much here. Worked VU on 14 Mc/s for a new one, loosed off two rolls of film over the holidays, took part in NED, and have said a few choice remarks about the rail strike, hi!" Cliff is planning a new two channel (14/28 Mc/s) Tx to try and get round the TVI problem.

"MACK" McINTOSH is on holiday in the neighbourhood of Dundee and says it is "great" up there with fb weather and well earned rest, but strictly NO radio. (And tnx for sub received OK, Mack).

JOE STEPHENSON has found recent conditions moderately good but "the same countries most nights", and he has noticed an increase in short skip. The allotment is beginning to claim its share of attention now and construction has been shelved.

L.G.YOUNG, G5GG has been QRT for some time now but is hoping to find some time for radio next winter. He has been licensed for 5 or 10 watts for 32 years now though in most of that time he has never used more than 1 -- now that he has to buy 150 he is wondering what to do with the odd 149 (Guess we might put an add in our spares column for you, OM: "For Sale, new and unused, 149 watts, buyer collects!")

W.H.WRAIGHT was on the final stages of constructing a "Huntsman O-V-2" when he had the misfortune to break the grid pin of one of the 954s. This was more than a pity as the garden has now relegated the air test of the rig to the autumn.

BILL "RED" IBALL made an interesting comparison of QRP-QRO reception during RSGB Field day. On the QRO Rx (well known commercial job) he logged 17 counties in 1 hr 20 min. On the QRP Rx he recorded 33 counties in 2 hours 35 min, rarer ones being Cambridge, Suffolk, Beds

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and Angus. He was astonished to hear a real specimen of air-hogishness recently when he was listening to a net of mobile stations testing and an obviously QRO local came up smack on the frequency calling CQ. Bill wonders if none of these chaps ever listen before they transmit.

NORMAN BASON, having been interested by Cliff Blatherwick's harking back to the "good old days" of bright emitters, has sent along some samples of circuitry of vintage 1922 and earlier. Having a quantity of said Blackpool illuminations in the very bottom of the junk drawer, Norman tried out one or two of them in their appropriate hook-ups and reports that much light but no joy was emitted (The gremlins are a generation older now, OM.)

(Hope you will forgive me, chaps, cutting the News Feature short this month -- have a great deal still to get in this issue and I see I am already half through my quota. Will give it extra space next time!)

.....: OPERATION S A R K :.....

Official report from Station GC3DVC/P, active in Sark between 9th and 20th June, 1955, both dates inclusive:--

Operators were GC2CNC and GC2FMV. CW only was used. Frequencies were 1830 Kc/s and 1848 Kc/s. Transmitter (1T4 CO / 3Q5 PA) drew maximum of 9 mA at 90 volts, or 0.81 watts input when batteries were new. Rx was a 0-V-1 (1T4 / 1T4). Antenna - half wave end fed, roughly NE / SW, max height above ground about 25 ft.

Results -- 29 different stations worked. 44 contacts made. Best Dx was G5JU (Birmingham) at S4. Best report (other than from GC) was from G3PU (Weymouth) who gave S8 at 1406 BST on Sunday June 19th. Dx heard included GM3EHI, GM3EST, an OK2 and a G5 working EALCP in French (GM3EST was called for some time).

Stations worked:-- G3FKF (Salisbury -- first Sark/G QSO), GC2AAO,

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G5JM, GC3HFE, GC6AH/A, G3BMY, G5JU, G3CMJ, G3HQQ, G3GHN, G3JOJ, G3AKU, G3GZB, G3GQS, G3JJZ, G3JEL, G4RZ, G3PU, G2NJ, G3AZY, G2FIX, G2AOL, G3JLB, G3FAS, G3JVL, G3JJG, G3HIW, G3BHR, G3JAM.

Thanks are offered to all who gave the operators a clear field (a courtesy which G3JEL did not extend to them) and asked others to do so; thanks are also due to those who worked them more than once and thus kept them informed of signal strengths, including GC2AAO, GC3HFE, G5JU, G3PU, G3HQQ, G3JJZ, G3GQS, G3CMJ. Particular thanks are given to G5JU who did more than anyone else to ensure the success of the expedition.

.....: QRP SOCIETY SPARES SERVICE :.....

WANTED:-- XTALS, 1850/1950 Kc/s & 3500/3600 Kc/s. POWER SUPPLY, 300v @ 150 or 200 mA. MAINS On/Off Toggle Switches. METERS, AC &/or 1 mA or less, 0/50, 0/5 & 0/100 mA. VARIABLE CONDENSERS, 250, 350, 500 pF & 100 pF. KEY JACKS, short type & PLUGS. TRANSFORMER, mains 250 v 6.3 v. METAL RECTIFIER, 250v. VALVE, 6L6. CHOKE, smcething (LF). ELECTRO. CONDENSERS, 4, 8, 16 & 25 uF.

SALE:-- VARIABLES, 100pF Tx type. POT, $\frac{1}{2}$ meg. R1224A, 5v battery RAF SH (with RF stage & reaction) 1/9 Mc/s in 3 switched bands; good condition but less cabinet; £4 O.N.O. plus carriage. VALVES: All at 5/- each plus 6d carriage. GUARANTEED OK. UF42, UB41, UL46, UCH42, 6F13, UL41, UY41, 6J7G, EL32, EBC33, EF37, EF37A, CL33, 25L6G, 6SN7, EF50, PZ30, 50L6GT, X78, MHL4, MKT4, 6SH7, 1299A, VT135, VR54, RV2P800, A15, 6K7G, STV150/15, 6F6G, PY31, 6J5M, 12J5GT, 3B7, C7G, 6X5G, 12SQ7, 12SA7, X41, U50, CY31. Two 813 brand new, unboxed, guaranteed, at 40/- each or offers.

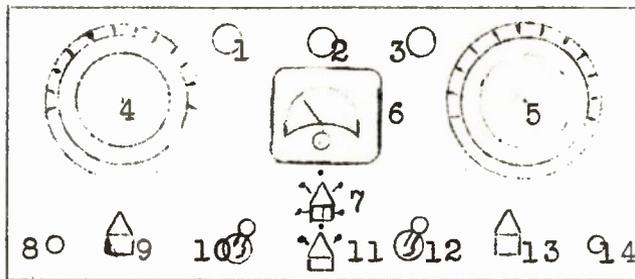
Write direct to SPARES MANAGER, G3CED, 17 Ethel Rd, Broadstairs, Kent, enclosing PLAIN stamped envelope. Do not enclose money .

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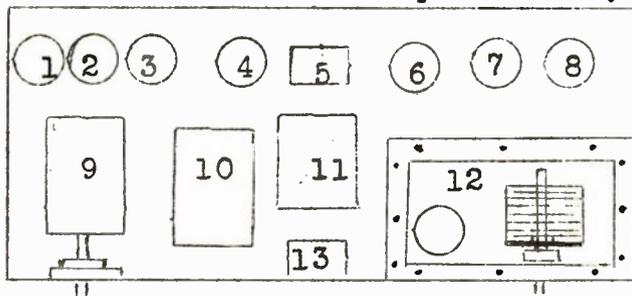
POWER SUPPLY components list:-- V1, 5Z4. T1, Ellison transformer, type MT137, 250/0/250 125 mA, 6.3v 7A, 5v 3A. T2, Mod tranny. T3, 5H 200 mA choke. F1, 500 mA fuse. F2, heater fuse. F3, F4, 1 A fuses. C1, 20 uF. C2, 16 uF. C3, 3 x .001 1000 v working. S1-2-3-4, Single pole 3-way 4 bank switch.

Point A goes to antenna relay. Points B and D carry Mod HT1 and 2 respectively. Point E is PA HT. Point G, VFO & BA HT. SW1 is a SPDT for phone or CW. SW2 is the mains DP "on/off". X, Y & Z are indicator lamps, X being amber for "NET", Y green for "STAND BY" and Z red for "Tx ON".

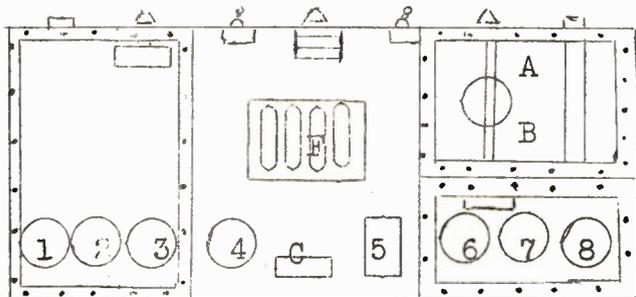
FRONT PANEL measures $16\frac{3}{4}$ " x $7\frac{3}{4}$ " and is set out as shown in the sketch in which 1, 2 & 3 are the X, Y & Z indicator lamps respectively; 4 is the VFO dial and 5 the PA dial (both ex TU unit); 6 is the meter and 7 the meter switch in which positions, clockwise are BA I-Drive-PA cathode-PA volts-VFO I-Spare (to be used for Total I). Point 8 is key socket; 9 Drive control; 10 mains on-off; 11 "net-stand by-send" switch; 12 Phone-CW switch; 13 Mod gain; 14 mic socket. The front panel is just the size of a TU case, but of course can be altered to suit individual requirements.



by-send" switch; 12 Phone-CW switch; 13 Mod gain; 14 mic socket. The front panel is just the size of a TU case, but of course can be altered to suit individual requirements.



CHASSIS PLAN, the bottom sketch, shows 1, QSL50/15; 2, EF91, VFO; 3, EF91, BA; 4, 5Z4; 5, Mod tranny; 6, 6AQ5; 7, 6AT6; 8, 6BR7; 9, VFO box; 10, Mains tranny; 11, choke; 12, PA screen box with 5763; 13, meter. The chassis measures 15" x 7".



the chassis with the addition of letters A which is the mod gain extension shaft, B which is a brass tube of $\frac{1}{4}$ " dia for input screening, C being the smoothing condenser and F the fuse board.

(The final comments and sketches will appear in the next issue).

INTRODUCING TRANSISTORS - PART 1 - By "Point Contact".

Although the transistor has been in the news since July 1948 when Bordeen and Brattain of Bell Telephone Laboratories discovered it, small quantities have only been available in this country for the last two years. There are about 15 types available at the moment in this country of which four are easily obtainable -- off the shelf from a retailer or direct from the maker.

The cost of these devices is surprisingly low when it is considered that most manufacturers are only in the pilot-production stage. Actual prices range from 30/- to £5 for the more popular types with 35/- an average figure. These prices compare well with ordinary valves and also with the cost of transistors in the United States where it is much higher.

Transistors are NOT the answer to all electronic problems. In fact, so far, it has been obvious that the applications of commercially available transistors are severely limited.

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As regards Ham or home construction use, transistors have been used with some success in the following applications -- Low Power transmitters (Top Band and 80 metres), Top Band and broadcast band receivers, keying monitors, simple AF amplifiers, relay sensitivity amplifiers, audio oscillators (either sine-wave or multivibrators), and other cunning accessories. Commercially, in this country, only deaf-aids and HT generators have been marketed, whilst in the U.S. it has only just reached the stage of commercially made broadcast Rxs (by Sylvania) being in the retailers windows.

It is the writer's considered opinion that there are very few transistor circuits published that work straight off and do not require some kind of "frigging" or post-construction adjustments, not merely to the RF circuits, but to the DC conditions. This, in valve circuitry, is frowned upon by development engineers.

However, "nil desperandum", it is on conditions like these that that Ham and the experimenter thrive.

A very good booklet on transistor theory and circuits, to help acquaint you with the art, is "Transistors and Crystal Diodes" by B.R. Bettridge of the G.E.C., published by Norman Price Ltd at 5/-. And please do not be led into the realms of the tomes by Shea and Shockley otherwise I am sure you will be left gasping.

(Further articles in this authoritative series will appear as regularly as circumstances permit -- Ed.)

..... QRP SOCIETY CONTESTS

THE C - Z CONTEST (for the Partridge Cup, now held by Peter Huntsman) is for the highest annual (Jan to Dec) score of countries & Zones heard on five bands with receivers of not more than $1\frac{1}{2}$ watts HT consumption. A country or zone heard on more than one band may count once only in the total.

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Mc/s: --	<u>3.5</u>	<u>7</u>	<u>14</u>	<u>21</u>	<u>28</u>	<u>COUNTRIES</u>	<u>ZONES</u>	<u>TOTAL</u>
Norman Bason - - - -	15	36	111	26	-	118	32	150
E.W.Gardiner - - - -	12	9	92	20	-	108	27	135
Keith Ranger - - - -	-	59	99	-	-	106	28	134
Ted Stonestreet - - -	13	18	97	-	-	96	28	124
Joe Stephenson - - - -	16	2	76	14	-	82	23	105
Mack McIntosh - - - -	20	27	72	-	-	72	26	98
D.G.Gordon - - - -	17	4	60	20	1	68	22	90
Peter Huntsman - - - -	-	-	36	-	-	36	17	53

TOP BAND PANEL -- an annual contest (Jan to Dec) for the highest score of countries and counties heard on 160 metres with an Rx consuming not more than $1\frac{1}{2}$ watts total HT.

	<u>COUNTRIES</u>	<u>COUNTIES</u>	<u>TOTAL</u>
Bob Iball - - - - -	16	67	83
Bill Iball - - - - -	11	57	68
D.G Gordon - - - - -	2	27	29
Norman Bason - - - - -	5	22	27

And while we are on the subject of contests we must remind you of
P A R E C .

Sincere thanks are due to Messrs Southern Radio of Salisbury and to The Teletron Co who have both been good enough to donate prizes to be selected from their stocks by the winners in this contest.

If you have not got the rules at hand mail a post card to the Hon Sec.