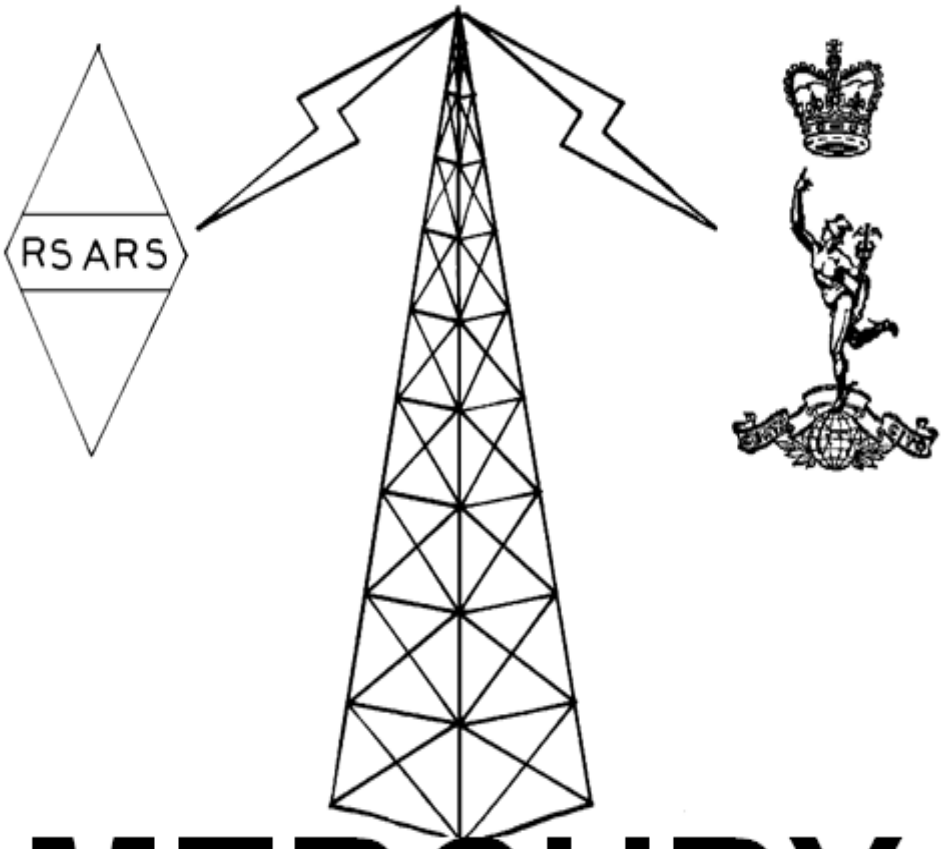

MERCURY

THE JOURNAL OF THE ROYAL SIGNALS AMATEUR RADIO SOCIETY

NUMBER 50 WINTER 1974/75

ROYAL SIGNALS AMATEUR RADIO SOCIETY
(AFFILIATED TO THE RADIO SOCIETY OF GREAT BRITAIN)

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HEADQUARTER STATION : Normal call-sign - G4RS. Special call-signs : GB3RCS, GB2AAD and GB3AAD (Aldershot Army Display) or to suit event. ACF/CCF call-sign - G4CCF. Locations : G4RS at Blandford. GB2AAD and GB3AAD at site of Aldershot Army Display. G4CCF with G4BTW. Blandford Camp: Grid Reference (1" Ordnance Survey Sheet No.179) 921091. QRA Locator : YK10e. WAB Area - ST 90.

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PRODUCTION : "Mercury" is produced at The School of Signals, by kind permission of The Commandant.

DISTRIBUTION : "Mercury" is distributed by The Royal Signals Amateur Radio Society to members only. It is available through trade.

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EDITORIAL

G3DPS

"MERCURY"

The dictionary tells us that 'Mercury' is (among other things) "The Roman God of Commerce, identified with the Greek Hermes, the Messenger of the Gods, a messenger, a title for a newspaper....."

Our 'Mercury' derives its name from The Royal Signals cap badge, but we should not overlook the other definitions. It should certainly be a messenger and, we hope, a newspaper. But a messenger must have news to carry, and a newspaper news to print. This is where we rely upon our membership. In the past we have been fortunate in getting articles from members, some long, some short, some technical, some humorous, all most welcome. We would like to think that such articles will still arrive at HQ in the future to ensure the continuance of "our newspaper".

In this issue it is again mainly the Old-Timers that keep us in print. Once again 'BQ' records a little more amateur radio history in a style that is a pleasure to read. G5YN passes along the 'gen' on his linear - not, perhaps, the chromium-plated, crackle finished 'black box' which demands a three figure cheque in the shops, but a practical and proven design which will, it is hoped, encourage one or two members to commandeer the kitchen table.

Several pages are devoted to incoming mail, and it is from members' letters that we probably glean our greatest amount of information. HQ is always interested in hearing from members, whether it is a short note on the latest DX worked, the latest addition to the shack (or family!) or even a detailed description of how you accepted that 520,146 Pounds cheque from Diana Dors when the XYL posted that coupon you were keeping a record of Zones Worked on.

Several dates are mentioned in this issue and should be written in Light Blue, Dark Blue and Green ink in your diaries. The last week-end in June sees RSARS as part of the Royal Signals Display at Aldershot. This is now becoming an annual event, and one at which we are pleased to meet more and more members. Bear in mind that it is a big Display and is well worth getting up early to attend. A week later we should be at Norton Barracks, Worcester, for Exercise Signal View IV. Again, open to the public, it is believed, on the Saturday. Whether RSARS will appear at ARMEX '75 at Harrogate a little later has yet to be decided. The Event-of-the-Year takes place on July 26th - The Annual General Meeting here at Blandford. More details later, but it is hoped that the number of visitors will exceed those of 1974.

Thought is still being given to a Midlands DX-vention and thanks are due to G3ADZ who sent along suggestions. Are you prepared to help out????.

It was pleasing to see the amount of effort that the New Zealand members have put into getting a local 80 Metre Net going. It is hoped that a Sunday morning Net will be possible and details will be given later. This of course, will be on 20 Metres (or perhaps 15).

In closing, may I remind those members who still have not paid their 1975 sub., that June 30th and "Discharge" comes round all too quickly. A list of such members appears elsewhere, although it is appreciated that one or two may have paid since the list was compiled

See you at Aldershot/Worcester/A.G.M. ???

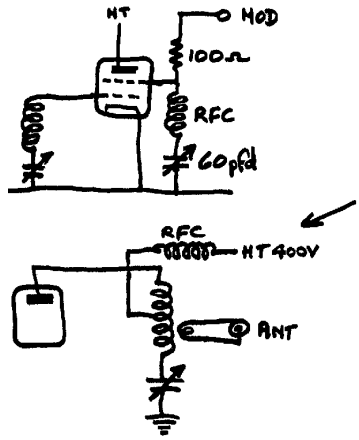
Heard on a 20 Metre pile-up :
DX-pedition : You're 5 & 9, QSL?.
European station : You're 5 & 9 also, Who did I work?.

FROM THE MAIL-BAG

From : Bill Begg, RSARS 624, 68 Tomnahurich Street, Invernes, Scotland. ".....The Atlas arrived OK and has been handed over to the junior op. - I hope it will give him some up-to-date references for his exams..... ....Had a big sort out of my QSLs to find that I am not so far advanced as I thought: after sorting out duplications etc., I find I have 220 QSLs with about 30 'in the mill', so I must get around to making the claim when Ray gets settled in his new QTH....." Regards and 73, Bill.

A letter from a serving member reminds of the constant need for serving radio amateurs to be security-conscious and be aware of current orders regarding their hobby. This particular member was recently fined and posted for failing to hand in QSL cards received by his Regimental Club station although, he says, he was instructed not to do so. The DCI which, until recently, dealt with this subject, is now believed to be time-expired, but in many cases extracts or copies of this Instruction are included in local orders and are still current. Do not be fooled by the fact that the original Instruction did not require cards to be handed in, only reported - your local Order may require otherwise. Check your Standing Orders, DCIs, etc. NOW. REMEMBER - SECURITY IS EVERYONES BUSINESS.

From : ??? (The following letter was postmarked REIGATE AND REDHILL and when opened produced an interesting letter with, unfortunately, pages 1 and 2 missing. Hence there was no heading address, and the closing part merely says "73, Jack, and the same to all members, nice to be back into the fold". No call-sign is mentioned but a P.S. says "Anyone wishing 70 MHz skeds, write QTHR".)
".....nuvistor converter and the tuneable IF is an everyday BC set tuning the Shortwaves and I use the 6·25 - 6·95 MHz section. I don't mind building TXs and PSUs but will not even attempt to build a RX. That is why I am stuck for a Communications Receiver at the moment. So if one can be found it would be great - it must cover 160 - 80 Metres if possible. At present I have just finished building a 35 Watts AM and CW rig for Two Metres with a 6146 in the PA and it is screen neutralised at 144 MHz but I am having trouble with modulating it at present. I am using a Series Gate Modulator of which all valves are correct (as per RSGB Handbook) but the speech seems to be breaking up and at one point a buzzing sound comes in when the microphone gain is turned up, and its NOT RF I hasten to add. I am wondering if the modulator is interfering with the screen neutralising.



The RFC should resonate at 2 Metres with the trimmer capacity. The trouble is that the capacity required for resonance is only a few pfd, and the recommended 'C' for the screen with series gate modulation is 100 - 500 pfd. So what other method of neutralising can I use so that the RC ratio constants are correct?

Series tuning so that the 6146 will work at reduced rating on 2 Metres.

The modulator is completely screened in a die cast box and all leads in and out are bye-passed to RF.

Can anyone help at all with this problem?. 73 ???

If members who think that they may be able to help with this problem will send their suggestions to HQ, these will be forwarded as soon as we find the senders address.

From : C.W. Pettifar, G2DPQ, 45 Greenway, Campton, Shefford, Beds, SG17 5BN. ".....Having a good time on 14 MHz on CW with ZL/VK/PY/OA contacts, also getting over the pond on AM to W8/W4/W3....."

FROM THE MAIL-BAG - Contd.

From Reg, G6RC/RSARS 0064 ".....I was very interested in the short description of The Magnetic Detector in "Mercury" as one of these was in use at Maurice Child's London Telegraph Training College, Earls Court when I was training to obtain a PMG Certificate as a Wireless Operator in 1918.

My intention at that time was to enlist in The Royal Flying Corps as a Wireless Op. but, fortunately for me, the Armistice was declared shortly before I was to take the exam. However, I completed the course and duly obtained a 1st Class PMG. Cert. and joined a ship in Grangemouth as a Junior Op.

I was, and still am, one of the World's worst sailors and had to give up a life at sea in a very short time!.

It was quite a coincidence that whilst looking through some old books a few days ago I came across the notes I made at the College. I see I wrote that "The iron band of a Magnetic Detector is composed of 70 strands of No. 40 silk covered soft iron wire and that it travels at a speed of 1🗁 metres per minutes. The primary coil is wound on either a glass or ebonite tube, is about 2 cms long and has a resistance of 1 - 3 Ohms whilst the secondary winding is on an ebonite bobbin and has a resistance of 140 Ohms.....".

On the model we used there were two horseshoe magnets. I also have a copy of Bangay's "Elementary Principles of Wireless Telegraphy - Part 1" and in addition a copy of "The maintenance of Wireless Telegraphy Apparatus" by Percy Harris, published about 1917 at a price of 2/6!!. This book has approximately four pages of information of setting up and repairing the Magnetic Detector. The last paragraph of this article refers to a broken mainspring and states "If the spring breaks and no spare is available a fairly satisfactory service can be carried on by turning the wheel by hand until arrival in port". I should imagine It would be great fun sailing across the Bay of Biscay in a storm endeavouring to correctly copy a message in those circumstances!!.

Harris also mentions that Marconi made a Receiver No.16 which combined a crystal and a magnetic detector. This could avoid laboriously turning the broken-down clockwork in an emergency....."

From Walt, G2AUA/RSARS 0502. ".....We hope to book a direct flight to Los Angeles for the period 10 June to 22 July and if not too distant from our relatives hope to look up some of our W6 members..... .....Re Top Band. The Shefford Club are usually about at 1900 hours on a frequency of 1920 KHz + or - to dodge the fish-fone QRM during weekdays and around 1830 hours on Sundays. At this time we are often joined by George, G3EBO. There is also a Bedford Net at 1200 hours which includes most of the same crowd plus a few others. RSARS members often to be heard include myself G2AUA, G2DPQ, G3EBO, G3TDW, G3XWS and, occasionally G2DRT. We are situated about midway between M1 and A1 Motorways and contact a lot of Mobiles, so if any members use these roads at these times, a listen a bit higher than 1900 KHz could bring in a new number!. The frequency is the usual one for this area - I was caught out when first going Mobile in the Bournemouth area - had to modify the whip for 1880 KHz!!....."

Would the member who had a CW/SSB QSO with GI3JEX at 1500 hours on 12th July 1974 on 14·120 MHz care to send a QSL?????

From Maurice, VS5MC/RSARS 282. ".....All I've got to say is that I was wrong when I said last January that conditions couldn't get any worse - they did!!. The only local news is that the Sultan has suddenly acquired an interest in Amateur Radio..... We sent a Telex to VS6DR and he sent back a TH6 and rotor by return air-freight. This is now on the Istana (Palace - Ed.) roof. So if you hear VS5HH you'll know who it is!!. On the other hand, he may sign just, "VS5".....".

From a member who wrote to HQ requesting a very small favour ".....Because of the trouble I am causing, I am fining myself and therefore enclose £1 as a donation to Club funds.....". (In view of your voluntary action no disciplinary actions will be taken against you and no entries made on your Conduct Sheet!. Seriously, your FB gesture is much appreciated. - Ed.).

FROM THE MAIL-BAG - Contd.

From Robin, G8LT/RSARS 0290. ".....You kindly asked me what I thought about the RTTY activity and maybe I can leave the following thoughts with you as I work about 95% RTTY and have done for about 7 or 8 years.

1). The back cover of "Mercury" lists RTTY on Saturdays at 1600 on 14·090 MHz which is fine. Because there are so few of us you might say Saturday AND Sunday.

2). 3590 KHz on Fridays will be pretty hopeless as the band is one large QRM cow-pat!. A lot of the RTTY boys used to get active on Sunday mornings at 1100 hours on or about that QRG. The band is a lot more sanitary at that time and there is far less commercial and continental stuff messing things up.

3). May I suggest we stick to one speed, 45·5 Bauds, everywhere. This takes care of anyone in the USA area who will have a synchronous motor on his machine at 45·5 Bauds and cannot go to 50 Bauds. I have two machines and can change them by multiway plugs but it is a nuisance and a lot less convenient as I have both tape senders (switchable) on 45·5 Bauds and cannot heave them out to change governors.

4). Let us also say firmly that 170 Hz shift is to be used. 850 Hz is virtually dead except occasionally on 2 Metres. With 170 Hz shift and the 250 Hz filter in the Drake R4C I reckon to be able to read almost anything on RTTY. On 850 Hz you need a clean channel.

5). We might consider an RSARS Autostart Net. I do this with the USA stations with the TX and RX crystal controlled on 14095 KHz or the autostart frequency of 14075 KHz. The Terminal Unit (about which I sent you the reprint) (It is hoped to produce this article in the very near future - Ed.) has Autostart facilities built in and I frequently leave things set and when I come back there is the ARRL Bulletin on the paper and the machine is at rest and switched off. An extension of this is the introduction of Selcal so that you can call selected stations but I guess this is too ambitious for a start but would be well understood by the 'aficionados' of RTTY.

At the set-up here I have the two TU's, the Mainline and the ST-6 homebrew and which are illustrated in the RSGB Teleprinter Handbook. I am getting the FSK by feeding in 1,000 Hz and 1,170 Hz into the SSB TX which is so simple. The machinery is two Creed 54's with perfs., and a pair of Creed 6S6's tape transmitters. Also have an old 85R printing reperf. which can be switched in at will.

I use a 5" CRT as Shift Monitor 'off air' which has the rotating 'X' type display and is an essential tool of the trade. There is also mounted in the rack TDMS 5EB and TDMS 6EB so I can measure most of the essential parameters on incoming signals. I work all bands 3·5 to 144 MHz inclusive.

So, Jack, lets have a bit of RTTY activity in RSARS. As I have said before it is the fastest and least greedy of KHz's of any mode and is at least able to tax the ingenuity of the enthusiast - you cannot go out and buy a ready made RTTY set-up!!. (not like SSB). Hope my plea for 45·5 Bauds won't blow a fuse at G4RS.....". (Thanks for all the info, Robin - due note taken of all points raised.

HQ agrees about the advantages of RTTY - less bandwidth occupied (with the narrower shifts), and few CW men can manage 60+ w.p.m.. Incidentally, the Seimens T100 at HQ is, and has been for a long time, set on 45·5 Bauds!. It is known that quite a number of RSARS members are interested in and active on RTTY so how about everyone congregating on 3590 or just below on the next three Sundays following the delivery of this 'Mercury' at 1100 hours. At least it will be good practice for the "Le Touquet" Trophy a little later on!! - Ed.)

From : G5FG, 9 Acacia Street, Hatfield, Herts., AL10 8SZ. ".....to wish you and all members a Happy New Year and to pass 73 especially to G8NY, Les, and Betty and all 'SCU' types. I wonder if Les has any news of Jack Kelsale?....." Good Luck and 73 from Fred G5FG/505.

From : G4CRI, 3 Vyvyan Place, Helston, Cornwall, TR13 8AD. ".....I apologise for not entering the Net during the latter half of 1974. This has been due to pressure of work, illness and the very poor state of the bands. Hope to be more active in '75….." 73 Mac.

FROM THE MAIL-BAG - Contd.

From Bill, G3DBU, 10 Hilltop Crescent, Harrogate. ".....A few thoughts on the subject of QSLing. This is entirely my own work, my own opinions and is in no way influenced by certificate hunting, DX hunting, fox hunting or any other form of hunting. To QSL or not to QSL!!! - that is the question to quote Our Bill, but what is the answer?. This vexed question constantly crops up in conversation and over the air - nobody can give a positive answer, the variables are too spread out. If you are a certificate hunter then it looms large in your mind, on the other hand, if you are an experimenter then QSLs may mean nothing - so what to do?. Having just had a clean-out of the shack (no rude remarks, please) prior to moving the rig into more humane surroundings i.e. the house, I thought I would gather the QSL cards together. To my horror I discovered that I could muster 106 - so, I thought, here goes, lets get Ray off his charpoy and give him some work to do. Off went the claim and, lo and behold, back came a nice certificate - many thanks, Ray.

But it set me thinking (I am capable of it on the odd occasion) and making a check of the number of RSARS QSOs I discovered I had made 123. This gave a return of 86% confirmed which is a darned sight better than the normal return on other QSOs.

I feel, however, that this percentage could be improved still further by a slight modification to the QSL procedure. There are quite a number of members who say "Will QSL" to indicate that they do, so why not make this part of the official procedure for a RSARS contact. This could leave one in no doubt that he will receive confirmation - or should do!. After all, what is the point in exchanging numbers if you have no intention of confirming it afterwards?. It must be most frustrating for those who are sweating it out for their '500' knowing that sufficient QSOs have been made but someone, somewhere, just couldn't care less. A typical example of gentlemanly operating is Charlie G3RCO who states over the air that he QSLs but does NOT require returns. More power to your fist, Charles. We know that cards and postal charges can be expensive but even a rubber stamp would suffice surely, after all, courtesy costs nothing.

Having been on the Overseas Net for some time and listening to the comments on QSLing I think it would be a good idea if the Society had its own (Overseas) QSL Manager. John (G3YSK) must be overworked now, so we could not ask him to do it. It is difficult for the members in the non-Sterling areas to effect a return service. Surely the Society is affluent enough to help here. Some form of reimbursement could be worked out whereby the member in question paid once a year along with his subs or make the subs for Overseas members slightly higher if they wished to avail themselves to the return QSL service.

As I said at the beginning these are suggestions, but if it sets other members thinking then we may come up with some good ideas, who knows?. 73 Bill No.130.

(Thanks for the suggestions, Bill. We know of one RSARS member who will NOT QSL (and says so during contacts) plus two others who will send along a card quite happily but do not require QSLs in return. We also know of members who have sent several SAE/IRC, etc. for a wanted card, including a basic card all filled out and only requiring signing, only to be met with a stony silence. As one member was heard to remark on 80 "So-and-So must have a wonderful collection of SAEs!". Now that the ZL members have really got organised and have their own Net, HQ has been working on arranging their own 'local' QSL Manager, after all, there is no point in them sending QSLs to John for distribution in NZ!. It is also hoped that this local QSL Manager will liase with John and ship NZ cards for Europe in bulk and vice versa. HQ would be quite happy I am sure to pay the bulk parcel rate. If ever a Net becomes operational in North America, etc., the same could apply, and, for that matter, in any other area. How the "501 worked/499 QSLd" member gets the other couple of cards from members who say they will QSL and then don't we can offer no suggestion (short of borrowing a Centurion tank and turning up at the members front door to collect in person). Remember, confirmation does NOT have to be on a RSARS card, any written confirmation will do (a certain HQ member has a scrappy piece of paper from a certain Sec.)

FROM THE MAIL-BAG - Contd.

From Laurie, G3AQC, 11 Elsenwood Crescent, Camberley, Surrey. ".....With reference to the G3ZOJ Audio P & F Unit described in the Summer 74 edition of 'Mercury' I built this circuit and have the following comments which I hope will be of interest to you.

1) The notch is quite deep and does a good job in removing an unwanted heterodyne.

2) The sides of the notch are not very steep, 3dB points at approximately 500 Hz, hence the remaining audio is very coloured to the extent that intelligibility is reduced, the loss of 0·5 - 1·0 KHz in 3 is quite serious.

3) With SSB systems it is not necessary to cover 100 Hz to 25 KHz. The use of 10K + 10K for VR3 is quite satisfactory (use 470 Ohms in series to restrict minimum value). Note tracking over range 300 Hz to 3 KHz is very good - no need to adjust VR2.

4) The diode clipping is not very effective. Some rounding is seen but output circuit flat-tops before diodes. The output circuit is not capable of driving 8 Ohms HI-FI type headphones to required audio level. No filter after diode clipper means that even if it did work the audio would be badly distorted.

Conclusion. Circuit only of use in case of fairly strong wanted signal and strong unwanted heterodyne, makes listening easier. Clipper quite useless. Output circuit flat-tops and lacks power.

I do hope that these notes don't sound too derogatory, but the circuit I built up did have these problems - and you did ask!!!....."

73, Laurie, G3AQC.

From : Doug McLay, GM8FVC, 29 Cramond Avenue, Edinburgh, EH4 6NA. ".....As I told you the last time I wrote I have moved my job to Glasgow from Crewe, so I have had to leave 55 Signal Squadron in Liverpool to join the Dundee Squadron of 39 Signal Regiment (V) which is The Special Communications Regiment. There are a lot of 'hams' in the Regiment and I have supplied RSARS application forms to 2 of our Squadron - here's hoping for success.

On the operating front I have been active on 2 Metres SSB and AM Mobile. The highlight of 1974 was the QRP Contest on 2 Metres when Ian Jolly (G4BTW/RSARS 605), Al Ross (GM8IZH) and myself climbed Ben Nevis twice in a fortnight to do a 'recce' and then enter the Contest. 2 Metres was very 'flat' during the Contest, and our number of QSOs was low and we were only able to manage a disappointing 7th place. However, we did manage the best DX at over 600 kM - not bad for 1 Watt P.E.P. on 144 MHz. Incidentally, on each climb we used the Liner 2 plus an A43 battery (Ni-Cad) and a 10 element Yagi. On the 'recce' we aired the RSARS G4CCF call-sign but, unfortunately, didn't work any other RSARS members....." 73 Douglas.

From ; J.A. Batchelor, RSARS 647, 28 Asket Walk, Seacroft, Leeds, LS14 1JE. ".....Re the article by G3NUI/RSARS 140 "All Square on Two". I have used one of these for six years with good results and similar construction, but instead of coathangers my elements are made from scrap Pyrotenax. This is ¼-inch diameter copper tube with two internal conductors. Instead of staples to hold the elements down I use the Pyrotenax clips, and I have also made a rotator for the antenna so that the whole unit can be controlled from the operating desk. When filling out QSL cards this antenna is classed as a "Tri-square". This antenna has beem used by some of my friends (G3PUU, G4BUU and G8EHV) using three different transmitters and it loaded up OK in each case. On the receive side the antenna seems to be almost as good as my 4/4 Yagi. I would recommend it to anyone who needs a cheap Two Metre antenna that is quick and easy to make.....", 73 for now, 647.

From : Dennis Dumbleton, G3HCM, 14 Compton Court, Long Compton, Shipton-on-Stour, Warwickshire, CV36 5VW. "..... Many thanks for the print-out of 2 Metre frequencies - exactly what I wanted!. Enclosed herewith cash to cover cost, anything over to go to Society funds....." 73 Dennis. (Many thanks for the FB contribution, Dennis. The computer print-out referred to lists all 2 Metre frequencies from 144·000 MHz to 146·000 Mhz in ·001 MHz steps and shows division by 2, 4, 6, 6, 12, 16 and 18. Handy for selecting crystal frequencies - handy when you can't find pencil/paper/ slide rule/pocket calculator!. Obtainable from HQ for 35p - Ed.).

FROM THE MAIL-BAG - Contd.

From : Martin, G3YJO Guildford. ".....I'll try and be on the RSARS Nets as often as possible as we have just put up a new antenna array for our new shack which is now in the Elec. Eng. Lab. Block - so I haven't far to go!!….." Best 73 Martin, G3YJO.....

From : Ted, G2AYQ, temporarily at Ward G3, Plastic Surgery Unit, Royal Naval Hospital, Plymouth, PL1 3JY. ".....Thank you for the 'phone call asking after my health. Well, I have been in here a week and things seem to be going OK. The medics seem satisfied with the progress. The suspected diabetes was a false alarm as Luck would have it. I have been amusing myself listening to the Plymouth 2 Metre boys on one of those AM/FM allband receivers. I have been doing a bit on 2 Metres myself and hope to do a lot more when I get out of here. My best 2 Metres contact so far on AM is Oxford on 2½ Watts output. The antenna is a 5 element J-Beam....." 73 Ted.

From : Bert, G8TK, 105 Langley Grove, Sandridge, St. Albans, Herts, AL4 9DZ. ".....At the moment am knocking up a QRP rig and have contacted Rev. Dobbs. I was recently in contact with PA0EE who is QRP ARC International Area Rep. for Western Europe. He supplied me with the following info which may or may not be of interest.

International QRP frequencies are CW 3540, 7030, 14065, 21040 and 26040 MHz. Every Friday night PA0AA broadcasts QRP News at 1915 and 2115 GMT on 3660 or 3600 KHz (his third figure could be a '6' or an '0') (Suspect that it will be a '6', Bert - Ed.) and 14100 KHz. He (PA0EE) has the means to broadcast QRP news all over Europe as necessary. European QRP Party every Sunday as follows :

1000 GMT - 3540 KHz 1030 GMT - 7030 KHz 1100 GMT - 14065 KHz (for DX)

Furthermore, he is interested in constructing a QRP station based on 1930 vintage gear, using same parts. Perhaps some of our very senior members have 'gen' in the archives (I haven't got a clue myself!). His QTH is :

PA0EE, FRANS PRIEM, HEERNSTEDE 1R, LELYLAAN 69, HOLLAND.

In the mention on QRP Awards there is a very nice one - The 1000 Miles per Watt Award. I hold No.6 for a 2 X QRP QSO with VK7CK made on 15th July 1947 VK7CK was using a bicycle pedalled (self-excited?') generator and I was using a 46 doubler on to 20 Metres. Another RSARS holder of this Award is G3LXP. By the way, HZ1KE was on 80 (3765 KHz) last night around midnight at times was 9+10. He says he now has a Linear and I heard him work G3ALI, G3WMZ, G6AE among the dog-fight!....." 73 Bert, G8TK.

(I can confirm, Bert, that the 1000 Miles per Watt Award is certainly an attractive Award and is endorsed in distance per Watt. The one at G3DPS is for 5280 miles per Watt. It is certainly an attractive addition to any shack wall - Ed.).

From : R.A. Dowsett, G3RSV, 3 Bladon Road, Ruddington, Notts., NG.11 6DA. ".....I have now left the Service and am working at 33 Central Workshops, REME, Newark as a P & TOIV in charge of all TeleMech Sections. As yet I am not on the air but am taking steps to get operational on 2 Metres….."

From G5NF/RSARS 0947. ".....I lived at Farnborough all the early part of my life and saw lots of interesting things happen. For instance, I can remember there were two bills where Mons Barracks now stand. These were built for R.S. as no doubt you know. The late Sir Robert Watson-Watt (then Mr) had a couple of wooden huts on one of them and used to track thunderstorms, etc. I was also a member of the Aldershot and District Radio Society, which used to meet in a wooden hut opposite St. George's Church. Watson-Watt and Captain Butler, (OC W/T Station on Canal Bank opposite the R.E. Yard - back in the 2,000 Metre days!) among others were members. I often wonder how many of us are left. There is at least one in the area - Ken, G2DX. I can also remember a BERU contest when it was very hard exchanging reports with a certain Lieut. (key kept sticking!!) who afterwards rose to a very high rank. Won't bore you any more…..". (You don't bore us, OM, but I wonder who that Lieut. Was?. Anyone else belong to A&DRS?.

FROM THE MAIL-BOX - Contd.

From : Dennis Haylock, G3ADZ, 6 St. Mark's Avenue, Bilton, Rugby, Warwicks, CV22 7NP. ".....One idea for your possible Midlands 'Get-together'. Have you heard of 'The Town and Country Festival'? Essential details are as follows. This is a very big show, held during the past two or three years during Late Summer Bank Holiday weekend at The Royal Showground, Stonleigh. Location, as you probably know, is about three miles from Leamington Spa, 9 from Coventry, and about 23 from Birmingham. It is already established as quite an important event for the South Midlands, and covers every type of hobby, indoors and out, including show jumping and other displays, and there is also a Steam Traction Rally and a Vintage Car show.

I had only just arrived in the Midlands before the 1974 show, but became a bit involved through the Mid-Warwickshire Radio Society. Other Amateur clubs Birmingham, Solihull, Coventry, Banbury, Rugby and Stratford-on-Avon. All three Services were present, including Army Recruiting and the Signal Regiment from Warwick.

It struck me that all this could add up to quite a lot of existing local support, and together with a pretty central location and probably the right time of year, might fit in with RSARS ideas on the subject..... .....It is going to be three or four months before I get on the air again, as I have first to build the shack cum workshop, get up some sort of antenna system and then recover my equipment from the Leamington Club. I get on the air from that location as G3ADZ/A during the odd Monday evening, but because antennae are restricted to a very small loft space, this very limited activity is on 20 and 40 only. I am, however, fairly active on 144 /M (A3 and F3), with transmit crystals for 145·0, 145·1 and 145·35 MHz - the latter being the local Raynet frequency. I run a Garex 2, so can cover the whole band on receive. If any members are hard up for VHF Cert. contacts I am always pleased to sked evening or week-ends. I can also get on 70 MHz on Sunday mornings only - again /M and A3 only - this band does not like the local TV very much. The many current house and garden jobs also have to get some priority!!….. " 73 Dennis. (Seems a very good idea for a get-together, Dennis. Any other Midlands members care to lend a hand with the organising?. Drop a line to HQ if you think you can help. - Ed.).

From : Len Ogden, G3RFC, 14 Westminster Avenue, Reddish, Stockport, Ches. ".....Had a dead period during the Summer with the DX-100 off the air, but have now sorted the problem out - replacement of HT dropper and a rewind of the LF coil in the VFO. It does not sound much to put right but my shack is very small, more like an overgrown 'phone box, so keeping a good weather eye open I withdrew to the garden and did my repairs "in the field"....."

From : P.H. Huntsman, G3KBQ, 16 Crescent Avenue, Hexham, Northumberland. ".....Now that I am once again working all bands on SSB and CW I hope to work many stations on the RSARS Nets.....".

From : John P. Wresdell, G3XYF/623, West View, Station Road, Nafferton, Driffield, East Yorkshire. ".....No, I do not expect the Society to accept any responsibility for my "Mercury" or other correspondence being delayed because it bears "East Yorkshire" instead of "North Humberside" in the address. I am a founder member of the "Yorkshire Ridings Society" which believes that Yorkshire and its three Ridings should be preserved intact and not chopped up and given stupid names, e.g. Humberside. The complaint about my mail bearing East Yorkshire instead of Humberside is in no way personal, I just want East Yorkshire on mine as a protest to the Post Office. I have just become established on SSB after 6 years of AM and hope to join the RSARS Nets very soon. 73 John.....".

From : A45249 Cpl R. Norcross, VS6AF/RSARS 606, BASQNBUT DET A (RAAF), Little Sai Wan, Hong Kong BFPO 1. "…..I shall be here until May 1977 but hope to be in the UK on leave around July/August 1976 so hope to visit the HQ station then. Have already QSOd Maurice, VS5MC and chatted to VK4IV on the Far East Net. Glad to meet the FoS from Blandford (can't remember his name!) (Don G3DBF - Ed.) a few weeks ago at the China Fleet Club during a HARTS meeting. VS6AC temporarily off the air with u/s RX…..".

WORKED ALL BRITAIN (WAB).

WAB was set up to encourage inter-G working and also DX to G contacts. There is an Awards programme with the ultimate being the Diamond Award when an inscribed trophy is presented. All revenue goes to support the Radio Amateurs Invalid and Bedfast Club. Details of membership may be obtained from G3ULH - QTHR.

My position is that of Contest Manager and I should like to bring to your attention the details of the WAB Contests for 1975. Accordingly the rules are set out below.

1. There will be five contests: HF Phone, HF CW, LF Phone, LF CW and VHF.
2. Dates of the contests are : HF Phone - 16 March, HF CW - 6 April, LF Phone - 11 May, LF CW - 1 June and VHF - 20 July.
3. The duration of each contest is 12 hours : 0900 - 2100 GMT.
4. Contestants may be all licensed amateurs and all Short Wave Listeners.
5. Classes of entry are : Single Operator, Single or Multi-Band, Multi-Operator, Single or Mu1ti-Band. Only one TX to be used at any one given time.
6. Exchanges: RS(T), QSO number commencing 001, WAB Book Number if any and, in addition UK Contestants give their WAB area and County.
7. Scoring: Each completed QSO counts FIVE points, SWL's count FIVE points for each station heard participating in the Contest.
8. Multipliers : Overseas stations - the number of WAB Areas only. UK stations - The number of WAB Areas plus DX Countries. ALL G PREFIXES COUNT AS ONE.
9. Operating Bands: HF - 10, 15 and 20 Metres, LF - 40, 80 and 160 Metres. VHF are all the authorised bands.
10. Log Details: Logs must show title of Contest, Class of entry, Name and full QTH, Time of QSO, Band, Reports exchanged, Points and Multipliers claimed.
11. Awards : Certificates of Merit to the leading entries in each class, and to the leading entry from each Country. A class entry of 10 will mean a second, and third if there are 25 entries or more. Providing that there are 25 entries as SINGLE OPERATOR in each Contest (LF) from UK contestants, a trophy will be awarded which will be held for one year.
12. Logs must be received by the WAB Contests Manager, R.L. Senter, G4BFY, 10 Toll Bar Avenue, Bottesford, Nottingham RG13 0BP, England by the following dates : HF Phone - 5 May, HF CW - 26 May, LF Phone - 30 June, LF CW - 22 July and VHF - 6 September. Late entries will be void.
13. It is a condition of entry that the decision of the WAB Contest Manager in conjunction with the WAB Manager and elected Committee shall be absolute in cases of dispute or interpretation of rules.

I hope that you will give the Contests publicity in your magazine or newsletter and look forward to receiving entries from your members. This letter is being sent to all the major Countries and to many Clubs and Societies to try and make the Contests worldwide in interest.

Signed R.L. Senter G4BFY
WAB Contests Manager.

(It is interesting to note that the above details were addressed to "The Communications Manager, School of Signals" and were passed straight to the Gen. Sec. RSARS!! - Ed.).

SILENT KEY

From Robin F.G. Cogzell, G3OTY/RSARS 451

comes the following report of another RSARS Silent Key.

It is with regret I have to report the passing of Phil, G3LN, who, although a member, had not been on the air for a number of years due to business pressures and ill health.

Phil retired last September and was looking forward to joining the 80 Metre Nets; he was awaiting some new SSB gear.

A long standing member of the Stourbridge Radio Society and a real OT, Phil will be missed by the many who knew him and came into contact with him. He leaves a wife and daughter.

The President, Council and all members extend to Mrs. Rock and her daughter their sincere condolences.

SWL SECTION NEWS. GORDON ALLIS. RSARS 481.

As Jack mentioned in the last edition of "Mercury" a section was being devoted to the non-licensed member. This was to be used to pass on information and technical tips, etc., to help out the SWL. I am sorry to report that the response has been disappointing, only one article having been submitted to your scribe. So come on, lads, get the pens in operation and lets have some info. The type of gen required, for example, a) details of your stations' achievements on the bands, i.e. Awards gained, Countries heard, Commercial stations logged, QSLs received and any other information applicable to non-licensed operation. The address to forward contributions to is ;

GORDON ALLIS, 117 CHESSINGTON ROAD, WEST EWELL, SURREY, KT19 9XB.

To start the ball rolling here are a few details of myself and the station. I have been interested in amateur radio since 1965 when I was introduced to the hobby by G3SSY who helped me to get started by giving me a WS19 to listen in with. The bug bit and every spare moment I had was devoted to the bands. This receiver gave me the necessary know-how so that the next step was to purchase an AR88D which opened up a whole new world of hamming. I joined RSARS and ISWL and started to send out QSL reports. Through this I have made a number of friends throughout the world with whom I regularly correspond. To date I have 241 Countries confirmed, so picking up a new country now is quite an achievement.

My station consists of a Geloso Double Conversion RX, an HRO MX with bandspread coils, hooked up to a TA33 beam at 40' and an Inverted Vee at 30'. By profession I am a TV Service Engineer with a small local company and my other hobby, apart from hamming, is photography.

73 Gordon.

SWL LETTERS.

Only the one letter to hand and that is from RSARS 1006. Trust you are now airborne and in contact with a local club. Reg requests any Society member in the Harrow area to contact him to discuss hamming in general. His address is ;

A.R.D. MURRAY ESQ., 11 ARDRESS AVENUE, NORTHWOOD, MIDDLESEX, HA6 3DS.

FURTHER REMINISCENCES OF AN OLD KNOB-TWIDDLER.

G2BQ.

It Seems that "The Birth and Early Life of a Ham", which was written in 1947 and reproduced in a recent issue of "Mercury", was read with interest by quite a few RSARS members, and that another few pages of personal reminiscences by someone who has now been twiddling knobs for over fifty years would be acceptable. This article covers the period from 1931 to the outbreak of The Second World War.

When I left Catterick at the end of the Y.O.'s 'Q' Course (Young Officers Qualifying Course) I was posted to Armoured Fighting Vehicles Signals at Tidworth. This small unit consisted of headquarters and a number of Tank Signal sections and one Armoured Car Troop, which used to be detached to their various tank or armoured car battalions for training during the Summer months. I had sold my transmitter to another Y.O., 2/Lieut. Powys-Lybbe, before leaving Catterick, and although I made some attempt to get going again at Tidworth, after a short time I gave up my transmitting licence in order to swot up on mathematics and try to get sent to Cambridge University, to which two Royal Signals Junior Officers were sent each year. I knew very well that there was not enough spare time for maths and radio, and I doubted my strength of will if the temptation was there!.

Powys-Lybbe's chief interest was in cars; unfortunately he was posted to 3 Div Signals at Bulford, a horsed unit, and one morning, at 6:30 a.m., when he was Orderly Officer, he could not get his car to start to drive the 300 yards or so from his quarters to the stables. He promptly forgot all about the horse and tried to fix his car. And that, I think, was the end of his brief career in Royal Signals. Mind you, horses always woke at an unreasonably early hour, and 300 yards was a long way to have to walk carrying a sword!.

One evening, about seven years ago, I was going home from work (in Lancashire) using a Top Band Mobile, when I was heard by G3DMK/M who was on holiday locally. He called me but we did not make contact as we were, by then, getting too far apart. However, he looked me up in the call-book and saw my name. "That's the chap who was with me in Tidworth when I was there" he thought "I remember I calibrated some crystals for him". He was then Cpl Frarey, an Instrument Mechanic, and a great cyclist in his spare time. He rang me and we subsequently met at my house and I was able to show him some of the home-ground crystals which still bore his calibrations pencilled on them. A.F.V. Signals had about the only Wavemeter that the Army possessed in those days, and I wonder how accurate it was. I still have the crystals and one day I must get them out and check them against a modern standard. (Send them to HQ and we'll check them for you, 'BQ' - Ed.)

The following year I spent my holiday over in the North-East and visited him at his home near Catterick. He showed me how to make an aerial supporting kite, which I did, and have had a lot of fun with it : he or I could let any member of RSARS have the pattern if they would like it.

While I was at Tidworth, a certain Captain Houston-Fergus, who was one of the few radio amateurs (perhaps the ONLY one) in the Channel Islands, call-sign GC2ZC I think, and in charge of the T.A. contingent there, wrote to the War Office and suggested that a wireless link with the mainland should be tried out in case the submarine cables got cut in the event of a war. The War Office thought that this was an excellent idea and instructed A.F.V. Signals, which was by way of being an experimental wireless unit in addition to its main function, to carry out the test. To ensure success, the most powerful transmitter available, an MA set in a 3-Ton truck, with a power of about 1 kW supplied by a petrol-driven generator, was to be used. The frequency would have been about 3·5 MHz, I think, because all the sets were crystal controlled on frequencies of that order. I can remember riding across Salisbury Plain one day at dawn in a tank, and hearing the ARRL HQ station (W1MK was it?) calling 'CQ' on the frequency to which we were tuned.

Captain C.T. Hughes was put in charge of the test, and on the appointed day took the truck with the M set out to a quiet spot and set up shop. I must have been detailed to assist him, or, at least, I

managed to "trail along". The MA Set suffered from one big disadvantage; although the receiver was a superhet, the I.F. coils, tuned to about 300 KHz if I remember rightly, were in a wooden box, and the break-through and direct pick-up at this frequency was nobody's business!!. We tried from about 1000 hours till 1400 hours to establish contact, but failed utterly. Then Captain Hughes said "To hell with this. I bet I can do it with a No. 1 Set".

The No.1 Set was, surprisingly, designed by a lady at the Signals Experimental Establishment, at that time situated in the middle of Woolwich Common, and was an excellent bit of work. It was the first Army set to use screen-grid valves, which had only recently been produced; these were double-ended bright emitters which were pushed sideways into their holders. One of these valves was used for the HF stage of the receiver in a 1-V-2 arrangement, and another for the output stage of the two-valve self-excited MO/PA transmitter; the whole set working off a 120 Volts dry battery and the input to the PA was, perhaps, 1🗁 Watts; the official range with a rod aerial was two or three miles.

Captain Hughes rushed back to barracks and hastily slung a wire between two barrack blocks as an aerial and got immediate contact with Jersey without any difficulty. A report of the successful test was duly sent to the War Office, but it tactfully omitted to say that the high-power MA. Set was not the means by which success was achieved.

The first two years I was with A.F.V. Signals I was assigned to No.4 Tank Signal Section which was attached during the Summer to No. 4 Tank Battalion at Catterick Camp. By the second year, G5YN, who had joined Royal Signals after three years at Cambridge as a normal undergraduate, was also at Catterick on his "Q" course, and had with him his amateur gear. I made up a simple single valve oscillator running off a 60 Volts battery that could either be keyed or used as an oscillating leaky-grid detector so that we could have a short daily sked on CW over the mile or so that separated the Tank Corps and Royal Signals quarters. As I had no license I used the call-sign F8MMM ... Anyone reading our messages would have been a bit puzzled by such exchanges as "How about a game of squash this evening?" with the "French" station replying "OK, meet you on the court at 6:30". The power of my transmitter was, of course, minute, and the aerial a short piece of wire, and I never had the G.P.O. tracking me down as a pirate. I doubt whether they had any tracking gear in those days.

The Tank Corps hated having to have wireless at first. The sets were very bulky, mostly MB Sets running about 50 Watts from a 1200 Volts rotary transformer, the primary power being 12 Volts accumulators. By the time the MB Set or the MC Set, two large batteries, and a Royal Signals operator had been crammed into the tank, there was not an inch to spare, and in fact, the whole shooting match had to be taken out of the tank to allow the 3-pounder gun to be fired during the annual range practice. Before this nasty new-fangled idea was thrust upon them the tank commanders got on very happily by displaying coloured flags, Navy style, from the turret tops

Although the MB and MC sets were nominally crystal-controlled, a large amount of reaction was used to make the crystals oscillate, so that the Master Oscillator was half self-excited and used to drift off frequency. As Signals Officer I had to leap out of the C.O's tank in which I travelled (in riding breeches and leggings and with a Service Dress hat - and strictly speaking I should have had spurs on as well!) and rush over to any of the other tanks to retune the transmitter whenever they were close enough and, hopefully, likely to remain stationary for a few minutes.

On one occasion while going through a camp the C.O's tank stopped abruptly for no apparent reason and the C.O. got out in great haste; I thought there must be a fire, but, in fact, it transpired that he had waved to two soldiers sitting outside a hut to stand up and salute (normal etiquette for an armed party). They replied with a gesture since made famous by Churchill and Harvey Smith but in those days, definitely impolite. Alas, I missed hearing what the C.O. said to the two culprits.

When the Tank Battalion went to Redesdale, about 90 miles away from Catterick, for its annual target practice, I offered to try and establish wireless communication between them and the "rear details" left behind at Catterick. We screwed together all the sections of tank aerial rod, 4 feet long

by 1 inch diameter duralumin tubes, that we could lay our hands on to make a vertical aerial some 30 to 40 feet high, somewhat unsafely guyed by D8 cable fastened on with insulating tape and with its base supported on an insulator on a wooden stand about 6 feet high. This worked against a D8 counterpoise and was coupled to the PA coil of the MB Set by a coil that sat on the top of the case of the set which at least at that point was made of wood. At the Redesdale end we used a wire slung as nearly vertical as possible from a pine tree. Results were quite good, but it is ironic to think that probably all the useful radiation was skywave from the low horizontal counterpoises and not from the laboriously erected vertical aerials.

The next year I was with No.3 Tank Battalion at Lydd and Captain Hughes at Tidworth and I got good contact using modest horizontal aerials between barrack blocks, and connected directly to the aerial terminal of the MB Set through a small capacitor to make the aerial "look more like" the short rod aerial reactance-wise. But after a few days we were officially told to desist. The top brass of those days very much discouraged any initiative in wireless communication, and I have always thought that that was a great pity. Perhaps I do them an injustice, but to me they never seemed to be able to see further than a horses ears or to think easily other than in terms of the horse-drawn cable wagon. I believe that a really good Army inter-Continental network could have been built up by enthusiasts in the far-flung Corps, given a little encouragement, or even abstinence from disencouragement. As it was, the only official attempt at inter-Continental communication was an experimental link between Aldershot and Egypt, and I do not remember that it was a roaring success. It must have been about this time or a year or two later that Lt. Eric Cole, SU1EC, and Signalman Runeckles, whose call-sign I forget, also in Egypt, were going great guns, making contacts all over the world.

Reverting for a moment to tank communications - while at Lydd I persuaded the Tank Corps C.O. to buy sorbo-rubber ear-pads for all the headphones; standard headphones were the "official issue" for use in the tanks and this very obvious innovation, which vastly improved reception by cutting out nearly all the tank noise (to say nothing of saving your ears from a hammering from a bare ear-piece when the tank went over a bump and your head hit the wall of the tank) had not apparently occurred to the powers-that-be.

I managed to get sent to Cambridge University, and after two years there at H.M. expense was lucky enough to be selected as a member of The Oxford University Arctic Expedition, 1935/36, to spend a year in North East Land running the wireless communications and ionosphere pulse sounding equipment. After having written some unkind things about The War Office, I must give them their due - they did, and, I think, still do, encourage people to take part in adventurous undertakings and give them full pay whilst doing so.

North-East Land is the most easterly island of the Spitsbergen Group and since its shores are swept by a south-going current from the Polar Basin presents a sharp contrast to the relatively much warmer west coast of West Spitsbergen which just catches the tail end of the Gulf Stream. At the time, it was little known. There were to be basically three communication links from the Expedition base call-sign GVX, which was set up on the North coast at 80ºN, 20ºE approximately:

a) to the G.P.O., Portishead Radio, call-sign GKC/GKU, for passing press reports and official telegrams as required,
b) monthly to G6DW (Douglas Johnson, who is still active on the air and a regular member of G5YN's Sunday noon Net on '80') who had special G.P.O. permission to pass personal messages between the Expedition members and their families and to accept monthly summaries of ionosphere critical frequencies for Prof. E.V. Appleton and The Royal Society,
c) daily to two stations to be established on the ice-caps of North East Land, call-signs GVY and GVZ.

In addition, we could communicate with the Norwegian station at the coal-mine at Longyearbyen in West Spitsbergen if necessary (call-sign LGS).

Each member of the expedition was made responsible for obtaining certain ranges of equipment

or stores, preferably by gift or on loan to save expense, I had to get the wireless gear. The War Office were very helpful and agreed to lend what was the prototype of the No.3 Set, a monstrous affair of about 2 kW that was housed in a 3-ton truck and was powered by a 3000 Volts generator driven by an in-line Austin 7 engine with subsidiary belt-driven 1000 Volts and 12 Volts generators. The Signals Experimental Establishment and a civilian firm packed all this up in about a dozen huge and heavy packing cases and, in due course, we got them all ashore in North-East Land. All the leads, beautifully terminated in Ross-Courtenays, had been cut to length for the original installation in the truck and, needless to say, did not suit the new layout in the Base hut. It took me about three weeks hard work to sort it all out and set it to work, but then it did its job well and never gave any real trouble.

I should perhaps explain that in the numerical scheme of numbering sets the idea was that the No.1 Set would be a set of a few Watts, and be succeeded by the No.11, the No.21 and so on. The No.2 Set would be, say, 50 Watts and be succeeded by the No.12 and so on. The No.3 would be higher powered still and be succeeded by the No.13. It was not a long-lived scheme and was first wrecked by the introduction of a special set for light tanks, which was given the Number '7', probably because it could not be fitted into the numbering scheme.

Communication was established easily with Portishead (GKC), with both stations using a frequency of about 10 MHz until this became unusable with the onset of Winter darkness. Portishead then used a long-wave transmitter (GKU) and GVX was on a frequency of 3·5 MHz.

It was originally intended that each ice-cap station should be equipped with a 15 Watt transmitter powered by a pedal-driven generator which supplied both LT and HT; one sat on a saddle and pedalled as if on a cycle. However, on the way to North-East Land we called in at Tromsoe in North Norway and visited the Northern Lights Observatory there, and it was arranged that we should send weather reports three times a day via LJB, the Bear Island radio station, so we kept one of the 15 Watt transmitters at the Base to avoid having to use the big sender and thus we could save petrol. This communication link proved excellent as did those with the ice-cap stations, though, of course, only one of them could reply. Bear Island was about 300 miles South of the Base and the further ice-cap station about 20 miles away. The frequency used was about 2 MHz in Winter and 3 MHz when daylight returned in the Spring.

Communication was not established with G6DW for a month or two, but was then very good with both stations on 3·5 MHz.

Communication with Longyearbyen was never good; for some reason unknown they could never hear us properly, although they were much closer than Bear Island, but their 500 Watts medium-wave sender was very loud at the Base.

The receivers at the Base and the two ice-cap stations were all Eddystone All-World Fours, 1-V-2, with plug-in coils and dry batteries, and proved excellent. The aerials at the Base were centre-fed horizontal dipoles supported on 30 ft masts.

We also had a Gambrell time signal receiver to receive Rugby, GBR, on VLF. I think the frequency is 16 MHz. GBR put in a terrific signal which could be received with a short aerial suspended a few feet above the ice-cap, sea ice or rocks, and this time signal receiver was taken on sledge journeys all over North-East Land. I wished that I had taken some gear suitable for use on the amateur bands, but what with having to pass the Cambridge Tripos Exams and make all the arrangements for the official communications I simply could not find the time to get any. The big sender could have been used, but it would have used up too much petrol, besides which it was a very laborious job to fill up the radiator with water; every time, after use, when the weather got really cold, the radiator had to be drained; anti-freeze being quite unknown, at least in the U.K., at that time. The 15 Watts sender covered only 2 - 4 MHz or something of that sort.

The ionosphere pulse sounding equipment was run from a 230 Volts AC petrol-driven generator. The receiver, a superhet lent by the Radio Research Station at Slough (now the Appleton Laboratory) was kept in the Base hut and the transmitter, built at Oxford University to the design of

the Radio Research Station, was housed in a little hut about 70 yards away, built especially to house it and the night ozone camera which took long exposures of the Pole Star and was driven by a clockwork mechanism. Two wires for a telephone and two for "mains" linked the two huts. Each day at local noon a "run" was made, starting at the lowest frequency at which echoes could be seen, usually about 1 MHz. The man operating the receiver would photograph the echo pattern on the oscilloscope on a strip of bromide paper on a drum kept in the dark room which was separated from the living room by a wooden wall; the camera lens and shutter were mounted in a hole in the wall and the drum was turned by an arrangement of Meccano worm and pinion wheels especially taken for that purpose. After taking a photo, the receiver operator gave a tinkle on the 'phone and turned the drum round slightly. The man at the transmitter increased the frequency 0·1 MHz, gave a tinkle on the 'phone, and the receiver was retuned and another photo taken. This went on until the last critical frequency (F2x or sometimes relating to layers higher than F2) was reached and the day's "run" was then over. The whole process took about half an hour, including coil changes at the transmitter and receiver, depending upon how high the critical frequency was.

Once a fortnight, on "international" days, when the half dozen or so observatories throughout the world which were doing ionospheric work (e.g. Slough, Huancayo in Peru and Washington D.C.) were making observations, we made "runs" every two hours, and at the Equinoxes and Solstices every hour. We also made special closely spaced "runs" on the occasion of a nearly total eclipse of the Sun and in the Winter when Aurora was seen to be directly overhead. Occasionally we made continuous records automatically on a fixed frequency lasting twelve hours or more.

Incidentally, I made another year's observations for the Admiralty at Barentsburg, the abandoned Russian coal mining "town" in West Spitsbergen during WII, in 1942/3. By that time techniques had advanced enough for the whole process of making a "run" to be automatic. You pushed a button to start the engine and another button to make the "run" when the engine had had a few minutes to warm up; the tuning of the transmitter PA and the receiver was ganged and motor-driven and the film was drawn past the camera lens. A whole "run" from 1 to 15 MHz took about 10 seconds. Pulses were generated by sweeping the tuning of the MO through that of the PA, by a motor-driven rotating capacitor. In North-East Land the pulser used a thyratron which would not fire in cold weather if left in the small hut and we had to keep it in the Base hut and pop it into the transmitter while still warm. The aerials at Barentsburg were vertically-shooting crossed rhombics instead of simple dipoles, with the terminating resistors at the top of a 60 ft mast.

While I was in North-East Land, my old friend Evan, G5YN, was, unknown to me, with the British Mission to Tibet, where he set up AC4YN, the first of the few amateur stations ever operated in that country, a station which gained world-wide fame as the rarest of rare DX. I worked AC4YN and AC3SS when I was licensed as VU2BC in India after the War (1947) but AC4YN was, of course, by then under new management.

The next venture in radio was as Section Officer of The Shanghai Signal Section in 1937. I found two self-excited senders of about 500 Watts which had been modernised by a predecessor, LT Joey Lyddon. I wonder what they were before!. Sgt Macdonnell and an I.M. whose name I have forgotten and I rebuilt them yet again with crystal controlled Master Oscillators, as mentioned in the previous article already referred to. We occasionally put one of them on the amateur bands and worked a few stations in Australia and elsewhere, largely to pass some private messages during the time of the Japanese invasion, when the Shanghai submarine cables were cut and the official wireless station, which was some miles outside Shanghai, as cut off by the Japanese, leaving Shanghai largely isolated.

Things were pretty free and easy in Shanghai in those days. If you wanted to operate an amateur transmitter, you just did so, allocating yourself a call-sign, or perhaps you were supposed to tell the head of the local P & T. Mac operated as XU8DI. I never got going as an amateur in Shanghai because there were so many other things to do (once more I was swotting for exams - promotion exams this time!). There was plenty of cricket, football and what have you, and a truly astonishing

FURTHER REMINISCENCES OF AN OLD KNOB-TWIDDLER - Contd

exuberance of night clubs, dance halls and parties of all descriptions. Also I felt somewhat out of touch with amateur radio and although I looked for suitable ready-made gear I could not find any. After 18 months I was posted to Hong Kong. I had by now got the exams behind me and decided that the time had come to get going again. I was introduced to one of the few 'hams' there, a Customs Officer named Brown, who kindly offered to get all the pieces necessary for a transmitter from the U.S.A. and let me build it in his shack. A few weeks later he called me in, and I found that not only had he got all the pieces, but he had also put them all together, a magnificent 50 Watts CW crystal-controlled set for 14 MHz. Wonderful kindness!. By this time I had got a license necessary in Hong Kong - for VS6BE, and a second-hand Hammarlund Comet Pro (I think that that was it's name) receiver with plug-in coils.

All I had to do was put up an aerial, a job done in double-quick time because the tree I used to support one end of it was covered all over with the most vicious black ants.

Within a few days I had worked stations all over the World, (VS6 being fairly rare DX), so I had a small modulator built by a radio shop in Kowloon to give grid modulation of the PA. I also obtained a rather superior carbon mike. I had great fun with this, and could always be sure of a contact, though different parts of the World came in at different times during normal operating hours.

Alas, all things come to an end. Just before War was declared the local Post Office authorities came along, said "No more of that, young man" and, to my great amusement, literally sealed up my transmitting equipment with red tape and sealing wax.

(Visitors to The Royal Signals Museum at Blandford are recommended to look for the display of photographs, etc. which deal with "Brownie's" trip to the Arctic regions - Ed.).

HOW'S YOUR CW?

A QSL card recently received by the Editor for a VS5JC contact way back in 1966 comes from PY1DB, Daniel N. de Brito of Rio de Janeiro. The front shows a view of Rio and the reverse gives details of the contact. In fact, it looks like a normal card until you read the small print at the bottom. It appears that Daniel holds the World record for reading CW at 65 words per minute. Before you write to tell me about Ted McElroy, etc., I should add that PY1DB maintained the copy for ONE HOUR. Ah well!, back to the 12 w.p.m.

SHEEPSKIN.

On another QSL recently received, this time for a contact from 9M2XX in 1968, comes details of THE EINDHOVEN CERTIFICATE. This can be claimed by licensed amateurs or SWLs who can produce evidence of having worked or heard two-way communication with 15 radio-amateurs whose calls are given below. Full details of the QSLs must be sent with the claim and contacts after 1/1/74 only count. There are no band or mode limits, but UHF/SHF contacts count double (does this mean you work 7½ stations? -Ed), UHF/SHF means 430 MHz and above. Send details and 7 IRCs or HF 13,50 to : B. MUNNEKE. VARENLAAN 7, SON 4563, NETHERLANDS.

Call-signs to choose from to obtain THE EINDHOVEN AWARD include : -

PA0 : ALM BBE BJB CUR EAP EDV GD GU GRE HAN HKS HSR HWB HWE JJT JNW JOE JSA KLS KVN LMD LVT LVW LWS MJK MRT MS MUN NDS NRD OB PAZ PFU PJS PKJ PMJ PCC POP PRB PUI PWA PWZ QN RMB SON TRD VDP VO WCH WJW WKS WSB WTU ZA.

PEZ : EVO.

PI1 : EHV TSH.

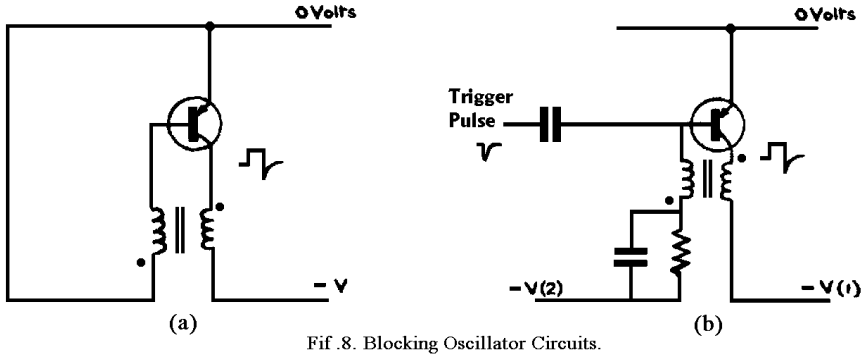
TRANSISTOR CIRCUITRY, LOGIC, GATES, ETC - Part III.

Training (This is the third instalment taken from a School of Signals Training Precis by kind permission of the Commandant, School of Signals. Part II appeared in the Spring 1974 edition of 'Mercury'. - Ed).

THE BLOCKING OSCILLATOR,

34. A range of monostable and astable circuits has been achieved using range inductance as the main timing element in a transformer-coupled feedback circuit. The circuits are generally known as Blocking Oscillators since the active element is rapidly driven into saturation during the first portion of the regeneration cycle.

35. The basic circuit of a transistor blocking oscillator is shown in Fig.8 (a). In the absence of a trigger pulse, the transistor will rest in the off state since the base to emitter potential is zero. If, now, a pulse is applied to the circuit in such a manner as to cause the transistor to conduct, a voltage will be developed across the collector winding of the transformer and regenerative feedback to the base circuit will occur. The collector will rapidly bottom but the current through the collector winding of the transformer will continue to increase at a rate depending upon the inductance of the winding. The increase in collector current will continue until limited by the capabilities of the transistor and the total resistance of the circuit. When the collector current stops increasing, the voltage induced in the base winding of the transformer disappears and the transistor rapidly turns off, the action being accentuated by regeneration in the reverse direction.



Fif .8. Blocking Oscillator Circuits.

36. The resulting output waveform is shown in the figure. A square waveform is generated during the ON period of the transistor while a large overshoot of voltage occurs when the transistor is turned off. The overshoot takes a little time to die away exponentially before the transistor recovers to its normal rest state.

37. A blocking oscillator can be made to be free running by adjusting the DC conditions of the circuit so that a small transistor current will flow when the supply voltages are connected. It is usual, however, to provide a second timing circuit to control the period between the ON states of the transistor. The second timing element is usually a resistor-capacitor combination.

38. An astable blocking oscillator whose pulse repetition frequency is controlled by an RC element is shown in Fig.8 (b). Assuming that the time constant of the RC network is large compared with the period of the transistor ON pulse, there will be little effect of one timing element on the operation of the other. When the supplies are connected, the transistor bottoms and the collector current increases until limited by the transistor and circuit constants, as before. The voltage across the collector winding of the transformer then collapses and regeneration occurs in the reverse direction turning the transistor OFF. The right-hand terminal of the RC network, which has now been brought to a positive potential, moves exponentially towards the supply line V-(2) but as it crosses zero potential the transistor is rapidly turned on and the cycle is repeated.

TRANSISTOR CIRCUITRY, LOGIC, GATES, ETC - Part III. - Contd.

39. The resulting output waveform consists of a train of positive-going square pulses of relatively low mark-to-space ratio. The period between pulses will depend on the time constant RC and the magnitude of the supply line V-(2). If the mark-to-space ratio is increased, the RC network will have an effect on the timing of the generated pulse and the behaviour of the circuit becomes more difficult to predict. The oscillator may be synchronised to an external signal to apply a trigger pulse to the transistor base, as shown in the figure.

40. Blocking oscillators offer the advantage of demanding only one active element but the transformer is usually a relatively bulky item. The mean power dissipated in the circuit is invariably low since the transistor spends a large proportion of its time in the OFF state. The transformer enables a wide range of impedances to be driven when additional windings are provided. There are, of course, a great many variations of the circuits shown in Fig.8 to be seen in practice.

DIODE LOGIC CIRCUITS.

41. Combinations of diodes and resistors can be used to provide various functions in AND and OR logic. The treatment of such combinations will initially consider the diodes to possess 'ideal' characteristics, that is, the forward and backward resistance of the diode will be assumed to be zero and infinity, respectively, and factors that may have an effect on the speed of switching will be ignored. Performance limitations brought about by the imperfections of practical diodes will be considered later.

42. SIMPLE CIRCUITS. Two simple diode gates are shown in Fig.9. The input signals to these gates comprise changes of voltage between the two levels of V+ and V–. An examination of the two-input gate shown at (a) will show that when either one input or the other (or both) is positive the appropriate diode will conduct and the output will also be positive. It follows that the output will be negative only when both inputs are negative. The gate may therefore be regarded as either providing the OR function or the AND function depending on whether the positive or the negative condition of the input signal, respectively, represents the binary 1. For this reason the circuit arrangement shown at (a) is either referred to as a "positive - OR" or a "negative - AND" gate.

43 In Fig.9 (b) the polarities of the diodes and the supply are reversed and it will be seen that the output will be positive only when both inputs are positive. It follows that the output will be negative when either one input or the other (or both) is negative. The circuit may therefore be referred to as a "positive - AND" or a "negative - OR" gate.

44. In principle any number of inputs may be provided to the gates shown in Fig.9 by adding extra diodes, but in practice the number of inputs is usually limited to between five and ten depending on the type of diode used and the accuracy of switching required.

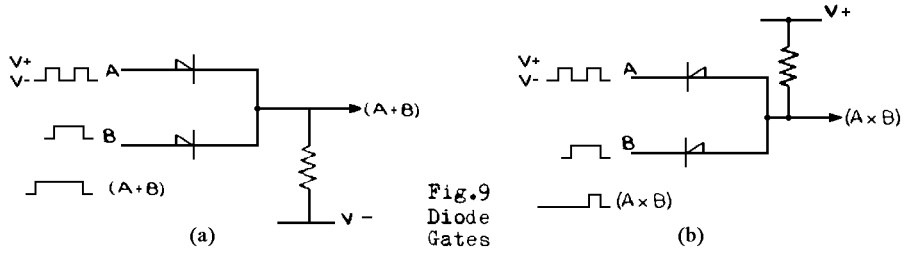


Fig.9 Diode Gates

45. It should be pointed out that the 'supply' end of the load resistor shown in Fig. 9 (a) and (b) may also be used as a logic input if required. For example, the positive - OR gate (a) will give a positive output when either one diode or the other or the bottom end of the resistor (or a combination of two or all three) is positive. Similarly, the positive - AND gate (b), will give a positive output only when both diodes and the top end of the resistor are positive. In both circuits one of the supply lines, either V+ or V–, may be regarded as being at earth potential, if desired.

TRANSISTOR CIRCUITRY, LOGIC, GATES, ETC - Part III. - Contd.

46. Use is made of a resistor as a logic input in a class of pulse diode gates, two of which are shown in Fig.10. At (a) the two input signals comprise changes of voltage between zero and some positive value. It is assumed that the input to the resistor is a steady DC level while the input to the diode will be cut-off for any condition of the AC input and the output will remain at zero. When the DC input is positive, however, the diode will conduct when a negative-going waveform is applied to it's input and this waveform will appear at the output. The signals to the two inputs may be changed over if desired so that the DC input is applied to the diode and the pulse to the resistor; in this case the polarity of either the diode or the DC input signal will have to be reversed.

47. In Fig.10 (b) the roles of the diode and capacitor have been interchanged and the DC signal must be applied to the resistor input. When the DC input voltage is zero, the diode is reverse biased by an amount V+ and so long as the positive-going pulse input to the capacitor does not exceed V+ in amplitude this pulse will not appear at the output. When the DC input is positive by an amount V+, however, the diode will conduct when a positive-going pulse is applied to the capacitor input and this pulse will then appear at the output. The DC level of the pulse input to the capacitor is immaterial.

48. There are a great many variations and refinements to be seen in practice of the pulse gates shown in Fig.10. An important application arises when bistable circuits are set by clock pulses depending on a particular DC logic condition. The principle will be referred to again when bistable circuits are considered.

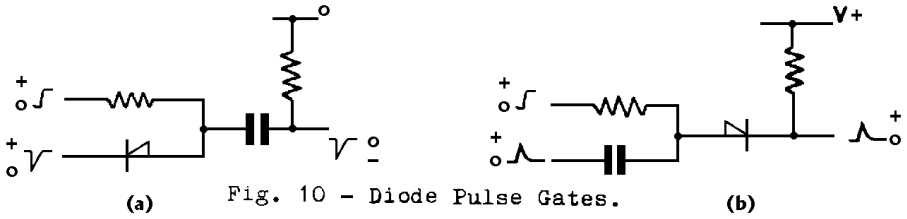


Fig. 10 - Diode Pulse Gates.

Multi-level Circuits.

49. Simple diode gates may be connected together in cascade but the circuit problems encountered are easier to handle when the gates are of a like nature, that is when they are both AND or both OR. Fig. 11 shows two arrangements of similar gates connected in cascade to form a two-level logic circuit. The input signals comprise changes of voltage between V– and V+ and as before, one of these levels may be regarded as being at earth potential if desired.

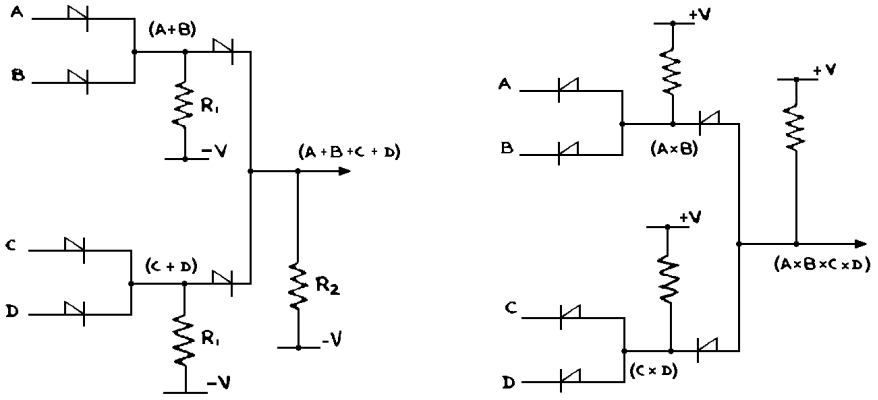


Fig. 11. Like - gates in Cascade.

50. The circuit shown in Fig.11(a) provides the OR-to-OR function for positive-going inputs. It should be noted that, under certain conditions, the input circuits will be loaded by the diode load resistors in parallel and will therefore have to supply more current. The worst case occurs when only one of the four inputs is positive; that input will then have to supply the total circuit current. Fig.11(b) shows a circuit that provides the AND-to-AND function for positive-going inputs. The worst loading case on this circuit occurs when only one of the four inputs is negative.

51. When unlike gates are connected in cascade, the effect of the load resistor at the second level is to reduce the amplitude of the change of voltage at the output. In practice, precautions have to be taken to minimise or eliminate this effect so that the voltage representing 0 and 1 will lie within a given tolerance. Fig.12 shows two arrangements of dissimilar gates connected in cascade. The input signals comprise change of voltage between V– and V+ as before but the supply voltages are labelled E– and E+ to allow for a special case when the supply and signal voltages are not equal.

52. First assume that the supply and signal voltage levels are of the same magnitude. The circuit shown in Fig.12(a) will give a positive output at the correct potential when at least one input of each pair is positive. When this condition is not satisfied, the output will be negative but will be less negative than the correct potential by an amount depending on the ratio of the resistors R_1 to R_2 and the particular combination of the signals at the input. The worst case occurs when there is a positive signal at the output of. one gate and a negative signal at the other.

53. The effect can be reduced by choosing a value for R_2 that is very much greater than the value of R_1, a typical ratio being $R_2 = 10R_1$. With the ratio of resistors the negative output will be about 90% of the correct amount with respect to the positive supply voltage under the worst conditions of input.

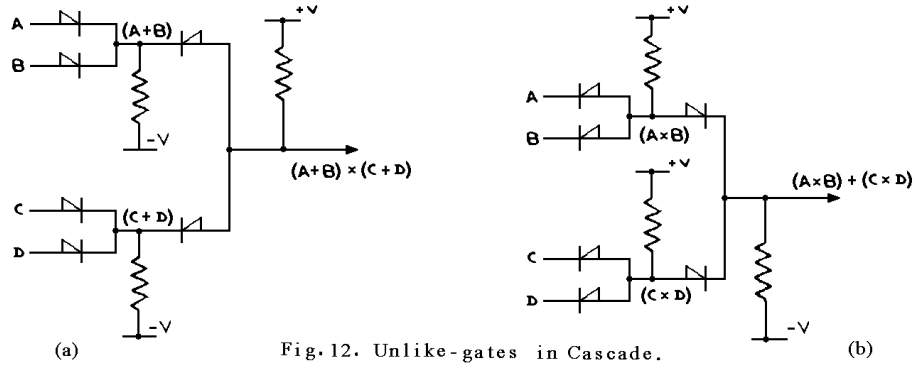


Fig. 12. Unlike-gates in Cascade.

54. Similar considerations apply to the AND-to-OR circuit shown in Fig.12(b). The output of this arrangement will be negative and at the correct potential when at least one input of each pair is negative. When this condition is not satisfied the output will be positive, but will be less positive than the correct potential by an amount depending on the resistor ratio and the input conditions, as before. Again, the worst case occurs when there is a positive signal at the output of one gate and a negative signal at the other, the values of the resistor being chosen to reduce the error at the output by the desired amount.

55. A method of eliminating altogether the effect of the output load resistor R_2 is to make the supply voltage E+ more positive than the signal V+ in the positive AND-to-OR case and the supply E– more negative than the signal V– in the positive OR-to-AND case. It can easily be shown that the relation between R_1 and R_2 should be us given below if the output level is to be correct and assuming the worst combinations of input signals.

TRANSISTOR CIRCUITRY, LOGIC, GATES, ETC - Part III. - Contd.

$$\text{Positive OR-to-AND (Fig. (a))}\quad R_1 = R_2\,\frac{V- \; E-}{E+ \; V-}$$

$$\text{Positive AND-to-OR (Fig. (b))}\quad R_1 = R_2\,\frac{E+ \; V+}{V+ \; E-}$$

The following example illustrates a typical set of conditions. If the supply and signal voltages are chosen as follows:

$$E+ = 20, \quad V+ = 10, \quad V- = -10, \quad E- = -20 \text{ volts}$$

then the minimum resistor ratio, R_2/R_1 that will allow accurate switching in the circuits shown in Fig.12 is 3.

56. The foregoing principles can be extended to more than two levels if required but, in spite of the apparent simplicity of diode logic, design problems become increasingly more difficult to handle as the number of cascaded circuits is increased and circuits in more than three levels is seldom encountered. In order to avoid the difficulties of cascaded diode circuits transistor buffer stages can be inserted between levels.

57. In addition to the problems encountered when diode logic circuits are cascaded, difficulties also arise when the source resistance from which the input signals are fed are comparable in value with the circuit resistors. In practice, the signals will be attenuated to some extent as they pass from element to element and it is usual to allow a depreciation tolerance of about 20% to the signals in order in order to cater for this effect.

(In following parts, Diode Coding Matrices, Practical Limitations, Invertor Logic, Emitter Logic, etc. will be dealt with. - Ed.).

QRP SUMMER CONTEST.

G8TK kindly sent along the following details. Mark your calendar/diary NOW.

Organized by Activity-Group-CW in DL. Single-Op. CW. Below 10 Watts input but open also to QRO stations. 05/06 JULY 1975. 1800 - 1500 hours GMT. Select 5 Bands from 1·8 to 28 MHz.

15 hours operation allowed, take 6 hours pause in two parts at most. Call "CQ QRP TEST" and exchange RST and QSO number/input (.../1 to .../9). Add 'X' if TX is CO- or VXO-controlled. Example : 579 005/8X. QSOs with all stations are valid: Own Country = 1 point, Own Continent = 2 points, DX = 3 points. 3 additional points for a contact with a QRP station (= 4 to 6 points). Handicaps : One station using below three Watts input or Xtal-TX = 1 handicap in QSO, 4 handicaps possible (both .../2X or so). Both stations QSO points X 2 for 1 handicap, both points X 3 for 2 handicaps, both points X 4 for 3 handicaps in a QSO....

Multipliers : Own Country = 1 point, DX = 2 points per band and country according to latest DXCC List, but call areas in JA, PY, VE, VK, W, ZS extra.

QRO stations : Same rules, but input not limited (use .../QRO) and only QSOs with QRP stations valid. QSO points : as much as the QRP station gets for it. Logs by 31 July. Please also send a "mini-log" to :

HARMUT WEBER, DJ7ST. D-3201 HOLLE, KLEINE OHE 5, WEST GERMANY.

A HIGH POWER LINEAR AMPLIFIER.

G5YN.

You will remember in the last article by the Impoverished Sidebander that I described a small Linear Amplifier to enable my SB10U to drive the KW 600 which had been lent to me. The latter had to go buck to its owner in due course. Using this commercial amplifier had opened my eyes to several shortcomings in the old transmitter adapted for use as a Linear Amplifier as described in "Mercury" a few years ago. The construction of a new Linear Amplifier was therefore imperative.

A study of the literature indicated that I had most of the components necessary to build an amplifier based on the "One-Band Kilowatt Amplifiers" described on pages 194 to 197 in the ARRL Handbook for 1962 (Pages 195 to 198 in the 1968 Edition). The circuit appeared to have the desirable features of simplicity and low drive requirements. To ensure stability anti-parasitic chokes were used and the paralleled 813s were neutralised. The additional components required for neutralising were RFC2, C7, C8 and C9. The 813s operate in Class AB1.

The tank coils L3 and L4 are tapped by large size wander plug and sockets. If you have a big ceramic switch - so much the better. L3 is tapped at 4 turns for 15 Metres. 20 Metres is covered by the whole of L3 plus 1 turn of L4, 40 Metres by L3 plus 8 turns of L4 and 80 Metres by L3 plus 19 turns of L4. It will be noticed that C18 is connected to the centre, 3rd turn of L3. This has the effect of reducing the effective tuning capacity across L3/L4, particularly at the higher frequencies. C18 need only be 100pfd but the only suitable capacitor I happened to have was of 200pfd. This trick of tapping the capacitor down the coil is most effective.

It was originally planned to make the SB10U work into a 75 Ohms load. However, a resistor of such low value reduced the drive to too low a value at frequencies above 7 MHz. By increasing R1 to 8 Kohms it was found that drive was maintained. If you will look at page 41 of the SB10U Instruction Manual where the modification to the DX100 is described you will see that the SB10U is working into a capacitive load. 100pfd was found to be the best compromise. 50pfd is best on 15 Metres but 150pfd for 80 Metres. However, the value is not highly critical.

R4 provides a more constant load for V1 as well as flattening the tuning of L1/C6. With these values for C1, R1 and R4 excessive drive is available on 80 and 40 Metres, a little in reserve on 20 Metres and just enough on 15 Metres. The excessive drive was corrected by making R1 into an eight-step attenuator. Tap 1 is used on 80, tap 2 on 40, tap 7 on 20 and tap 8 on 15. The SB10U should run at full output on peaks otherwise the residual carrier will form too large a part of the total signal. S2 and the link coil L2 are provided so that if your sideband generator has sufficient output you need not use the sub amplifier V1. If you have difficulty in getting enough drive on 15 Metres, increase R4. I use a 6BW6 as a Class A sub amplifier because I had one in the spares box.

The components are mounted on a 16" X 10" X 3" aluminium chassis with a 17" X 10½" panel. The pre-War "Ormond" slow motion drive for C18 was a very old friend which just had to be used and is very smooth and also looks very well. A slow motion drive is not really necessary and any large good looking dial will do. A 4" Raymart dial is used for C19 and a 3" Raymart dial for C1. The sockets for V2 and V3 are mounted well below the chassis on lengths of 2BA brass studding so as to reduce the height of V2 and V3 above the chassis. A sketch of the layout is shown in Fig.2.

The 300 Volts HT for V1 (which draws 27 mAs) is obtained from the same power pack that serves the SB10U. The power pack for V2 and V3 is shown at Fig.3.

The Variac is very useful for turning on the power gradually and for applying reduced power when required for tuning up. Voltage regulators V3, V4 and V5 are not necessary were there. They could be replaced by the extra resistance required to drop 450 Volts at 40 mAs (about 11 Kohms). C, again was composed of what was available. The choke input provides quite good regulation for the main HT supply. If you are using strings of silicon diodes instead of the 866A's then the swinging choke can be omitted but surge-limiting resistors may be necessary. In this case the transformer secondary need only be 1400-0-1400 Volts. Grid bias for V2 and V3 is taken from a small power

pack stabilised by an 85A2. This gives a standing current of about 45mAs per valve, total 90 mAs. This is within their dissipation of 100 Watts each. They drive up to about 300 mAs on load and give about 250 Watts output on 80 Metres falling off at the higher frequencies.

You will notice that there has been no reference to 10 Metres operation. This in because I am not set up to get 10 Metre output from my SB10U. Also, with the very high output capacity of the two 813's in parallel, 28pfd, plus circuit strays, a poor L/C ratio results in low efficiency.

This amplifier proved easy to neutralise and is perfectly stable. Excellent reports have been received both locally on 80 Metres and from Cape Town on 20 Metres, and it does not appear to degrade the quality of the SB10U output.

If anybody is short of a condenser for C13 I have some spares.

A HIGH POWER LINEAR AMPLIFIER - TABLE I.

Resistors.

R1	8 x 1 Kohm 1 Watt.
R2	33 Kohms ½ Watt.
R3	500 Ohms ½ Watt.
R4	10 Kohms 2 Watt.
R5)	Found not to be required.
R6)	

Inductors

RFC 1,2,4.	2·5mH small RF chokes.
RFC3	Heavy RF choke (Ex. WS53)
L1/L2	Wound on Eddystone plug-in formers.
L3	6 turns 2½ diameter self supporting 14swg or small diameter tube.
L4	25 turns on Eddystone 2½ x 5" Ceramic former.

Sockets.

S1, 2	Co-axial sockets, Belling Lee or Radiospares.
S3	British 4-pin valve socket.
S4	Co-axial socket Pye.
J1,2,3,4	Closed circuit jacks Bulgin or Radiospares.

Meter

M	500 mAs FSD (Ex BC-610)

Switch.

SW	8-way Yaxley.

Capacitors.

C1	100 pfd Silver Mica.
C2	·01 µfd disc ceramic 500 VW.
C3	·01 µfd disc ceramic 500 VW.
C4	·01 µfd disc ceramic 500 VW.
C5	·0005 µfd Mica 500 VW.
C6	·001 µfd disc ceramic 500 VW.
C7	·01 µfd disc ceramic 500 VW.
C8	·0005 µfd Mica.
C9	10 pfd air trimmer (neutralising).
C10,11,16,17	·01 µfd disc ceramic 500 VW.
C12,14	·005 µfd tub ceramic 1500VW (German).
C13	·001 µfd tub ceramic 8KVW (Dubilier).
C15	·001 µfd Mica 4KVW (Dubilier).
C18	·0002 µfd variable (Cyldon).
C19	·001 µfd variable (Johnson).

Parasitic suppressors.

APC1	6 turns on 100 Ohms ½W resistor.
APC2	6 turns ¼" diameter 16 swg.
APC3	6 turns ¼" diameter 16 swg.

Valves.

V1	6BW6 or 5763 (Pins numbered for 6BW6).
V2,V3	813.

Filament Transformer.

T1	10 Volts, 10 Amps (Woden).

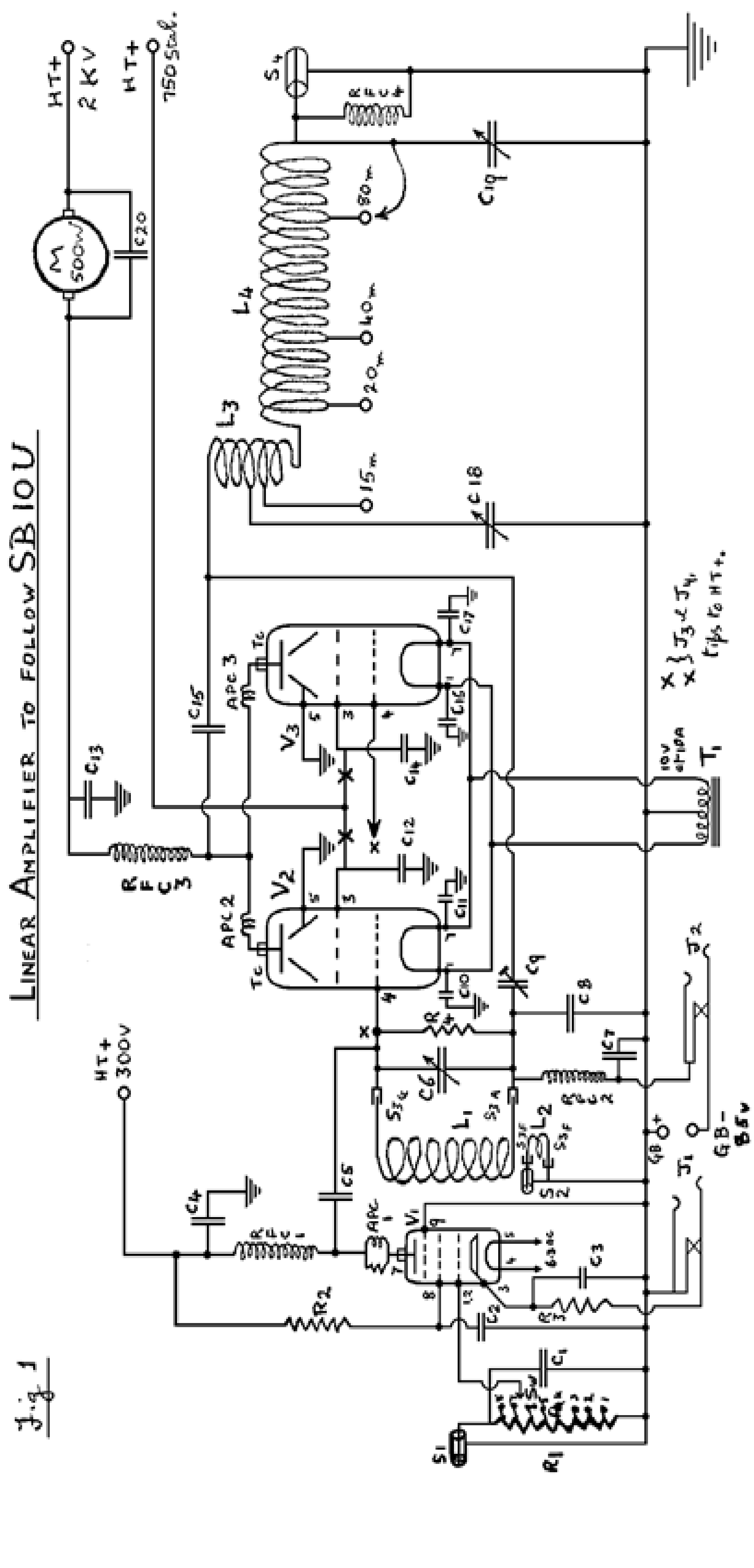
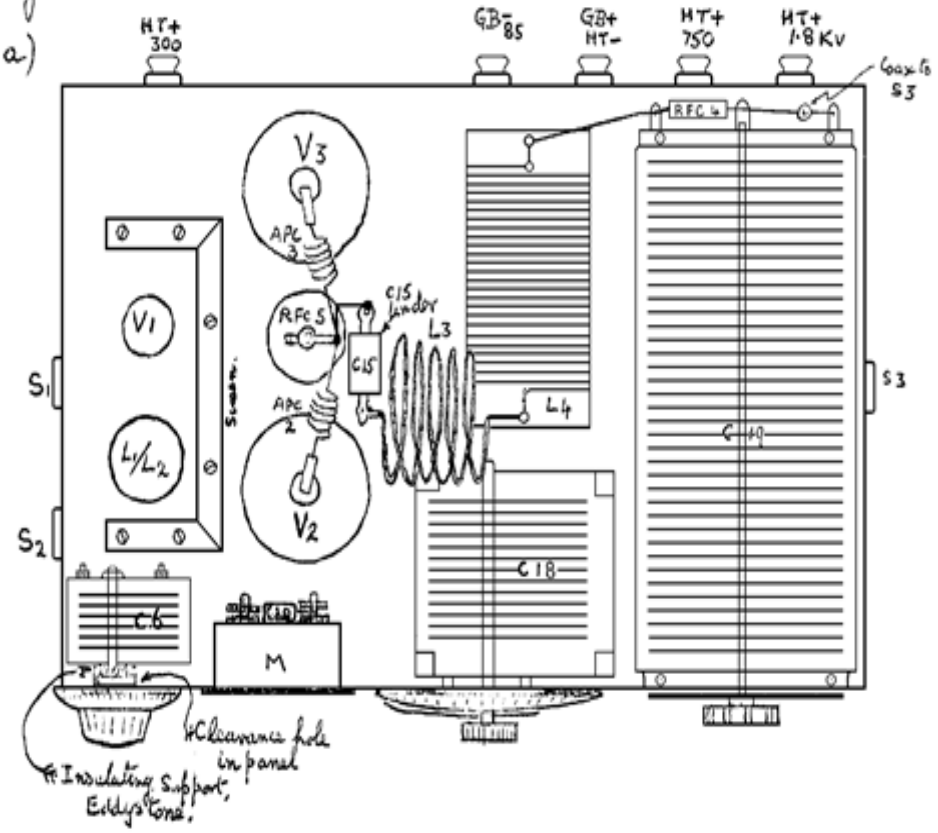

Linear Amplifier to follow SB10U
Fig 1
HT+ 2KV
HT+ 750 stab.
HT+ 300V
M 500W
C20
C13
RFC3
RFC4
RFC1
RFC2
S4
L4
L3
80m
40m
20m
15m
C19
C18
C15
C17
C16
C14
C12
C11
C10
C9
C8
C7
C6
C5
C4
C3
C2
C1
APC 3
APC 2
V3
V2
V1
TC
T1
10V 4+10A
L1
L2
S1
S2
R1
R2
R3
R4
J1
J2
GB+
GB- 85V
X } J3 & J4, tips to HT+.

Fig 2

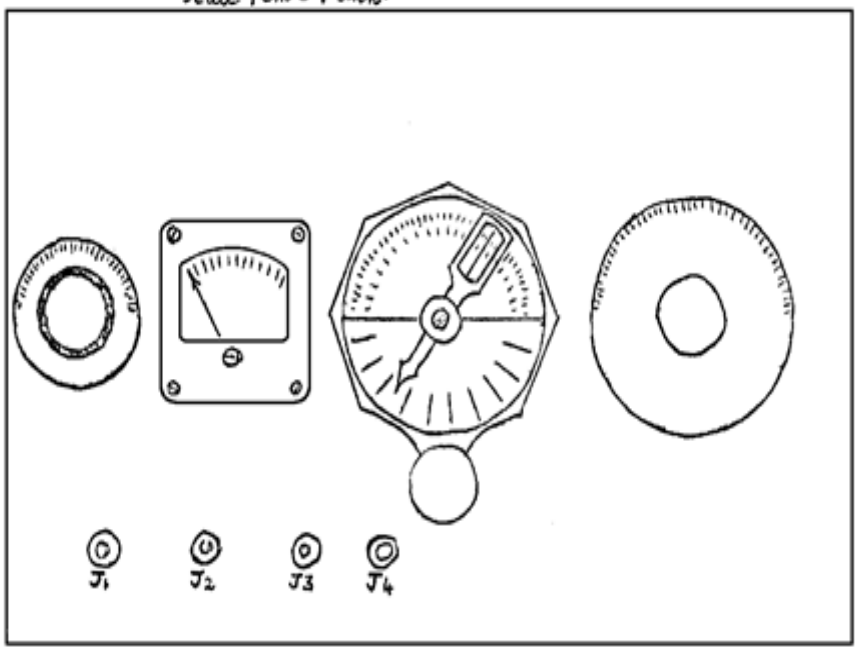
Scale 1 cm = 1 inch.

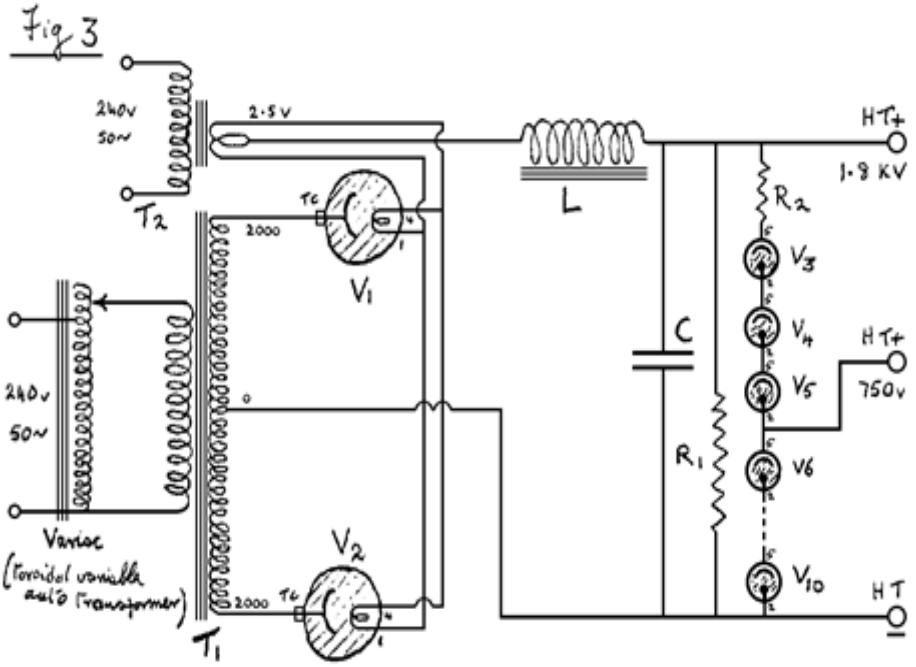
a)



b)

Scale 1 cm = 1 inch.





Component list for Figure 3.

Variac	Claude Lyons Type V8H (400 Watts).
T1	2000-0-2000 @ 250 mAs (Surplus Market).
T2	2·5 Volts 10 Amps (Woden).
V1,2	866A.
L	5/25 Henry 5/250 mAs swinging choke (Woden).
C	Made up of ; 2 x 6 µfd 2500 VW TCC (Ex WS53) plus 3 x 4 µfd 4000 VW oil filled (Japanese) all connected in parallel.
R1	40 Kohms 100 Watts wire wound vitreous enamel.
R2	17 Kohms 30 Watts wire wound vitreous enamel.
V3,4,5,6,7,8,9,10	VR150/30.

DONATIONS.

HQ would like to acknowledge the many donations to Society funds made by members. These are very much appreciated and are the main reason why the sub is still at 50p!. Talking to the Treasurer the other evening, Your Editor was pleased to learn that donations since last June 1st total well over £100. A large proportion of this has come from the 75R Teleprinters kindly donated to the Society by a member. Costs, such as those for Ties Printing, Cards, etc. have risen since last year but the Society has managed to absorb them and at the time of writing prices remain as per the Society, Stores Order Form.

SUBS.

As this is being typed at the end of February, it is disappointing to see that over 200 members still owe their 1975 subs. If you are an Annual member, why not ask HQ for a Bankers Order Form - it saves a lot of work at your end and even more at HQ where staffing is an acute problem.

WHITE STICK SECTION.

(The following article first appeared in "St. DUNSTANS REVIEW" for December 1974 and is reproduced here by permission of, and with acknowledgement to The Editor "St. Dunstans. Review" and the St. Dunstans organisation. - Ed.).

Among the more usual crafts display at The Corn Exchange, Maidstone, in the Kent Association for the Blind Exhibition of Handicrafts on the 6th November was wrought iron work by Duncan Sutherland (RSARS 1039) of Dorrit Way, Rochester.

Duncan is a relatively new St Dunstaner who came to us in 1972. He lost the sight of one eye during service in the Second World War with The Royal Corps of Signals. The sight of the other eye failed just over three years ago. At Ian Fraser House he was introduced to wrought iron work. "They had the tools there set out in the Workshops and I took an interest in it" said Duncan.

So much so that he became one of the first St. Dunstaners to be set up in his own workshop with the specialised tools for working in wrought iron. His exhibit at the show was a house sign in mahogany suspended from a wrought iron wall bracket. Duncan is specialising in this particular item although he also makes other things, including shelf brackets and flower pot holders. He is at present making seven balustrades for a staircase.

One piece of equipment St. Dunstan's did not provide is the capstan on which Duncan has mounted the metal former, which shapes the iron strip into scrolls. This is Duncan's own invention made from the base of a dentist's chair. "When the metal former was fixed on the bench I found I had to swing the metal round the scroll. This was getting in the way of everything so I thought why not fix it on a capstan and turn the scroll?". The base had to be heavy so Duncan thought of a dentist's chair, which had been given to him. With the chair removed he has a rotating base which can be raised or lowered to working height.

"It is a nice hobby for an unsighted person who likes to work with his hands" says Duncan, a former engineering factory worker "The attraction is the idea of turning out something with a certain amount of beauty in it".

Wrought iron is not Duncan's only hobby. He is a newly qualified radio amateur - his call-sign is G4DJI - having passed his examination in May. "So I am comparatively new - not new as an operator, I had about five years in the Service on the key so the question of morse in the examination was no difficulty."

Around his new shack are Braille maps of the world on which he can check the whereabouts of any contact he makes He has already worked Portugal, Sicily, Sweden, the Ukraine and Yugoslavia.

Also in his shack is another dentist chair which makes a very comfortable operator's seat. Duncan extolled its usefulness. It's got tilt, it revolves; you can adjust the seat back; you can raise and lower it and the headrest is adjustable as well. In fact I suppose its the first dentist's chair where the person has gone to sleep voluntarily. You can really be comfortable in it!".

A hobby that has survived from his sighted days is Duncan's aviary in which there are some 18 species. " I breed a number of tropical finches, the Java sparrows, the Australian Zebra Finches - they breed quite freely, cut-throat finches breed. With budgies I specialise in lutinos and albinos". Even without sight Duncan enjoys listening to his birds. "Every species of bird has its own sounds. I can't manage the cleaning of the breeding cages because I'd miss a lot. Regarding feeding and watering of the birds and mixing different types of seed that are required for the tropicals, I can manage nicely.

Another danger Duncan has found being blind, is that of treading unknowingly on a young bird fallen from a nest in the indoor flight. The older birds know him and although they do not fly away they move out of his way. "When I go in I sweep my hand across the floor to see there is no youngster down there.

Another of Duncan's innovations are basket-work nesting boxes. "That's my own design" he said, "It's in the shape of a coconut, with just a hole at one end about half an inch diameter. These baskets are especially made for finches to nest in. They build their own nest in these quite happily, and they lay and raise their youngsters in there".

The cost of seed has increased 400% in 18 months and Duncan has had to reduce the number of his budgerigars. Instead of 10 breeding pairs he only has four or five. "Up to now I've been able to carry on but we'll have to see in future", he concludes, "I will still keep the finches because they don't require much in the way of feeding. I like to have things alive around me, things which need care".

(Unfortunately, we have been unable to reproduce the accompanying photographs, photos which show a smart G4DJI at work at the wrought iron bench, handling a fledgling albino budgie, at work in the aviary and studying a Braille map in the shack with the KW equipment prominently on view. Well done, Duncan! - Ed.)

1794(P) AGAIN.

1794(P) never welcomed a visit from Colonel @***$=~. He knew this one was inevitable. With the latest suspect he had achieved exactly nothing. The door burst open. In came the moustache followed by the Colonel. "Well?" roared the Colonel. "Nothing" admitted 1794(P) "All we know is that this fellow picked up a piece of paper. He will admit nothing except that it concerns a meeting. All he had on him was 12 squares of paper each with two letters on it, and 36 pieces of paper with single letters and figures on them. No letters or figures were duplicated on either set. "What was on the paper he picked up?" queried the Colonel. "Just this" said our hero, passing over a piece of paper. The Colonel read

AS IM JN BU FR FS BN DS AN LP HN IN LQ BT DO FR CT LO BN BS

DS IT JN IM JP JM CR GN FO CR HP FS CR IM FV JX EX BX AY BZ

Can you help? If you can decode the message, send it along to HQ with your name and RSARS number, and we'll pass it along to 1794(P). You probably won't get a medal, but the first three opened on June 1st will get a RSARS 50p voucher.

AUSTRALASIAN NET.

A letter from Gary ZL2AZT/RSARS 407 tells of the efforts to get this Net going. In a letter dated 22nd January 1975, Gary tells that the first such 80 Metre Net was held the previous evening. It opened at 0700 GMT and consisted of an almost 100% turnout of RSARS members in New Zealand. Apparently George, ZL2BJW has agreed to be Net control and a suggestion has been made that a local Newsletter is produced - again George has volunteered to organise this. The Net has been organised for the third Tuesday in the month, with an 'official' off on February 18th. The initial frequency will be 3·740 MHz but a QSY is expected to a frequency below 3·700 MHz where some of the VK stations can join in. (It is believed that VK's are not allowed to operate above 3·700 MHz - perhaps one of our VK members can confirm or deny this?). The following RSARS ZL members were 'on parade' for the initial meeting ; ZL1AXM Ken, ZL1ACL Eddy. ZL2AZT Gary, ZL2BJW George, ZL2BBT Keith, ZL3VJ Alex, ZL4IJ Tom. ZL4MI Leo. The lads are now looking for European contacts and arrangements are being made for a Sunday morning 14 MHz Net. Further details will be published in Mercury or may be heard on the UK 80 Metre Net, but in the meantime, monitor 14·275 MHz + or - from 0600 GMT on Sunday mornings. Congratulations to those who have done the organising and thanks to all those who have attended the Nets. Long may they flourish.

AWARDS AND CONTESTS. G3EKL

The New Year has come and gone, thick heads have cleared both North and South of the border, but bad band conditions still prevail and, together with the atrocious manners regrettably so frequently heard, combine to offer as nasty a taste in the mouth as any alcoholic hangover. I can only suggest that we all attempt to be as polite as possible, use our dummy loads, use power commensurate with distance and band conditions, abide by out licence regulations and also the Region 1 Band Planning - these small points can help towards all of us enjoying our hobby the better.

After the sermon, some concrete points. No more competition results yet (these notes are being compiled in mid-January) but the "MOP" Award for 1974 has been winkled out and the lucky winner is - G3YSK, your QSL Manager. The 'Top Five MOP'ers were :

Call-sign	"AM"	"CW"	"VHF"	Total
1. G3YSK	(From 250 to 400) 150	(From 25 to 100) 75	(From 20 to 50) 30	255
2. G2TT	(From 1 to 200)			200
3. 9M2DQ	(From 100 to 200) 100 X 2			200
4. GW3ASW	(From 300 to 450) 150	(From 25 to 50) 25		175
5. 9HIBX	(From 150 to 200) 50 X 2	(From 1 to 12) 12 X 2		124

Well done, John!, and a "Thank You", to all members striving for the various Society Awards. I am still waiting with bated breath for a claim from Derek - a hearty jump up the ladder would be inevitable and a severe 'jolt' on the 'CW' ladder should be expected, so what about it, Derek?

Once a year the Society ladders are published to whet the appetite of aspiring members!. Shortage of paper and space prevents the complete run-down, but here we go with the top few :

SPECIAL AWARD

Silver Plaque (400).
Europe : G2KK G8VG
Overseas : 9H1BX

Bronze Plaque (300).
Europe : G3XSN G3UAA G3EKL GW3XHJ
Overseas : Nil.

Special Award
Europe : G3HWL GM3PIP G3JVD G3YBT G3EYD G2HKU G3WMZ GM3HGA G3WXX G2TT
Overseas : VS6AA (282) MP4TAF (588) MP4TDA (046) 9M2DQ (300)

"ANY MODE" LADDER.
450 : GW3ASW 400 : G2KK G8VG G3YSK 350 : G3XSN G3UAA G3EKL GW3XHJ
Overseas : 9HIBX 9M2DQ

CW LADDER.
150 : G2KK G3UAA 100 : G8VG G3YSK 12 : ZL1AXM K2JFJ 9H1BX

VHF LADDER.
50 : G3YSK 20 : G3VIR G3EKL

QRP LADDER.
12 : G2HKU G3DNF

AWARDS AND CONTESTS - Contd.

And that is your lot for this edition and also the last from the wilds of Salisbury Plain. If there has been a hiccup in the processing of claims in the last few weeks, please bear with me, as I have been undergoing a QSY and also a QRP course - I've had the extreme pleasure of converting the XXYL to the XYL again - may I ever be allowed to radiate RF as I please !!!

Vy

73 Ray.

(Congratulations and very best wishes to Ray and the XYL. As most members will know, Ray is now a resident of the Signals Home of the North. Please send claims, etc. to his new QTH as shown on the inside cover of 'Mercury'.

Ray's words re operating standards came to mind when listening to the top end of 80 the other evening. A VQ9 was active at about 5 & 5 and an attempt to 'MC' was being made by an ON station. The frequency was bedlam. The 'list' was closed when a OZ station called the VQ9 direct. He was promptly told off by the MC. The OZ station informed the MC that he was not calling him. The MC replied that he would have to be "on the list" but the list was closed anyway. To this, the OZ stated that he did not wish to be put on the list as he wished to work direct. An argument (with about 8 stations participating) then took place 'for' and 'against' "the correct way to work DX on 80," i.e. via a MC. The OZ persisted, even though he was told to "Get off" and "Go away". The MC then said that he would ignore the OZ. The Danish station then pointed out that nothing in his licence stated that he had to work through an MC. By this time there were at least half a dozen calling the VQ9 direct, three or four calling the MC, several agreeing with the OZ and some telling him to go QRT, plus a couple of 'swishing' carriers. When the noise died down the OZ asked the MC if he would ask the VQ9 if he was prepared to work direct. Outraged cries followed from those 'on the list'. Finally the message was put over to the VQ9 who said 'Yes'. The MC called the OZ who, by this time, seemed to have disappeared!. It is sometimes easy to see why potential amateurs prefer collecting stamps!! - Ed.)

ANTENNA AND BEAM ERECTION.

No, not an article on the engineering aspects of back garden erection - just a note to say that the HQ station now has a 'Mustang' on a 50' tower here at Blandford. The whole story began last year when the Society "won" (to use an old Army expression) a set of triangular tower sections. These were refurbished and bolted together and looked good, but were positively useless, lying on their side in the antenna field. As luck would have it, the G.P.O. "Heavy Gang" were in the adjoining Antenna Field putting up feeder route poles. Ten minutes later two holes, 16" dia. X 11' deep were brought on to RSARS charge. The next problem was getting the tower into the holes!. Ray, G3EKL, came to the rescue with his Army Air Corps connections and over the horizon came a helicopter, which, in a matter of minutes, had the tower neatly in one of the holes. John, G3ZKA, set the guys and filled the hole with concrete. All that was now required was to assemble the beam and put it on the top. Easier said than done - except that, over the horizon (yes, you've guessed it!) came another helicopter. With 'ZKA at the top of the tower (complete with Belts, Lineman, Safety, I hasten to add) the chopper dropped the beam neatly on the top. The TA33 and the old 10 set tower are still there but due for overhaul and/or pensioning off. Photos of the tower erection have been sent to RadCom and 'SWM' although photographs of the 'antenna event' failed due to faulty film. (It is interesting to see how seriously these young helicopter pilots take their job - on flying helmet "Help stamp out fixed wing"!!!.)

MEMBERS SUPPLIES.

Members are reminded that the following items are available from HQ. Large SAE please for paperwork.

MEMBERSHIP LIST - Showing all membership call-signs with space to enter name and QSL card receipt. Issued with amendment slips to bring the recipient right up-to-date. FREE for SAE.

DISCOUNT LIST - Giving full details of a large number of suppliers who are prepared to grant discount facilities to RSARS members. Items offered cover a very wide range including furniture, jewellery, cars, motor cycles, lawn mowers as well as electronic items from most of the more well-known suppliers. FREE for SAE.

'Q' CODES/'Z' CODES - A list of the more often used 'Q' Codes and 'Z' Codes. FREE for SAE.

ANTENNA PLOTS - Circular graphs designed for plotting antenna radiation, loudspeaker and microphone responses, etc. On A4 paper. FREE for SAE.

MEMBERSHIP APPLICATION FORMS - Standard application forms to pass along to friends who may wish to consider joining RSARS. FREE for SAE.

APPLICATION COVERING LETTERS - A letter to go with application forms giving brief details of facilities offered by the Society, etc. FREE for SAE.

STORES ORDER FORMS - Copies of the standard stores Order Form. FREE for SAE.

MEMBERSHIP CARDS - A new series has just been produced. Please forward your Name, RSARS No., Call-sign (if any) and date of joining. Membership cards may be necessary when visiting any of the Discount suppliers.

WORLD ATLAS - An up-to-date Atlas giving lots of world-wide details, including the new UK County Boundaries. Price £1-50 inc. Post and Packing - at least 25p cheaper than in the shops.

AWARDS RULES - Containing details of all RSARS Awards, Trophies and Contests including The 5-59 Trophy, The Le Touquet Trophy, Certificates, The MOP Award, Details of the GW2OP Trophy, etc., FREE for SAE.

VHF DIVIDE AND PRINT - A computer print-out of all frequencies 144·000 to 146·000 MHz divided by 2, 4, 6, 8, 12, 16 and 18. Price 35p inc. Post and Packing.

HEADED NOTEPAPER - 100 sheets = 50p, 500 sheets = £2-25p, 1000 sheets = £4-25p. Post and Packing paid.

BASIC QSL CARDS - 100 = 60p, 500 = £2-00p, 1000 = £3-75. Post and Packing paid.

PLAIN LAPEL BADGES - 25p. Post and Packing paid.

CALL-SIGN LAPEL BADGES - 40p Post and Packing paid.

RSARS TIES - New stock just received. Despite price increase from manufacturer still at old price of £1-35p Post and Packing paid.

RSARS LOG BOOKS - 1 = 25p, 2 = 45p, 3 = 65p, 4 =85p, 5 = £1-05p and 6 = £1-25p. 40 pages, 1000 entries with manilla covers and extra column for recording RSARS No., WAB area, etc. Post and Packing paid.

PLASTIC BALL PENS -Blue ball pens with "ROYAL SIGNALS AMATEUR RADIO SOCIETY" engraved in gold. Separate cap. 1= 5p, 5 = 20p, 10 = 35p, 15 = 50p. Post and Packing paid.

RETRACTABLE BALL PENS - Triangular shaped retractable ball pens engraved "ROYAL SIGNALS AMATEUR RADIO SOCIETY". 1 = 13p, 2 = 23p, 3 = 33p, 4 = 43p. Post and packing paid.

MEMBERS SUPPLIES - Contd.

RSARS DYMO BADGES - Pin fixing, double row white plastic frames allowing 16 letter/spaces per row. Tape available in a variety of colours. 1 = 13p, 2 = 23p, 3 = 33p, 4 = 43p. Post and Packing paid.

RSARS KEY FOBS - Plastic fob stamped with "ROYAL SIGNALS AMATEUR RADIO SOCIETY" and diamond badge in Gold. Affixed to strong key ring. 1 = 13p, 2 = 23p, 3 = 33p, 4 = 43p. Post and packing paid.

WINDSCREEN STICKERS - Adhesive clear backing carries RSARS diamond in Light Blue, Dark Blue and Green with "RSARS" across centre. 1 = 23p, 2 = 44p. Post and Packing paid.

OVERPRINTED QSLS - These are the Basic QSLs showing a figure of Mercury on the front, with "MEMBER STATION", "ROYAL SIGNALS AMATEUR RADIO SOCIETY" all in blue. The reverse gives all the necessary information to act as a) a SWL Report, b) Acknowledgement for a SWL Report, or c) a QSL for a contact on AM, CW, SSB, FM, RTTY or SLOW-SCAN. Minimum order = 500. 500 = £3-25p, 1000 = £6-25p. This includes overprinting in RED, BLUE, BLACK or GREEN with a) your RSARS No., b) your call-sign, c) your name, and d) your address. Recent printing problems have now been overcome and delays should be considerably reduced.

GREAT CIRCLE CHARTS - A computer print-out individually produced for a members exact QTH based on co-ordinates provided with the order. Please state your Latitude and Longitude in Degrees and Minutes only (NOT MAP REFERENCES). The Chart lists well over 1,400 world-wide locations from ABADAN, IRAN to ZWOLLE, HOLLAND and shows Latitude and Longitude of each location, Distance from members QTH in Nautical Miles, Statute Miles and Kilometres, plus the bearing to and the bearing from each location. Complete with index. 37 pages 14🗁" x 11" printed one side only. Price £1-25p. Post and Packing paid

ANNUAL GENERAL MEETING - 1975.

The Administrative Commandant, School of Signals, Lieut.-Col. Barker R. Sigs., has kindly agreed to allow the Annual General Meeting of the Society to be held at the School of Signals again this year. The date??? - Saturday 26th July so mark your a) Calendar, b)your diary, c) your Log and/or d) the shack wall. Details being worked out still, but a mid-day meal and afternoon snack should be available on repayment (costs not yet known but should be about 70p). Due to security arrangements some form of identification may be necessary to gain access to the Camp. A RSARS Membership card will be acceptable (see above for availability). More details before the day, but we look forward to seeing more members than the record breaking number that attended last year. Bring the XYL, Girl friend (but preferably not both) etc. In the meantime, we will indent for some fine weather!.

ALDERSHOT ARMY DISPLAY.

The Society will again be providing a Stand at The Aldershot Army Display which is open to the public during the last week-end of June, 27th, 28th, 29th June. The Stand will be in the Royal Signals Complex and all visitors will be very welcome. Lots to see and do and the Arena Display will take place during the afternoons. More details later or, if you have any particular questions, drop a line to HQ. See you there???.

3 PEAKS 2 METRE EXPEDITION.

The aim of the expedition is to operate the same amateur radio station from the highest mountains in Scotland, England and Wales within a period of 24 hours. The expedition is to be made up of DOUG.LAS MC LAY, GM8FVC/RSARS 705, IAN JOLLY, G4BTW/RSARS 605 together with AL ROSS, GM8IZH, and with PETER RIDDLE of the REME TAVR acting as transport Supremo.

The attempt is to take place on APRIL 5th 1975, starting at midnight from the peak of BEN NEVIS. It is expected to be on the summit of SCA FELL between 1100 and 1300 on 5th APRIL 1975 and to be on SNOWDON at about 2100. The expedition will operate A3J on 2 Metres on 144·19 MHz. It is planned to spend about 30 minutes on each summit. A special event call sign (GB3UKP) has been applied for, and special QSLs will be sent for contacts with the expedition, and a special certificate to any station that works all three peaks.

There will be a "MISSION CONTROL" operated by GM8EUG/P in Kirkcudbrightshire who will act as 'Control', and keep stations advised of the progress of the expedition. All enquiries about the expedition should be addressed to GM8FVC - QTHR.

(To encourage RSARS members to support this effort, HQ has offered the participants "AFFILIATED 55" as a RSARS DX-pedition number. RSARS QSL cards will be made available to the expedition, if required.)

CONGRATULATIONS.

Are extended to Robin, G8LT/RSARS 290 who, it is reported by The Owl, made a successful two-way RTTY contact with the USA via OSCAR VI and OSCAR VII. The far end was manned by W2LFL and the QSO lasted about 20 minutes, It is understood that G2AOX put a lot of work into the venture by way of timings, orbital calculations, etc. Well done, all!.

5N2NAS.

This call-sign, believed held by The Nigerian Army Signals has been carried on the RSARS membership lists for some years as "C/o G3VIS". Members who have recently contacted this station were surprised to learn that the operator had no knowledge of The Royal Signals Amateur Radio Society. A letter, requesting an explanation, was recently sent to G3VIS. To date no reply has been received and the call-sign has been struck from the RSARS Membership List.

SKEDS.

That expert shuffler of (QSL) cards, G3YSK, informs HQ that he has regular 2 Metre and 4 Metre skeds as follows. All members are invited to join in :

Monday and Thursday	1900 GMT	144·33 MHz
	With G2BQ and G3XMZ	
Tuesday and Thursday	2130 GMT	70·26 MHz
	With G2BQ and G3XMZ	

LATE LETTER.

A letter, just in from WA6CEB/G3XSP, John Neville tells of poor band conditions over there, hence few, if any, UK QSOs. John and XYL are thinking of "going the other way" this year and missing out on a trip to the UK. Instead, they hope to be visiting Hawaii, Hong Kong, New Zealand and possibly Australia. John hopes to get on the air during the trip.

THAT ANTENNA!!

We must thank the many people who wrote to say they recognised the antenna mentioned in a previous issue. It was, of course, the G5RV of world-wide fame. Letters came from all over, including a note from G3JFF of RNARS who included a compliment slip with a copy of their Journal which just said " Re the antenna query in 'Mercury' see RSGB Bull Nov. 57 and July 58" (Tnx, Mike). Bill G2QB, writes to say "The letter to the RSGB Bulletin in July 57 brought a reply from G2WI. In November 1957 The Bull printed a symposium on the working of this antenna and various theories were advanced. In July 1956 the Bulletin carried an article by Louis Varney, G5RV, "An effective multi-band aerial of simple construction". This consisted of a 102' flat top, split in the centre, with a 34' long open-wire stub, followed by 72 Ohms co-ax or twin lead feeder, to the TX. The aerial has been fully described in the RSGB "Radio Communication Handbook", page 13.72 and it is referred to as "The G5RV 102 ft Dipole". G5RV described the operation of the aerial, and a digest of his remarks follows :-

On 1·8 MHz, the transmitter end of the feeder is jumpered, and the aerial is used as a Marconi type with a series tuned coupling circuit, and a good earth connection.

On 3·5 MHz, the electrical centre of the aerial commences about 15' down the centre of the stub.

On 7 MHz, the aerial works as two half-waves in phase, with a portion "folded" at the centre.

On 14 MHz, it functions as three half-wavelengths.

On 21 MHz, it works as a slightly extended two wavelength system, or two full waves in phase.

On 28 MHz, it consists of two one-and-a-half wavelengths in-line aerials fed in phase.

The open wire portion of the feeder can be extended right to the ATU, but should preferably be an odd multiple of a quarter wavelength on 14 MHz.

I (G2QB) have been using this antenna for the last twelve months or so, and have found it to work well on all bands. It is used in conjunction with an ATU. This consists of a roller inductor, a split stator condenser, and a second variable condenser, with a 1 : 1 Balun (see 'QST' July 1970 and July 1968). It is easily possible to attain zero reflected power on any band with the arrangement, and it has been very successful in clearing up one isolated case of TVI. The antenna is very popular on the Continent and is always referred to as 'The G5RV'.

From Folkestone, Fred, G3MYX, also wrote on the subject and even included two pages from the November 1966 RSGB Bulletin. He mentions that some years ago he made up a half-sized version (25' 6" tops and 17' 0" stub) used with a home-brew SSB phasing rig and had some useful QSOs and some of the stations worked expressed an interest in the antenna.

And last, but by no means least, a note from G5RV confirms what so many other members have mentioned.

Thank you, Louis, for a very interesting and much-used antenna, and to all those who wrote to comment on same.

****

LAST-MINUTE LETTERS.

From, Harry VQ9HCS, on Astove Island, comes a long and interesting letter just as we go to press. Harry mentions that there are as many as 92 islands in the Seychelles Group "but before you rush off to your rig, only 3 have amateurs on them". He mentions the Service Expedition to Danger Is., and comments that there are no amateurs on it (sorry, Harry, we were not asked!). He mentions that his generator arrived OK but the "rather expensive bulk cement carrier which dropped in to Astove to deliver it got stuck on the reef and stayed for over 3 months!". Apparently, the W.../VQ9 calls at present heard from Diego Garcia may well become VQ9…/C. Why 'C'? Well, /D is already used for Desroches and Diego Garcia is in the Chagos Archipelago. Harry's QSL Manager, by the way, is BILL DeLAGE, 236 SLATER STREET, ATTLEBORO, MASS., 02703, U.S.A. Harry hopes to be staying 'for some time' on Astove Island and is likely to be going over to 12V DC supply.

NEW MEMBERS.

Once again, we publish a few details of more recent members, although it must be admitted that a few of the following have been with us for quite a while!.

RSARS 0065 - C.A. DODD, G3XMZ, 9 MEATH GREEN AVENUE, HORLEY, SURREY. Clive, whom many may remember as DL5ZZ, is a "re-enlistment" having been away from the hobby for a while whilst settling in "civvy street". Joined Royal Signals In 1965. Saw various Units including 11 Signal Regt., 229 Signa1 Squadron, 1 Div. Signal Regt. and 3 Div HQ and Sig. Regt. Left the Service in September 1971. Has a QRP home brew TX (10 Watts) for 160 - 40 Metres. Also on 4 Metres with a Nuvistor convertor to an HRO and a 12 Watts QQVO-4-7's TX to a 4 element ant. at 40'. Crystalled on 70·260 and 70·533 MHz. Building a 45 Watts input 2 Metre TX and also a QRO Amplifier (QV06-40A) for 4 Metres. (1 Sep 74).

RSARS 161 - CAPT (RTD) J.H. TAYLOR, G3UVE, 44 AVONDALE AVENUE, HINCHLEY WOOD, ESHER, SURREY, KT10 0DA. John known to some in the past as 158941, joined 2/48 Div Signals (TA) in 1939. Embodied on 2 September 1939 at 2nd STC, Prestatyn. Feb/Mar 1940 saw G3UVE at 152 OCTU and this was followed by service with 94th Heavy AA Regiment, 2nd Heavy AA Regt L of C Signals, Cyprus, Air Formation Signals at Ismailia, then as GSO III with 'H' Force HQ MEF, and 9th Army Signals. John also saw service in Hamburg and Berlin. Runs a Drake TR4 Transceiver with Remote VFO and Drake MN4 ATU. Present antenna is a home brew Wight-trapped dipole at 30 feet with co-ax/balun and 75 Ohms Twin Feeder. Started 'ham' life with a complete (but somewhat modified) WS52 about 9 years ago. This was followed by a KW 2000E and now the Drake. John admits to "being rather rusty on the CW!". (1 Sep 74). (P.S. John is also a member of the R.S.G.B., The Institutes of Management and Marketing and The Society of Dairy Technology).

RSARS 220 - TIMOTHY D. HARRISON, ORCHARD LEA, WAINFLEET ROAD, BOSTON, LINCS., PE21 9RZ. Tim is one of our CCF members and is a member of Boston Grammar School CCF. Operates on the CCF National Net with c/s 1. Has a second interest in Golf and is a member of Boston Golf Club.(1 Sep 74). ,

RSARS 258 - JAMES HOLLAND, G4COQ, 18 EDINBURGH DRIVE, ACCRINGTON, LANCASHIRE, BB5 3AR. An ex-member of Royal Signals in which he served from June 1945 until May 1948 as No. 14943847. Jim saw service in Catterick (of course!) Scarborough, Calcutta and Karachi. (1 Oct 73).

RSARS 286 - GEOFF G. DREWE, G4CAO, 43 WOODHAM LANE, NEW HAW, WEYBRIDGE, SURREY. Geoff is also a member of R.S.G.B. and The Society of Electronic and Radio Technicians - On the back of his application form he writes : "Served as a National Serviceman with 70 Brigade (EA) Signal Troop at Nyeri in Kenya as a Corporal Radio Mechanic 1953 - 1955. Army Number 22886291. Spent 3 months on detachment with 3 Kings African Rifles. Worked on WS53, WS19. WS88 - WS31, WS 62, R107, R209, etc. Started work in 1950 as a Radio Engineer. Resumed in 1956. Now a Television Service Engineer, Interested in all bands 160 - 2 Metres. Listen all day and every day on 80 - 20 Metres. Rig luckily on bench directly beneath trapped dipole." At time of application Geoff was G8HCM but "reserved" the call-sign G4CAO which was subsequently issued. (l Feb 73).

RSARS 290 - R.W. ADDIE, G8LT, SPRING HILL, WAPPENHAM, TOWCESTER, NORTHANTS, NN12 8ST. A call-sign well-known to many particularly RTTY fans, G8LT joined us w.e.f. 1 Feb 73. Robin is also a member of the R.S.G.B., The British Amateur Radio Teleprinter Group and, as an additional interest, The Poole Yacht Club. He has earned his living in the Radio and Electronics Industry since 1946 and is a Fellow of the I.E.E. and a Member of the I.E.E.E. (USA). Has held a full license since 1937 and the main interest is RTTY (See Wireless World, February 1973). Operates 3·5 to 144 MHz also SSB and CW. G8LT's Service history reads as follows :

NEW MEMBERS - Contd.

RSARS 290 - Contd.

10-10-39, 2nd Lieut. Royal Signals, 52 (Lowland) Div. Signals. OC Wireless Section Div. Signals, 2nd B.E.F., 1940, Seconded AA Command Radar School Petersham, Attached to AA Command London Area as Radio 0fficer (Radar) G.L. (Lt), 1941, Posted to Special Communications Unit No.3 Barnet and then Hanslope Park with Rank of T/Capt. 1945, Posted same duties I.S.L.D. Calcutta as T/Major. 1946, Demob. 1946 Until present date, Reserve of Officers and then TAFVR. (1 Feb 73)

RSARS 303 - ROY A. GUBBINS, G4BKQ, 29 MEADOW END, GOTHAM, NOTTS., NG11 0HP. Joined Royal Signals as 14901608 and served from 2 Jan 45 Until 13 Feb 48. Trained at Catterick as an Operator Wireless and Line later serving as a Radio Operator. Units include GHQ Southern Command, GHQ India at New Delhi and Simla and a short time with GHQ Eastern Command. Roy is mainly a CW man and interested in 80, 20 and 15. Gear includes a KW 2000B, a DX100U and a DX40U. (1 Mar 73)

RSARS 311 - C. LANCASTER, G8HDR, 41 GREEN LANE, HARROATE, HG2 9LP. Chris is another CCF member of RSARS and is a member of Hymers College (Hull) CCF where he has been a Signals Section member for 4 years. , More recently he has been NCO in joint charge of the Signals Section. First introduced to amateur radio when on a visit to G4RS when on a Signals Cert. 'T' Course at the School of Signals during Easter 1970. He passed RAE in December 1972 but more recently has been QRT due to 'A' Levels QRM (Trust all went well, OM). Chris was considering starting a Northern VHF RSARS Net but 'Nothing Heard' recently. (1 Apr. 73)

RSARS 313 - D. HAMILTON, 102 WEST END DRIVE, ORBISTON, BELLSHILL, ML4 3BE, LANARKSHIRE, SCOTLAND. David is a disabled member of RSARS and as such has been granted Honorary Membership. He served in The Cameronian Scottish Rifles as a Rifleman from 18 Oct 40 Until 13 Jun 41. David transferred to Royal Signals on 14 June 41 after passing an OWL B III Course. He later qualified as a BII OWL at the Depot R. Signals and served abroad from 13 March 43 Until 1 Jan 44 in MELF on Combined Operations in Sicily and Italy. He was discharged on 5 October 47 and spent a short time in civilian life before re-enlisting again in Royal Signals from 6 October 47 until 22 March 52. He also attended No.115 Provosts Sergeants Course at the Depot Wing Military Prisons Staff Corps where he obtained a 'B' grading and he later became the NCO i/c Provost Staff at the School of Signals at Catterick Camp. His Regimental Number was 21005240.

RSARS HQ were recently able to forward to David a serviceable AR88 and it is hoped that this will help with the listening. David is also an Honorary Member of the Mid-Lanark Amateur Radio Society. (1 Apr. 73).

RSARS 327 - JOHN MCAVOY, GM3RPM, 113 SPEY AVENUE, FOXBAR, PAISLEY, RENFREWSHIRE. John lists the following on the back of his application form "Service: 2 years Catterick Camp, National Service, 1949 - 1951. OWL BIII and OWL BII. Royal Signals TA approximately 10 years. Hong Kong Signal Regiment for 6 months in 1950 in Sek Kong/New Territories. Also Korea 1950/51 with 28 Brigade 1 Commonwealth Div. Last TA Camp was at Blandford, Dorset. Licensed in 1962. Rig consists of KW Vespa MkII TX, KW 201 RX, KW E-ZEE Match, KW SWR 101 Meter, KW 'Q', Multiplier, KW LPF and KW 3-position Ant. Switch. Mic is a Shure 201 and Keys are a US Army Semi-Automatic Bug J-36 (vintage 1942) and a "Royal Signals" straight Key. Antennas are an 80 Metre Dipole (cut for 3·750 MHz) and an indoor 15 Metre Dipole. Married with 4 junior ops (3 boys and 1 girl) and is a Stock Controller by occupation. Interested in WAB (Book Number 1221) and is a fanatic on Bing Crosby, Stan Kenton, and Jane Froman. (1 Apr 73).

RSARS 329 - J.W. DUDBRIDGE, G3UUO, 39 CHESTERTON PARK, CIRENCESTER, GLOUCESTERSHIRE, GL7 IXS. John, who is also a member of the Swindon and District ARC,

NEW MEMBERS - Contd.

RSARS 329 - Contd.

the R.S.G.B., The Law Society and The Solicitors' Benevolent Association, tells us that he was educated at Cheltenham College where he was actively involved with the CCF including the Signals Section, where he "rose to the rank of Corporal". He was commissioned into the RE (TA) in 1963 and saw service with 204 Field Squadron (Bath, Somerset) with 43 Div Engineers, until disbandment in 1967. Since then RARO III only but is interested in becoming active again, perhaps with a Signals Unit near his home location. Licensed as G3UUO in October 1965 and is reasonably active ("Wife and work permitting"). 160 Metres (AM), 80 - 10 Metres (SSB only), 2 Metres and FM Mobile. At time of application John was engaged in developing the newly formed Club in Cirencester and developing a compressed Dipole for 160 Metres local ground-wave trials have proved successful. (Would be interested in up-to-date details, John - Ed.). Admitted as a Solicitor in 1971 and now practising in Gloucester. (1 Apr 73).

RSARS 345 - F.L. PARTINGTON, G4BZP, 21 EAST ROAD, WYMESWOLD, LEICS., LE12 6ST. Fred was another 'visitor' to Catterick Camp from November 1954 until June 1955 and from then until November 1956 with UK Comcan Signal Regiment at Droitwich, Worcs. Service Number was 23087400. Active on all bands from 70 cms to 160 Metres and specialises in VHF activity from sites reached by climbing (mountains), Fred is a Graduate (B.Sc.) University of Sheffield and is married with 2 children. (1 Apr 73).

RSARS 362 - LESLIE M. AIREY, G3GEJ, 19 HORSEMAN DRIVE, COPMANTHORPE, YORK, YO2 3SN. Here we welcome back another 're-enlistment' who was previously RSARS 290. Les served with the Corps in such Units as No. 26 Technical Maintenance Troop, of Egypt Command Signal Regt. Other interests can be judged by his membership of The British Astronomical Association and The Royal Astronomical Society in which he is a Fellow. Welcome back, Les. (1 Apr 73).

RSARS 365 - T.N. LLOYD, G3SL, "ROCHELLE", 14 ROSEMARY AVENUE, HOUNSLOW WEST, MIDDLESEX, TW4 7JF. Tom's details read as follows : "Served in Royal Signals throughout most of WW II after transferring from RA Ack Ack. Took part in the invasion of Madagascar and Comores Islands (and the occupation of the former). Madagascar was handed over to the forces of General De Gaulle and I completed my service (up to demob) in Kenya. Since the War I have followed a career in Electronics in Civil Aviation - now in National Air Traffic Control Services of the Civil Aviation Authority. Present location - LATCC West Drayton, Middlesex as a Telecommunication Technical Officer Grade B. Licensed in 1937 and interested in home construction. Have recently completed a solid state double superhet communications receiver and now working on a solid state TX for SSB and CW. Remember many Royal Signals friends, in particular Sgt Waldron who became VQ4JTW post-war - have since lost contact. Rose to dizzy height of Lance Corporal during War as a Radio Mechanic. Retained my old RA number 1529103 in Royal Signals (thus obviously a foreigner!). Married in Tananarive (capital of Madagascar) to a Frenchwoman in 1944 - both bi-lingual and still very happy!!. (1 Feb 74).

RSARS 371 - JONATHAN HIRST, 27 NIGHTINGALE AVENUE, CAMBRIDGE, CAMBS., CB1 4SG. Jon was one of our youngest members at the time of his application being just 15. He is a member of his School's CCF Signals Section, which operates under call-sign 24A on the National Net. When not engaged on Service type communications Jon is a keen listener to the HF amateur bands. (1 May 73).

RSARS 398 - F.A. TICKNER, G3XFG, "JANINA HOUSE", 139 NORTH CRAY RD., SIDCUP, KENT, DA14 5HE. Fred, who joined us w.e.f. 1st May 1973, sent along a photocopy of his AFW 5258, perhaps better known as a "Record of Service" Card. This shows that he served in The Royal Engineers from 20 April 1939 until 21 January 1946 during which time he reached the rank of WOII. Welcome, Fred. (1 May 73).

NEW MEMBERS - Contd.

RSARS 404 - 24095280 L/Cpl Hall C. J., 'J' Troop, 21 Signal Regt., Att 18 Sqdn R.A.F., RAF Gutersloh, B.F.P.O. 47. Chris, or as he is now better known, Kit, is a serving member of the Corps but started Service life (to use his own expression) "as a wooden-top". This was with The Queens Company, Grenadier Guards. It was whilst serving in Sharjah as a Guardsman that Kit met Derek (then MP4TAF) who introduced him to Amateur Radio and Royal Signals. A call-sign (MP4TCR) was not long in forthcoming together with MP4BHT whilst visiting Bahrain. Interest in Amateur Radio lapsed a bit on return to UK but time was spent negotiating a transfer to Royal Signals. Kit was finally accepted in May 1970. Now in BAOR and active as DA2WN. (1 Sep 73).

RSARS 427 - P.S. WILLIAMS, 27 HOVE PARK WAY, HOVE, SUSSEX, BN3 6PT.. Phillip is a Cadet L/Cpl in the Brighton Grammar School CCF which he joined in September 1972. Active on the CCF Net under the School call-sign '44'. Keen to get RAE and attending Brighton Technical College for this purpose. (1 Sep 74).

RSARS 448 - R. H. WILDE, ZL2BFB, 179 COOK STREET, PALMERSTON NORTH, NEW ZEALAND. Richard sends along his application form together with his qualifying details. However, these cannot be published, but Dick goes on to say that he is a keen QRP CW operator particularly on 3·5 - 3·9 MHz. He has requested details of RSARS Nets which have been forwarded. Don't ignore that weak CW signal on the HF bands it may be ZL2BFB. (1 Dec 74).

RSARS 617 - C.A. BRADBURY, BRS 1066, 13 SALISBURY AVENUE, CHELTENHAM, GLOS., GL51 5BT. RSARS 617 served with Royal Signals from 1940 until 1946, mainly with S.C.U.3. He trained as an Operator Wireless and Line at STC2 at Prestatyn and served at Barnet. A member of the RSGB continuously since 1933 he has handled the G3C-- to G3D-- QSL Bureau since 1947 and the G3A-- to G3B-- cards since 1969. In fact, Brad has handled your Editors cards since G3DPS was first licensed. (1 Feb 74).

RSARS 662 - J. C. IMRIE, GM4GK, RED ROOFS, MARKINCH, FIFE, KY7 6HE. John is another S.C.U.3 member who served, as 2601772, from 1941 until 1945. He is a member of R.S.G.B. and A.R.R.L. (1 Feb 74).

RSARS 708 - 24339229 SAPPER ASPINALL W. 32 ENGINEER REGT., 3 TROOP, 7 FIELD SQUADRON, B.F.P.O. 30. If you think you recognise the name you should, as Bill is a Junior Op of Stan, G3VSA. Bill joined the Army on 29th January 1974 when all he actually went to the Recruiting Office for was to provide some company for his younger brother who wanted to join Royal Signals!. He has lived with Amateur Radio from 1966 when the OM took his present ticket, and he has been brainwashed about life with a DX-otic call out East!. Bill turned up at the 1974 Aldershot Army Display (on duty) and was most helpful around the RSARS stand. (1 Sep 74).

RSARS 711 - 24353461 SIGMN ASPINALL I. S., 4 TROOP, 1 SQDN., 11 SIGNAL REGIMENT, HELLES BARRACKS, CATTERICK GARRISON, YORKS., DL9 4HH. No, there's no mistake. 711 is the other Junior Op from the G3VSA stable. Ian joined Royal Signals on 5 August 74 at the age of 17 after a frustrating delay due to his youth and the fact that RSARS 708 got into uniform first!!. Interested in electronics from school days and (to quote the OM) has almost said goodbye several times through shaking hands with the mains at home!. (1 Sep 74).

RSARS 716 - CAPT. (RTD) H. BILTCLIFFE, G5HB, 23 GRIMBALD ROAD, KNARESBOROUGH, YORKS, HG5 8HD Harry, who is also a member of the R.S.G.B. and The Society of Environmental Engineers may have appeared in your log-books in the past either as D2HB, G5HB/F or ZB1HB. His Service connections make interesting reading and include : Prior to WWII was "MQC" in the RAF CWR. Served in RAOC and REME from 1939 until 1962. Harry was i/c Detachment attached to Raiding Forces (Signals) located at Mema, Egypt. In 1959, as a REME Captain, he was part of the Comcan Installation Team based in Malta. During 1959 he was concerned in the change-over from Primm Barracks, Tripoli to Azzizia ("or vice versa, can't remember which way it was now!"). Remembers a certain Major Leslie Beaumont, R. Sigs when he was OC Tripoli Signal Squadron. (Now G3RUS/RSARS 122 - Ed.). (1 Feb 74).

NEW MEMBERS - Contd.

RSARS 746 - M.J. HEWITT, G4AYO, 22 BROAD WALK, ORPINGTON, KENT. Mike has Light Blue as well as Khaki connections and was a National Serviceman in the Royal Air Force until 1956 where he trained as a Wireless Operator. He was demobbed from Hong Kong In '58 and later that year persuaded by an old school friend to join the TA. He joined the Phantoms (41st Signal Regiment TA) in Kensington. He stayed with the Unit for 5 years, during which time Annual Camps provide many memories. Mike still has a photo of a Camp in 1961. He believes that this was at Ollerton and he wonders if there are any other "survivors" of that Camp now in RSARS. Other Camps were at Crowborough, Penhale near Newquay and Shorncliffe. Spent a considerable apprenticeship as an SWL mainly on CW and most of the major awards were obtained with this mode including DXCC-250, HAZ, HAS, etc. The rig consists of a KW204, SX-117, KW 107 ATU, a trapped dipole for 10/15/20 in the loft and a mini' trapped dipole for 40/80 in a small garden. (1 Sep 74).

RSARS 762 - J.W. RICHARDS, GW8GAB, UPLANDS, CWM-COU, NEWCASTLE-EMLYN, DYFED. Recruited by GW3DRV, John is a Lieut. with the Army Cadet Force and is concerned with the organising and running a detachment in South Cardiganshire. (1 May 74).

RSARS 782 - CPL W. OWENS, EW TROOP, 2 SQUADRON, 30th SIGNAL REGIMENT, BLANDFORD CAMP, DORSET. Bill is a serving member of the Corps and makes regular appearances at G4RS. A keen SWL it is hoped that RAE will not be too far-away. (1 Oct 74).

RSARS 790 - G. H. CROSSLAND, G8EUR, 9 OLIVE WALK, HARROGATE, YORKS. George served with R.E.M.E. for four years from 1944 until 1948 as a TeleMech Field. He is now imparting knowledge to future Corps members as a Civilian Instructor III (Wireless and Line) at The Army Apprentices College at Harrogate where he started in 1964. (1 Oct 73).

RSARS 791 - E.W. WARDROP, G3MOW, 16 FLORENCE ROAD, BROMEY, KENT, BR1 3NV. Wal (or G-3 "Mad Old Wal") as he often announces himself is an ex-Gunner and enlisted in June 1940 and served with 15 Battn., 2nd Heavy AA Regiment RA until discharged on medical grounds in May 1941. If you were around the guns about this time perhaps you remember '1580733', - that was Wal. He endorses his application "Usual radio interests, mostly rag-chewing, mainly on 80 Metres". (1 Nov 75).

RSARS 797 - A.W.G. WEATHERLEY MM, G3EAX, 36 SOUTHVIEW ROAD, WEST WORTHING, SUSSEX, BN11 5HT. Alfred started Service life as an apprentice boy on June 30 1937 and had the number 2325680. Little detail, is (understandably) given of War service except to say "Special Operations Executive in Middle East, Greece and Norway from 1940 - 1945. 1945 - 1948 was spent with 6th Airborne Div. in Palestine followed by 2 years with 16 Para Bde. 1950/51 saw Alf with the Signal Troop of The Royal Horse Guards and this was followed by 2 years as a Para Instructor with 16 Para Bde (TA). 1953 - 1957 was spent in Hong Kong as a RQMS (A/WOI). Since 1957 he has worked for Shell Int. Petroleum Co. Ltd and has visited West Africa, Middle and Near East, Indonesia, Borneo, Labuan and Australia. Also ZC6DD, D2LZ, DL2LZ, 9M6AW and VK8AW. (1 Nov 73).

GEORGE TAYLOR, G4BNI/RSARS 0982 (who falls in with the White Stick Platoon on RSARS parades) asks if any member would be prepared to build him a speech compressor. George mentions "…..It's the soldering that gets me beat. If I have to burn my fingers, that's alright for one joint , but when there are a lot to make - not so good…..". If any member can see

DELIBERATIONS ON THE 40 MOST WANTED COUNTRIES. BY ?????

(The following appeared at HQ in the mail one morning. It was written by an Overseas member. If you recognise the style and would like to have a guess at the author drop a line to HQ. Correct answers will earn a small reward! - Ed.)

Deliberations on the 40 Most Wanted Countries.
(Or: All I want for Christmas is the South Yemen Republic).

1. I can think of nothing finer
   Than a QSO with China
   I would jump and shout 'Hooray'
   If I contacted Bouvet
   In sleep I oft times murmur
   "Oh, Lord, please give me Burma"
   And I also rave and ramble
   About the need to chalk up Campbell
   And while just thinking of Albania
   Drives me zanier and zanier
   It's nothing less than pathos
   To hear me whining for Mt Athos

2. I rant and rave and bawl
   For St. Peter and St. Paul
   And I'd pat my dog and lick him
   To hear 'CQ' from Sikkim
   I would give a thousand Lira
   To hear someone from Palmyra
   I check daily how the band is
   Hoping for Juan Fernandez
   Though I'd change my style and manner
   Just to QSO Serrana
   The success would be a dry one
   'Cos I'd still need to work Taiwan

3. When I' m old and grey and creaky
   I'll still need Manihiki
   And though I'd stoop to being a forger
   Of QSL cards from South Georgia
   That still would not be 'Fini'
   Since I'd still need one from Guinea
   And the whole thing's so much phooey
   Without a two-way yack with Nieue

4. I tell ya, brother, flatly
   I'd give my wife for Spratly
   And would mortify my flesh
   For a sniff at Bangladesh
   I would wear a surgical bandage
   If it would help me work South Sandwich
   And though that would bring me smiles
   I'd still need the Red Sea Isles

5. I wake at night so scared
That I've missed someone from Heard
And my heart is full of venom
For those creeps who don't need Blenheim
And my next-door neighbour, Charlie
Who's just confirmed Somali
And that other pin-head, Frank
How did he work Geyser Bank
I could shout and yell with fury
'Cos that lid Jack has just worked Kure
And I still cannot forget
I need a two-way with Tibet

6. But one day I'll end my Credo
With a fervent joyful 'Amen'
I'll have worked Revilla Gigedo
And - guess what'? thats right - South Yemen
So on and on I strive
Toward the final goal
That by the time I'm ninety-Five
I'll have made the Honor Roll

****

THE STORY OF CATTERICK CAMP. BOOK REVIEW by G3EJF.

(Johnny, G3EJF, kindly put on his Literary Critic's hat and sent along the following review, He feels, as does your Editor, that it may well be of interest to young and old, whether Signals or not - Ed.).

The story of Catterick Camp by Lt. Col. Howard R. Cole OBE TD DL F.R.Hist.S.

The average soldier serving at Catterick is too busy by day to take much notice of his surroundings and once off duty his first thoughts are to put the Camp Limits sign behind him. Later, perhaps much later, he may wonder what persuaded the War Office to put all those huts just where they did. These, and many other facts of the early days, are to be found in Colonel Cole's interesting book.

Having dealt with the history of the area from Roman times the author traces the events and personalities of the Camp from the First World War to 1972 when it assumed its present name of Catterick Garrison.

Photographs range from a "Kitchener's Army" infantry Battalion complete with horse-drawn Field Cookers to the new Royal Signals Trade Training School opened in 1971 whilst a map shows there was once a railway line running through Loos Lines.

A description of the present camp takes the reader from Richmond to Scotton and from Catterick Bridge out to Barden Moor and Newfound England. Appendices give the names of General Officers Commanding from 1916 to 1972 and details of the Formation badges connected with Catterick Garrison and there is a useful Bibliography for those with the inclination to read further. If any criticism is to he made of Colonel Cole's book it must be the lavish use of footnotes, it might have made for easier reading if, for example, the derivations of the names of roads had been made the subject of an Appendix.

This is a fascinating book, which will give nostalgic pleasure to the old soldier and an insight into recent history to the not so old. It is bound in hard covers and is available at £1 - 25p Post Paid from: ADMN WING, HQ CATTERICK GARRISON, PIAVE LINES, CATTERICK GARRISON, NORTH YORKSHIRE. Cheques and Postal Orders should be made payable to: THE CATTERICK GARRISON FUND ACCOUNT.

Please mention The Royal Signals Amateur Radio Society when making enquiries or ordering.

VHF AERIALS (AND UHF TOO) FOR THE REVISED BAND PLANS - Contd (from the last 'Mercury'!).

G3VSA

On pages 24 - 28 of the Autumn 1974 'Mercury' there appeared an article by Stan, G3VSA on the above subject. Unfortunately, the annexes showing the calculated sizes became detached from the original article and were not published. Stan very kindly wound up the computer again and sent along duplicate copies. These are produced below. Stan remarks "The wad for the 24 element type are the "Broad-Band" version, whilst the set for 6 element beams are the narrow-band limited cover editions for high gain use. I have included dimensions for both 70 cms and 23 cms - just for the hell of it!! The 70 cms version has been built and tested in use by locals here and is very satisfactory; the 23cms one has been built and tested by one local and he uses it /P operation from the hills - it also works well!."

FOR CENTRE FREQ. = 70·26 MHz

DIPOLE	= 79·704 inches.
REFLECTOR	= 83·689 inches.
DIRECTOR 1	= 75·719 inches.
DIRECTOR 2	= 74·922 inches.
DIRECTOR 3	= 74·125 inches.
DIRECTOR 4	= 73·328 inches.
DIRECTOR 5	= 72·531 inches
DIRECTOR 6	= 71·734 inches.
DIRECTOR 7	= 70·931 inches.
DIRECTOR 8	= 70·140 inches.
DIRECTOR 9	= 69·343 inches.
DIRECTOR 10	= 68·545 inches.
DIRECTOR 11	= 67·748 inches.
DIRECTOR 12	= 66·951 inches.
DIRECTOR 13	= 66·154 inches.
DIRECTOR 14	= 65·357 inches.
DIRECTOR 15	= 64·560 inches.
DIRECTOR 16	= 63·763 inches.
DIRECTOR 17	= 62·966 inches.
DIRECTOR 18	= 62·169 inches.
DIRECTOR 19	= 61·372 inches.
DIRECTOR 20	= 60·575 inches.
DIRECTOR 21	= 59·778 inches.
DIRECTOR 22	= 58·981 inches.

FOR CENTRE FREQ. = 144·25 MHz

DIPOLE	= 38·822 inches
REFLECTOR	= 40·763 inches.
DIRECTOR 1	= 36·881 inches.
DIRECTOR 2	= 36·492 inches.
DIRECTOR 3	=36·104 inches.
DIRECTOR 4	= 35·716 inches.
DIRECTOR 5	= 35·326 inches.
DIRECTOR 6	= 34·939 inches.
DIRECTOR 7	= 34·551 inches.
DIRECTOR 8	= 34·163 inches.
DIRECTOR 9	= 33·775 inches.
DIRECTOR 10	= 33·387 inches.
DIRECTOR 11	= 32·998 inches.
DIRECTOR 12	= 32·610 inches.
DIRECTOR 13	= 32·222 inches.
DIRECTOR 14	= 31·834 inches.
DIRECTOR 15	= 31·446 inches.
DIRECTOR 16	= 31·057 inches.
DIRECTOR 17	= 30·669 inches.
DIRECTOR 16	= 30·281 inches.
DIRECTOR 19	= 29·893 inches.
DIRECTOR 20	= 29·504 inches.
DIRECTOR 21	= 29·116 inches.
DIRECTOR 22	= 28·728 inches.

FOR CENTRE FREQUUENCY = 145·00

DIPOLE	= 38·621 inches.
REFLECTOR	= 40·552 inches.
DIRECTOR 1	= 36·690 inches.
DIRECTOR 2	= 36·304 inches.
DIRECTOR 3	= 35·917 inches.
DIRECTOR 4	= 35·531 inches.
DIRECTOR 5	= 35·145 inches.
DIRECTOR 6	= 34·759 inches.
DIRECTOR 7	= 34·373 inches.
DIRECTOR 8	= 33·986 inches.
DIRECTOR 9	= 33·600 inches.
DIRECTOR 10	= 33·214 inches.
DIRECTOR 11	= 32·828 inches.

FOR CENTRE FREQUENCY = 433 MHz.

DIPOLE	= 12·933 inches.
REFLECTOR	= 13·580 inches.
DIRECTOR 1	= 12·286 inches.
DIRECTOR 2	= 12·157 inches.
DIRECTOR 3	= 12·028 inches.
DIRECTOR 4	= 11·898 inches.
DIRECTOR 5	= 11·769 inches.
DIRECTOR 6	= 11·640 inches.
DIRECTOR 7	= 11·510 inches.
DIRECTOR 8	= 11·381 inches.
DIRECTOR 9	= 11·252 inches.
DIRECTOR 10	= 11·123 inches.
DIRECTOR 11	= 10·993 inches.

DIRECTOR 12	= 32·441 inches.	DIRECTOR 12	= 10·864 inches.
DIRECTOR 13	= 32·055 inches.	DIRECTOR 13	= 10·735 inches.
DIRECTOR 14	= 31·669 inches.	DIRECTOR 14	= 10·605 inches.
DIRECTOR 15	= 31·263 inches.	DIRECTOR 15	= 10·476 inches.
DIRECTOR 16	= 30·897 inches.	DIRECTOR 16	= 10·347 inches.
DIRECTOR 17	= 30·510 inches.	DIRECTOR 17	= 10·217 inches.
DIRECTOR 18	= 30·124 inches.	DIRECTOR 18	= 10·088 inches.
DIRECTOR 19	= 29·738 inches.	DIRECTOR 19	= 9·9584 inches.
DIRECTOR 20	= 29·352 inches.	DIRECTOR 20	= 9·8291 inches.
DIRECTOR 21	= 28·966 inches.	DIRECTOR 21	= 9·6998 inches.
DIRECTOR 22	= 26·579 inches.	DIRECTOR 22	= 9·5794 inches.

FOR CENTRE FREQUENCY = 1297 MHz.

DIPOLE	= 4·3177 inches.	DIRECTOR 11	= 3·6700 inches.
REFLECTOR	= 4·5335 inches.	DIRECTOR 12	= 3·6268 inches.
DIRECTOR 1	= 4·1018 inches.	DIRECTOR 13	= 3·5837 inches.
DIRECTOR 2	= 4·0586 inches.	DIRECTOR 14	= 3·5405 inches.
DIRECTOR 3	= 4·0154 inches.	DIRECTOR 15	= 3·4973 inches.
DIRECTOR 4	= 3·9723 inches.	DIRECTOR 16	= 3·4541 inches.
DIRECTOR 5	= 3·9291 inches.	DIRECTOR 17	= 3·4110 inches.
DIRECTOR 6	= 3·8859 inches.	DIRECTOR 18	= 3·3678 inches.
DIRECTOR 7	= 3·8427 inches.	DIRECTOR 19	= 3·3246 inches.
DIRECTOR 8	= 3·7995 inches.	DIRECTOR 20	= 3·2814 inches.
DIRECTOR 9	= 3·7564 inches.	DIRECTOR 21	= 3·2383 inches.
DIRECTOR 10	= 3·7132 inches.	DIRECTOR 22	= 3·1951 inches.

For 6 element beams (Reflector, Dipole and 4 Directors) use first six entries in each Table.

****

HERE AND THERE.

HQ was pleased to extend a welcome to the President whilst attending a TAVR Course at Blandford on 18 January. He was accompanied by G3HZP/257.

Tony, G3NUI (See "All Square on Two" last edition) writes to say that even after 18 months out of doors the original 2 Metre Quad as described is still in sound mechanical condition although it has now been superseded by a Quad of more ambitious design. Tony is now mainly on the HF bands, generally 20 Metres, using an FT-200 into a roof-mounted ground plane.

Bill Begg, RSARS 624 drops a line to say that as mail is now taking up to a week to get from Inverness to the South Coast, perhaps we should include him among the Overseas Members!!. Bill gives radio conditions "zero rating" at the moment. He sends 73 to all members.

A note from another member tells how he was interested in the article on German WWII radio equipment. He also mentions that they produced a very good receiver based on the HRO and had the first military tape recorders.

An extract from a letter from another member reads ".....put the remaining 10p (from an order - Ed.) in the Petty Cash Box (a 2oz tobacco tin, no doubt) or buy the nearest down-trodden, hard-working, not always cloth eared operator (guess what I was?!!) an ice cream and help to make his miserable life happy.....".

Ted King, G8HID/RSARS 936 is looking, rather urgently, for a DH63 valve (the Service equivalent was the NR68 and used in versions of the CR-100). It must be a DH63 - the substitute available through trade is not satisfactory. If you have one in the junk box going spare, drop a line to: Ted King, G8HID, 12 TOWERS AVENUE, MAGHULL, LIVERPOOL, L31 0AJ. Thanks.

HERE AND THERE - Contd.

An 80 Metre contact with G3WWX brought a mention of his military service. The result was the despatch of an Application Form which was duly completed and returned. Please add G3WWX to your lists. He is trying to locate a Royal Signals Captain who introduced him to Amateur Radio back in the Canal Zone in 1947 at the Ballah Radio Club. He thinks the call then was MD5PS. MD5PS is on our list of "Other Calls Held" but unfortunately we don't know who held it! If you can help drop a line to G3WWX, QTHR.

Pete, RSARS 880, tells that he is now an Adult Under Officer with the Hartshill Detachment ACF, No.1 (Stoke-on-Trent) Area. They are Signals-badged and waiting for equipment. He invites interested RSARS members to drop in at the Hartshill Det. which is in Wilfred Place, Hartshill and meets on Mondays and Thursdays 1930-2130 hours.

George Hare, RSARS 668 writes enclosing an order for Stores and takes the opportunity of passing along best wishes to all members "wherever they may be". Despite being nearly 70 he did quite well with the 'Military History' Quiz in the last issue.

Members who purchased 75R Teleprinters may be interested to how that a non-member contacted HQ saying that he has a number of covers for these machines. Contact STUART JESSON, G4CNY, 181 KINGS ACRE ROAD, HEREFORD, HR4 0SP or telephone Hereford 3237 (Home) or Hereford 3323 (Office).

Ref. the Clockwork Radio. GW3CVY, Jay, mentioned on the air that he had the pleasure of meeting Bungay (the author) at Kings College during World War I when Bungay was a Lecturer there. Also Jay remembers listening to the Eiffel Tower at 2 in the morning on a Magnetic Detector whilst on shipboard waiting for the Pilot off Abadan.

G3AMR, Gordon, RSARS 493, who was active as VP7BA, is now active as C6ABA. Same op, same QTH, same rig - just a change of call-sign.

Thanks to RSARS 0954 for sending along a number of Green Shield Stamps. Only one other member has sent along stamps but HQ now has about 5 books completed.

Tom, known to most as DJ0BU has now left Germany and is active as G4CAG from the home QTH in Clacton-on-Sea.

G3YJO, Martin, is now at The Department of Elec. Eng. at The University of Surrey, Guildford.

Thanks to GW3TMH for the presentation of a copy of The New RTTY Handbook to the RSARS Library.

The OWL tells that Harry, G3VVE, has had a short spell in hospital. Hope you will be operating from the vertical rather than the horizontal position shortly.

Last September a letter was received at HQ from Len Crooks, RSARS 830, saying that he was still enjoying his listening although he pointed out that he knew he was seriously ill. The Autumn edition was recently returned marked "Died September 1974".

The next few items have been held over from previous 'Mercurys'. It is believed that the items are still applicable.

A non-member interested in swapping stamps with RSARS members is: DAVID C. CHAFFIN M.D., P.O. BOX 91, KUMBA, UNITED REPUBLIC OF CAMEROON.

RAY SMALL, G3ALI/RSARS 984 would like to contact any members who knew him back in the S.C.U. days, Write to G3ALI, 8 HALL LANE, DOVERCOURT, HARWICH, ESSEX.

W9IWI, Julian, spent some Spring days "sorting things out in the garden". Results - a day in bed and a week hobbling around! He has been spending some time at his second hobby- photography.

Mike Harrod, is now training as a Technician at Catterick after transferring from RCT.

HERE AND THERE - Contd.

Martin Jue, K5FLU, kindly sent along a number of copies of the MFJ catalogue. These contain pictures and details of most of their products. They are 8½ x 5½ inches and a copy will be forwarded on receipt of a suitable SAE.

Ron Ham, BRS 15744, who is busy writing a new edition of "World at their fingertips" asks again for any details of amateur radio interest from the '30's. Several items have been forwarded by RSARS but more are needed. Ron also extends a welcome to anyone in the Storrington (Sussex) area to give him a ring on Storrington 3144 to arrange a visit to his Observatory and collection of antique and wartime radio gear. If you have anything that you think would be of interest write to Ron at :

R.A. HAM F.R.A.S., FARADAY, GREYFRIARS, STORRINGTON, SUSSEX, RH20 4HE.

Congratulations to GI3WME having recently been promoted to Warrant Officer Class II (Foreman of Signals).

SICK PARADE : Various sources, including The Owl, report that G2AYQ is in hospital at Plymouth, G3WJO has recently suffered a Heart Attack, G2ACD has recently had a couple of operations (but is believed to be progressing well) and G4 Ace King Queen has also been in hospital, To all these, and any other members in similar circumstances that we haven't heard about, we all wish a speedy and complete recovery.

To enable ZL members to contact 'Home' members (and vice versa) it has been suggested that a regular sked is maintained at 0800 GMT on Sundays on 14275 KHz + or –. Full details not known at present but why not switch on the rig whilst waiting for the kettle to boil when getting that Sunday morning cup of tea for the XYL?.

A letter from Bob Wilson, G3YZO, mentions ".....I am disposing of the gear of the late G3MVT, Jim Tiptaft, who was a member of RSARS. I have a QRO (full legal power) home-brew SSB TX, a heavy duty aerial rotator which drives through a worm and cog so that the antenna can't turn in the wind. Combined with it is a second servo which drives a Great Circle wall-map indicator. Also a Heathkit VOM which reads double on AC (theories for this would be welcome then I can put it right before I sell it), and a PSU with an enormous transformer which should power a medium power SSB TX.

The rotator is a snip at £12 ono, the VOM about a Fiver (it boasts 7 voltage ranges, 3 resistance and 5 current) : £6 if I mend it before I sell it, £4 if not!, and the PSU another £3 or £4. The problem is the TX. It consists of PSU, third-method SSB generator, Linear and Transverter/Dummy Load. It employed one of the oscillators in one of the Heathkit receivers (100 or 101) but this has already been sold by the previous disposer. Therefore, to be any use it will need to go to someone who has the time and knowledge to work out the circuits, inputs and connections. Then it will need an Oscillator pack. So, if anyone feels they could accept the challenge of not stripping it for spares, it could be theirs for a reasonable sum. Offers?..... …..I hope to go off to my mountaintop in Arabia again within the next 6 months, and am hoping to get a ticket this time. I now have 61 RSARS contacts, must get some wall-paper….."

R.T.O. WILSON, G3YZO/RSARS 230, 20 HIGH STREET, BARRINGTON, CAMBS. CB2 5QX.

OVERDUE SUBS.

As at 22nd February the Treasurer reports the following subscriptions for 1975 are overdue.

	0028	0105	0116	0135	0137	0138	0147	0151	0165	0187	0200	0202
0209	0211	0221	0221	0256	0259	0260	0269	0276	0311	0312	0318	0323
0333	0337	0340	0342	0346	0365	0368	0383		0415	0420	0423	0424
0432	0433	0436	0438	0440	0441	0454	0456	0467	0479	0480	0490	0517
0518	0528*	0551	0564	0570	0585	0587	0598	0599	0601	0607	0608	0609
0611	0615	0616	0621	0622	0629	0630	0632	0635	0637		0641	0642
0644	0652	0653	0663	0667	0673	0677	0678	0679	0680	0687	0688	0693
0694	0703	0706	0709	0712	0713	0723	0727	0734	0737	0739		0742
0749	0751	0765	0768	0769	0772	0773	0774	0775	0776	0777	0779	0785
0789	0790	0791	0800	0802	0805	0809	0810	0812	0816	0820	0821	0822
0824	0825	0826	0830	0832	0834	0835	0837	0839	0842	0847	0849	0852
0866	0869	0871	0874	0880	0883	0886	0887	0888	0895	0896	0897	0898
0899	0901	0904	0906	0912	0921	0922		0924	0926	0928	0929	0930
0932	0935	0939	0945	0946	0955	0960	0963	0964	0965	0971	0974	0975
0976	0978	0980	0981	0989	0992	0993	0994	0996	1000	1001	1005	1008
1009	1010	1011	1013	1016	1017	1020	1021	1025	1026	1027	1028	1030

* = Normally paid by Bankers Order, No subs received for 1975.

If your number is NOT included above, your subs have been paid for 1975 (and possibly later). Members whose subscriptions remain unpaid as at 30th June 1975 will he removed from the membership list. Please help us to help you, by paying subs promptly - or, better still, ask HQ for a Bankers Order Form and forget that you have to remember!

STAMP SECTION.

John, G2KO, reports that the idea of a Stamp Collectors Corner in RSARS resulted in a NIL return, guess no-one is interested in stamp collecting.

QTH QSY.

Reg, G3FQN/RSARS 231 reports a move of QTH. After 21st March 75 he will have moved from Brighton to ;

15 THE LAWNS, EASTCOTE, RUISLIP, MIDDLESEX.

Hope the move goes well, Reg, and that we will be hearing you from Middlesex.

SATELLITE PREDICTIONS.

The Appleton Laboratory recently sent two letters to RSARS HQ. The first asked if RSARS still required predictions to which a reply in the affirmative was sent - The next letter was to say that they could no longer supply us with predictions!. Arrangements are being made to obtain predictions and data on satellites from other sources.

ROYAL SIGNALS MUSEUM.

A chat with Bill Bailey, the curator of The Royal Signals Museum, recently indicated that items of interest are still required for the Museum, If you have anything that you would like to dispose of that you think would be of interest, please write to The Curator, Royal Signals Museum, School of Signals, Blandford Camp, Dorset, DT11 8RH. Small items as well as large are required, including letters, paperwork, shoulder flashes, in fact, anything, with a military signalling flavour. RSARS members have been most helpful in the past and many items have been donated by RSARS members.

ROYAL SIGNALS AMATEUR RADIO SOCIETY

STORES ORDER FORM

From: (Init.) _____ Surname: _____

Call-sign: _____ RSARS No.: _____ Date: __ __ 1/9__

Address: _____

_____

_____

_____ Postal Code: _____

Please supply the following RSARS Stores :-

Qty.	Item	Price £	Price p	Save! £	Save! p	Cost. £	Cost. p	For Office Use. Order	Date
100	Sheets of Headed Notepaper		50		Nil				
500	Sheets of Headed Notepaper	2	25		25				
1000	Sheets of Headed Notepaper	4	25		75				
100	Basic QSL Cards		60		Nil				
500	Basic QSL Cards	2	00	1	00				
1000	Basic QSL Cards	3	75	2	25				
500	Overprinted QSL Cards (See a))	3	25		Nil				
1000	Overprinted QSL Cards (See a))	6	25		25				
___	Plain Lapel Badge(s)		25		.....				
___	Call-sign Lapel Badge(s) (See b))		40		.....				
___	RSARS Ties	1	35		.....				
1	RSARS Log Book		25		Nil				
2	RSARS Log Books		45		5				
3	RSARS Log Books		65		10				
4	RSARS Log Books		85		15				
5	RSARS Log Books	1	05		20				
6	RSARS Log Books	1	25		25				
1	RSARS Plastic Ball Pen		5		Nil				
5	RSARS Plastic Ball Pens		20		5				
10	RSARS Plastic Ball Pens		35		15				
15	RSARS Plastic Ball Pens		50		25				
1	RSARS Trio Retractable Ball Pen		13		Nil				
2	RSARS Trio Retractable Ball Pens		23		3				
3	RSARS Trio Retractable Ball Pens		33		6				
4	RSARS Trio Retractable Ball Pens		43		9				
1	RSARS Dymo Badge (See c))		13		Nil				
2	RSARS Dymo Badges (See c))		23		3				
3	RSARS Dymo Badges (See c))		33		6				
4	RSARS Dymo Badges (See c))		43		9				
1	RSARS Key Fob		13		Nil				
2	RSARS Key Fobs		23		3				
3	RSARS Key Fobs		33		6				
4	RSARS Key Fobs		43		9				
1	RSARS Windscreen Sticker		23		Nil				
2	RSARS Windscreen Stickers		44		2				
1	Daily Telegraph Atlas (*)	1	50		Nil				
2	Daily Telegraph Atlases (*)	2	75		25				
	(*) Whilst stocks last.								
1	RSARS Great Circle Bearing and Distance Chart (See d))	1	25		.....				

Total cost of goods £_____

a) OVERPRINTED QSL CARDS. Normal overprint consists of: RSARS Number, Name, Call-sign, Address (RSARS No., BRS No., ISWL No., wtc., can be used in place of call-sign). Extra overprint is subject to agreement and possible extra cost. Overprint colours available : RED, BLUE, GREEN and BLACK. Where no colour is stated with order, overprinting will be carried out in RED. Please complete the following boxes - THESE ARE THE DETAILS THAT WILL APPEAR ON YOUR CARDS. The Society reserves the right to change the layout to conform to good printing practice. The details will not be changed.

RSARS No. ____ Call-sign _____

Name _____

Address _____

_____

_____

_____

Colour _____ Quantity _____ Other details :-

b) CALL-SIGN LAPEL BADGES. Badges can be engraved with SIX Letters/Figures/Spaces. This may be your call-sign, RSARS No., BRS No., ISWL No. etc.

PLEASE ENGRAVE MY BADGE _____

c) RSARS DYMO BADGES. These badges are double-row pin-fixing white plastic badges. Tape colours : RED, BLUE, BLACK, GREEN, ORANGE, PURPLE, YELLOW, WOOD GRAIN or any available colour in the Dymo range. Each row can be a maximum SIXTEEN letters/figures/spaces only. All embossing stands out in WHITE. Where no colour is stated BLACK tape will be used.

BADGE No. 1.

_____

_____

BADGE No. 2.

_____

_____

BADGE No. 3.

_____

_____

BADGE No. 4.

_____

_____

d) GREAT CIRCLE BEARING AND DISTANCE CHART. These are computer produced for each individual QTH. All that is required is your location given in LATITUDE AND LONGITUDE - Degrees and Minutes only. (NOT Map references).

PLEASE PRODUCE MY CHART FOR : LATITUDE ____ Degrees ____ Minutes NORTH/SOUTH*

LONGITUDE _____ Degrees ____ Minutes EAST/WEST *

* Delete as necessary.

All Stores are Post Free.

I ENCLOSE CHEQUE/MONEY ORDER/POSTAL ORDERS/CASH TO COVER TOTAL AMOUNT. (CHEQUES AND POSTAL ORDERS CROSSED /& Co/ AND CASH REGISTERED, PLEASE). PLEASE MAKE ALL MONIES PAYABLE TO "THE ROYAL SIGNALS AMATEUR RADIO SOCIETY" AND NOT TO INDIVIDUALS.

Date ____/_____/____ Signature _____

SOF/5/3/75

ROYAL SIGNALS AMATEUR RADIO SOCIETY
ANNUAL GENERAL MEETING

NOTICE IS HEREBY GIVEN that the 1975 Annual General Meeting of The Royal Signals Amateur Radio Society will be held at The School of Signals, Blandford Camp, Blandford Forum, Dorset, on Saturday 26th July 1975.

All members are entitled and invited to attend this meeting. All members are entitled to ONE vote and affiliated Clubs and Societies should, if necessary, elect one member to cast their vote on their behalf.

Propositions may be written or taken from the floor of the meeting. Written propositions should be in the hands of the Gen. Sec. not later than 19th July 1975. Written propositions should be signed by Proposer and Seconder. If no Seconder is available, one will be called for from the floor of the meeting, It is pointed out that annual members who have not paid their 1975 subscriptions by June 30th 1975 will have been removed from the membership list and will NOT be entitled to vote.

Visitors and guests of members are welcome to attend the AGM. All persons visiting Blandford Camp should carry some form of identification (RSARS Membership card, Driving License, etc.).

PERSONS ENTERING BLANDFORD CAMP DO SO ENTIRELY AT THEIR OWN RISK. NEITHER THE MINISTRY OF DEFENCE, SCHOOL OF SIGNALS OR THE ROYAL SIGNALS AMATEUR RADIO SOCIETY WILL BE RESPONSIBLE FOR DEATH, INJURY, LOSS OF PROPERTY, ETC., WHILST ANY PERSON IS ON MINISTRY OF DEFENCE PROPERTY.

The ladies are, of course, welcome at the AGM, and it is hoped to provide an alternative interest during the actual meeting.

A mid-day meal and an afternoon snack can be provided on payment of 70p per person. In order to ensure catering arrangements are complete it is essential THAT RSARS HQ IS INFORMED OF YOUR REQUIREMENTS AS EARLY AS POSSIBLE. Please return the enclosed "Booking Slip)". Telephone bookings, confirmations, changes, etc., can be made up to and including 21st July 1975.

It is intended to apply for a special call-sign for the day (GB3AGM or, if not available, GB3RCS) together with application for all-band concurrent operation. Main operation will be on 3·720 KHz + or – and 144·33 KHz for talk-in for Mobile visitors.

Suggestions for the organisation of the AGM are always welcome but due to limited man-power available should be forwarded to HQ as soon as possible. The crystal-check facility should be in operation, so bring along those unmarked crystals and we'll give you a frequency. If sufficient junk is discovered or brought to Blandford in the boot of member's cars, there will be a mini-junk sale. Tell the YL/XYL to bring her purse - there should be a raffle.

Accommodation in Blandford Forum is somewhat limited hut every assistance will be given by HQ where visitors wish to stay in the local hostelries.

.....

From (Name) _____ Call-sign _____ RSARS No. _____

I shall be attending the Annual General Meeting of RSARS on 26th July 75.

I shall be bringing other members and guests ____ with me and will be travelling by_____ There will be a total of___ _in my party consisting of ____ ladies and ____ gentlemen (including myself).

I enclose ____ to cover the cost of ____ meals (70p) per person - Lunch at approx. 1345 hrs and afternoon snacks about 1630 hrs please add any other points on reverse side.

Signed _____

R.S.A.R.S. NET DETAILS

LF 'PHONE.

MONDAY	1100 GMT	3.650 MHz	+ or –	PHONE	RSARS FAR EAST NET
MONDAY	1315 GMT	3.720 MHz	+ or –	PHONE	EUROPEAN NATTER NET
TUESDAY	1315 GMT	3.720 MHz	+ or –	PHONE	EUROPEAN NATTER NET
TUESDAY	2000 GMT	3.720 MHz	+ or –	PHONE	EUROPEAN CONTROLLED NET
WEDNESDAY	1100 GMT	3.650 MHz	+ or –	PHONE	RSARS FAR EAST NET
WEDNESDAY	1315 GMT	3.720 MHz	+ or –	PHONE	EUROPEAN NATTER NET
THURSDAY	1315 GMT	3.720 MHz	+ or –	PHONE	EUROPEAN NATTER NET
THURSDAY	2000 GMT	3.720 MHz	+ or –	PHONE	EUROPEAN CONTROLLED NET
FRIDAY	1100 GMT	3.650 MHz	+ or –	PHONE	RSARS FAR EAST NET
FRIDAY	1315 GMT	3.720 MHz	+ or –	PHONE	EUROPEAN NATTER NET
SATURDAY	1030 GMT	7.075 MHz	+ or –	PHONE	EUROPEAN NATTER NET
SUNDAY	1030 GMT	3.720 MHz	+ or –	PHONE	EUROPEAN NATTER NET

HF 'PHONE.

TUESDAY	0100 GMT	14.275 MHz	+ or –	PHONE	RSARS WESTERN HEMISPHERE NET
TUESDAY	1100 GMT	14.175 MHz	+ or –	PHONE	RSARS FAR EAST NET
WEDNESDAY	1300 GMT	14.275 MHz	+ or –	PHONE	RSARS WORLD-WIDE NET
THURSDAY	0100 GMT	14.275 MHz	+ or –	PHONE	RSARS WESTERN HEMISPHERE NET
THURSDAY	0800 GMT	14.175 MHz	+ or –	PHONE	RSARS FAR EAST NET
SATURDAY	0100 GMT	14.275 MHz	+ or –	PHONE	RSARS WESTERN HEMISPHERE NET
SATURDAY	0800 GMT	14.175 MHz	+ or –	PHONE	RSARS FAR EAST NET
SUNDAY	0100 GMT	14.275 MHz	+ or –	PHONE	RSARS WESTERN HEMISPHERE NET
SUNDAY	0800 GMT	14.275 MHz	+ or –	PHONE	RSARS FAR EAST NET

OTHER HF 'PHONE FREQUENCIES.

21.375 MHz + or –, 28.575 MHz + or –. (dependent upon bands). Call "CQ RSARS" on the hour and half-hour.

VHF 'PHONE.

TUESDAY	1900 GMT	70.22 MHz	PHONE	RSARS NATTER NET
MONDAY	1900 GMT	145.33 MHz	PHONE	RSARS NATTER NET
FRIDAY	1900 GMT	144.33 MHz	PHONE	RSARS NATTER NET

LF CW.

WEDNESDAY	2000 GMT	3.575 MHz	+ or –	CW	EUROPEAN CONTROLLED NET
SUNDAY	1030 GMT	3.575 MHz	+ or –	CW	EUROPEAN NATTER NET

(A CW Natter Net often forms around 3.575 MHz + or – after the 'phone Net has started on Tuesday evenings. Check with 'Phone Net Control or monitor CW Net Frequency).

HF CW.

FRIDAY	1900 GMT	7.025 MHz	+ or –	CW	RSARS NATTER NET
SATURDAY	1500 GMT	14.075 MHz	+ or –	CW	RSARS NATTER NET
SUNDAY	1500 GMT	21.075 MHz	+ or –	CW	RSARS NATTER NET

VHF CW.

SATURDAY	1900 GMT	145.32 MHz	+ or –	CW	RSARS NATTER NET
SUNDAY	1500 GMT	144.025 MHz	+ or –	CW	RSARS NATTER NET

LF RTTY.

SUNDAY	1100 GMT	3.590/QSY	RTTY NATTER NET	170Hz shift if poss. 45.5 Bauds if poss.

HF RTTY.

SATURDAY	1600 GMT	14.090/QSY	RTTY NATTER NET	170Hz shift if poss. 45.5 Bauds if poss.
SUNDAY	1600 GMT	14.090/QSY	RTTY NATTER NET	170Hz shift if poss. 45.5 Bauds if poss.

OVERSEAS NETS.

MEMBERS ARE ENCOURAGED TO ORGANISE LOCAL OVERSEAS NETS TO SUIT LOCAL CONDX/ /TIMES/BANDS ETC., AND U.S.A. MEMBERS ARE INVITED TO ARRANGE A 6 METRE NET. ALL DETAILS OF NETS, TIMES, FREQUENCIES, ETC., TO RSARS HQ PLEASE.

ALL MODES.: CALL "CQ RSARS" OR "CQ ROYAL SIGNALS AMATEUR RADIO SOCIETY". DURING QSOS SIGN "G1ABC DE G1DEF BT BOTH RSARS". OR "ON0NO DE G1GHI BT RSARS K". DO NOT JOIN THE INITIALS 'RSARS' TO YOUR CALL-SIGN IN ANY WAY. IN GREAT BRITAIN THIS IS ILLEGAL UNDER HOME OFFICE REGULATIONS. DO NOT WAIT FOR THE ABOVE NETS TO FORM - FILL THE NEAREST CLEAR FREQ. AND CALL "CQ RSARS". ALWAYS BOOK IN AND OUT OF RSARS NETS AND REMEMBER - YOU MUST PASS ALL DETAILS UNASSISTED FOR AN OFFICIAL RSARS QSO.