MERCURY

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ROYAL SIGNALS AMATEUR RADIO SOCIETY

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EDITORIAL.

G3DPS

Welcome, readers, to this first "Mercury" of the seventh decade of the twentieth century. Much has taken place during the last ten years in the field of commercial and amateur communication, and it is a safe bet that much more will take place in the coming ten. Whatever happens the radio amateur will be to the fore in these developments, and the Royal Signals Amateur Radio Society will be with the front rank of the amateurs.

The membership drive is going well, the latest number issued being 701, although, as mentioned elsewhere, the next few members recruited will be used to fill the gaps left by those who did not renew their membership during 1969. Remember, one of our major sources of income is derived from membership fees, therefore, the more members we can elect the better the Society financial position. Having spoken of income, let us now mention expenditure. I feel that the biggest call on Society cash, is made by the Postmaster General, or whatever he is known as these days. This by way of postage. All mail from HQ is sent Second Class (unless urgent), including "Mercury" inland (Overseas it is sent Printed Paper Rate). Since last May the postage bill has been something over £70-0-0 which is a lot of cash from a Society whose membership fee is only 10/- per year. Members can help by enclosing a stamp when writing to HQ, an envelope is not really necessary, it's often the wrong size, anyway!. Also the appeal for the odd I.R.C. lying around has been well answered and I would like to take this opportunity of thanking all those members who have forwarded same.

The file marked "Material for "Mercury"" is looking a bit thin, although, thanks to one or two members, you can more or less be sure of at least two more "Mercurys". However, more articles are required. Let me stress once again, they don't have to be highly technical and can be on any subject which will be of interest to other members. No special form or layout is necessary, as long as I can read it, I'll prepare it for "Mercury". As you will see in this edition, a member may retain the copyright of same, and, if this is requested, due note will be made in "Mercury". Please enclose a note giving us permission to publish if you wish to retain copyright.

At the time of writing the "Jubilee" Contest appears well under way, and it is hoped that as many members as possible will take part. Even if you are not competing for honours, please hand out the points to those that are.

Work is still proceeding on the venue(s) for the DX-peditions during 1970 although nothing definite at this time. Much depends, of course, on the availability of operators, transport, equipment and access to the rarer "spots". It is hoped that something definite can be given in the next "Mercury". Any information before then will be passed over the Nets.

June 21st is the "Big Day" at Blandford this year, when lots of items are planned in connection with the Royal Signals Jubilee Year. A Service Committee has been formed, but apart from the Society being asked to provide a station, little else is known at the moment.

To the many members who sent Christmas cards and New Year Greetings to the Editor, Secretary, HQ, G4RS etc., may I take this opportunity of saying "Thank You" for your kind thoughts - they were much appreciated.

I am sure that the Society will go from strength to strength during the coming year, don't forget the membership drive and mark the- application form "Introduced by .....,,". No Green Shield stamps, but 10/- credit to every member introducing 10 new ones. Good Luck.

G3DPS.




ANNUAL MEMBERSHIP SUBSCRIPTIONS BECAME DUE ON THE 1ST JANUARY 1970 !!!

RSARS PARTICIPATION IN THE RAEN SCHEME.

Dave Llewellyn G3TAN (268).

With the pending purchase of our 2 Metre gear, and the "upping" of the 2 metre beam antenna here at Blandford we should, very shortly, be able to radiate Top thru Two with a mean old signal. Now, although two metre activity is not all that "hot" around here, one of the uses we could put the new gear to is to provide a base station which would work directly to an RSARS mobile on two metres or directly to an RSARS/RAEN portable station located with an emergency authorities vehicle at the site of a local emergency. We are keen here at Blandford to offer any assistance we can during a local crisis, and, to this end, I have rigged my VW van for two metres portable operation, which will include a forty-foot tubular mast with either one or two J-Beams on the top (depending upon the cash available!).

It is intended to use the van as the RSARS/RAEN portable rig and to work it into G4RS who will relay information either on HF (or another VHF rig) to the appropriate controlling authority (Police, Fire or Ambulance). We would like to extend the range of this service as far as possible, of course, and rather than use a military vehicle, which would be unavailable at some odd time, we would like the assistance of another RSARS member, who lives reasonably nearby, so that we can deploy him at BULBARROW HILL (a local beauty and high spot) as a kind of "rebroadcast" portable station. Such a set-up would enable us to extend the range of the RSARS/RAEN service many more miles in all directions. So, any volunteers to fill the slot? All correspondence on RSARS/RAEN to me at 20 College Road, Blandford Camp, Dorset. (This will ease the load on Jack!!!).

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THE EASTER CONTEST.

Dave Llewellyn G3TAN (268).

Hear Ye, Hear Ye, all ye who have a key ….. eyes down for a full house!! We proudly announce the revival of the Morse Code in the Royal Signa1s, or, to be more specific, the revival of the contests which include that noble art of communicating on a Morse key. Blow off the dust, clean up the contacts, put a shilling (5 NP - Ed.!) in the El-Bug black your face - You're ON!.

You might think that having a contest at Easter is a bit "off", with the Hot Cross Buns not yet , settled, but the sooner the better, and our calendar is so full that a twenty-four hour period right in the middle of Easter break fills the bill. Twenty-four hours gives most of the members of the Society a chance to get in on at least one of the bands, and it isn't too long for those of you who really do have to blow the dust off the brass pounding machinery to get those contacts you need for your awards (particularly the "Special" - Ed.).

Activity will be generated from G4RS throughout the complete period with at least two operators manning the machinery. Our frequencies here will be as shown in the last "Mercury", i.e. 40 Khz inside each band, plus or minus according to the QRM. So remember that the QSOs with G4RS can provide a "bonus" to boost your final score.

We will start the contest at 1700 GMT on SATURDAY MARCH 28th and run through to 1700 GMT SUNDAY MARCH 29th.

Contest rules are published elsewhere, and the scoring system has also been published (Loose leaf to last "Mercury". - Ed.). This is a CW ONLY Contest, of twenty-four sixty minute rounds, between fully paid up members of the RSARS, so, if you own a key, and your membership is NOT paid up, so, on to your bike and down to the Post Office, there's a good lad!.

A plaque will be awarded to the outright winner, and personally presented with photo shots, ta ra ra ra and all that by yours truly on behalf of the Society. May the best man win. So get out your keys, find the end that goes up and down (or side to side) remember that a dash is thrice as long as a dot, and join the gang around 3,540 Khz plus or minus on Tuesdays. All Contest queries to me at 20 College Road, Blandford Camp, Dorset, Good Luck es 73 .

Dave, G3TAN.

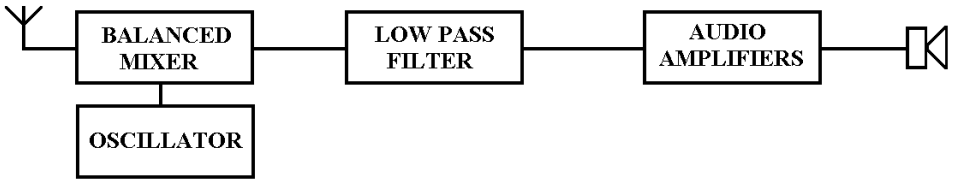
A DIRECT CONVERSION RECEIVER

G3EJF

(Although not a new idea - the Editor saw a demonstration of this type of receiver in the early '50's - it is felt that the Direct Conversion Receiver or Synchrodyne has never enjoyed the popularity it may have deserved. "Mercury" is happy to publish this article by G3EJF, the result, apparently, of a lot of work and experiment. Ed.)

After several references to the Direct Conversion, or Synchrodyne technique in amateur radio magazines, an article in QST by W7WKR and W7ZOL started G3UVY and the writer on a series of experiments to see whether one could really build a reasonable receiver for thirty-five bob.

The Direct Conversion Receiver may be looked upon as a superhet whose IF is zero, and a typical block diagram could be as follows :-



Among the advantages claimed for this type of receiver are a high degree of freedom from the effects of cross-modulation, freedom from blocking on strong signals and reasonable sensitivity together with extreme simplicity.

The original circuit, which was reprinted in Technical Topics in the February 1969 "Bull", used rather exotic sounding semiconductors not easily obtainable in UK, and the main interest was in seeing what could be done with cheap devices.

The circuit finally used by the writer is given in the accompanying diagram and it is proposed to discuss this in some detail. All the amplification is done at audio frequencies, something of the order of 100 dB being required and low-noise, high Beta transistors are necessary. At 2/9d each BC 169's looked reasonable and, in fact, proved satisfactory. With so much gain the stability of the AF amplifier can be a problem. Oscillation at audio frequency is prevented by careful layout and, if necessary, increasing the values of R8 and R12 whilst oscillation at higher frequencies was cured by adding C20 to the circuit. With one particular pair of low impedance 'phones the beast still oscillated, possibly due to their inductance being a critical value but a resistor of a few hundred ohms in series with the 'phones affected a cure.

As the main interest is in CW at G3EJF it was decided to incorporate an audio filter for additional selectivity. This consists of L7, C18, C19, C21 and R14. If R14 was short circuited the output transistor wou1d, in effect, a Colpitts oscillator and the value of R14 must be adjusted so that the positive feedback at resonance just cancels the negative feedback which is present due to the resistance of L7. The DC blocking capacitor C21 must be at least the value stated so that it does not affect the resonant frequency of the filter. Too small a value for R14 causes oscillation when the filter is switched on whilst too high a value degrades the filter performance. During experiments with this filter it was found possible to obtain a bandwidth so narrow that whilst 10 wpm Morse could he read, 20 wpm was completely garbled.

The main selectivity of the receiver is determined by the low-pass filter and considerable thought was given to this section.

In the original circuit a single Pi-section was used, the inductor being an 88 mH toroid. A small choke of the normal clamp construction and 100 ma inductance was tried, and, whilst this gave

reasonable results it suffered from one great disadvantage, whenever any other equipment was switched on in the vicinity, a 50 Hz current was induced in the choke causing a hum, which was quite deafening at times. Magnetic screening of the choke reduced the hum, and 2" diameter steam pipe of 1/8" thick walls was used for this purpose. Ever seen a small chassis with a chimney sticking up several inches? Fortunately, a supply of 88 mH toroids at 9/10d a pair was found at Messrs Spacemark Ltd., of Manchester, and these cured it completely. Of course, if the receiver is only to be used as a portable rig, the problem of 50 Hz hum does not exist. Having bought two toroids it was decided to use them both in a two section filter with an impedance of 600 ohms and a cut-off frequency of 2,000 Hz. An improved roll-off was obtained as a result. It may be pointed out here that the inductor in the CW filter, being later in the circuit, does not cause any induced hum.

The oscillator used by the writer is the familiar W3JHK "Synthetic Rock" and has proved remarkably stable - connected to a frequency counter we became bored waiting for the thing to drift more than the odd cycle once it had reached room temperature. Originally, a double emitter follower buffer stage was fitted, but this proved unnecessary. Too great an oscillator injection voltage caused the receiver to burst into uncontrollable oscillation and it may be necessary to increase the value of R6 to ensure stability. The voltage measured across the toroid T2 was 90 millivolts r.m.s. Any other oscillator circuit giving a similar voltage at low impedance could be used.

The configuration of the balanced mixer may seem rather strange but it is that used in the original article and works well. There is virtually no oscillator radiation and it may well be that the circuit was designed to balance out the oscillator voltage for just this purpose. The original diodes were described as "Hot carrier" types but as these were not available both OA81's and unmarked untested germanium switching diodes were tried. Both types worked equally well although it was thought worthwhile using diodes whose forward resistance and reverse resistance matched as measured on a multimeter.

Toroids for T1 and T2 were made from some ferrite pot cores bought at 2/6d a dozen from a surplus shop. These measured 5/8" OD, 7/16" ID, half and inch long and were cut into 1/8" lengths. The method of cutting was to wrap paper round a pencil until it was a snug fit into the bore and then scribe with a three-cornered file. This may need a certain amount of patience but with a dozen to go at you should soon learn the best method. Now wrap the toroid with masking tape to prevent scratching the enamel coating on the wire. Take three lengths of 28 swg wire and wind 15 turns trifilarly equally spaced around the toroid. Identify each end of the windings with a multimeter; winding 'A' is the low impedance winding, join the beginning of winding 'B' to the finish of winding 'C' to form the centre tap. The start of each winding is indicated on the circuit by a dot.

The tuned circuit L3, C2 should peak to the received frequency. Its main function is to prevent harmonics of the oscillator beating with unwanted signals but it was found that with a receiver covering the 3·5 Mhz band the extremely strong 7 Mhz BC signals were still breaking through to beat with the oscillator second harmonic. The rejector circuit L1, C1 was added to attenuate these signals.

Some form of volume control was found to be necessary and the crude aerial attenuator R1 was added. The purists will mutter about mismatches but a properly matched attenuator copied from the Racal RA 17 circuit was tried and found to work no better than the original carbon potentiometer. Alternatively, an AF gain control may be fitted by connecting a 15K variable resistor between C16 and chassis.

The receiver was constructed on a small chassis measuring 6½" x 4½" x 1½". The oscillator, which was built into a wall-box for a 13 amp socket, was mounted above the chassis and the remainder of the receiver under the chassis. The audio frequency stages were built on a small piece of Veroboard

and their stability was checked before incorporating them into the receiver. The balanced mixer was also built on Veroboard using a symmetrical layout. As no balancing control was fitted the symmetry of the layout is of some importance. Otherwise the layout of the receiver followed normal lines and in the interests of stability all earth connections were made to a single point.

Although the writer's receiver was built to cover the 3·5 Mhz band, there seems no reason why other bands should not be possible, only the oscillator and the front end tuning will need altering.

Due to the sensitivity of the receiver some difficulty was found in muting it during transmissions. The simplest method is to switch the battery off, the oscillator is quite stable when this is done. For CW, in order to obtain sidetone, an alternative method is to put a 1·5 megohm resistor between the low-pass filter and the junction of R7 and C14, shorting it out on "Receive" by means of a switch on the front panel.

A series of tests to determine performance has been carried out with the following results. The sensitivity is such that a 2 μV CW signal is perfectly readable. In practice this means that on 3·5 MHz during the day only the very weakest of CW signals cannot be heard whilst at night the aerial attenuator has to he used to prevent the operator being deafened.

The response of the low-pass filter is flat from 200 Hz to 2000 Hz. The bandwidth of the receiver is thus 4·2 kHz at -6 dB whilst the -60 dB bandwidth is 10 kHz. These figures compare very favourably with the average communications receiver. Rejection of signals beating with the oscillator second harmonic was 54 dB and they ceased to be troublesome.

The main disadvantage of this type of receiver is that, since the conversion oscillator is always in the middle pass-band, an audio image occurs. Unless one is trying to dig down into the noise for the weak signal this is not too much trouble. In any case the receiver only cost about thirty - five bob and you can't expect too much.

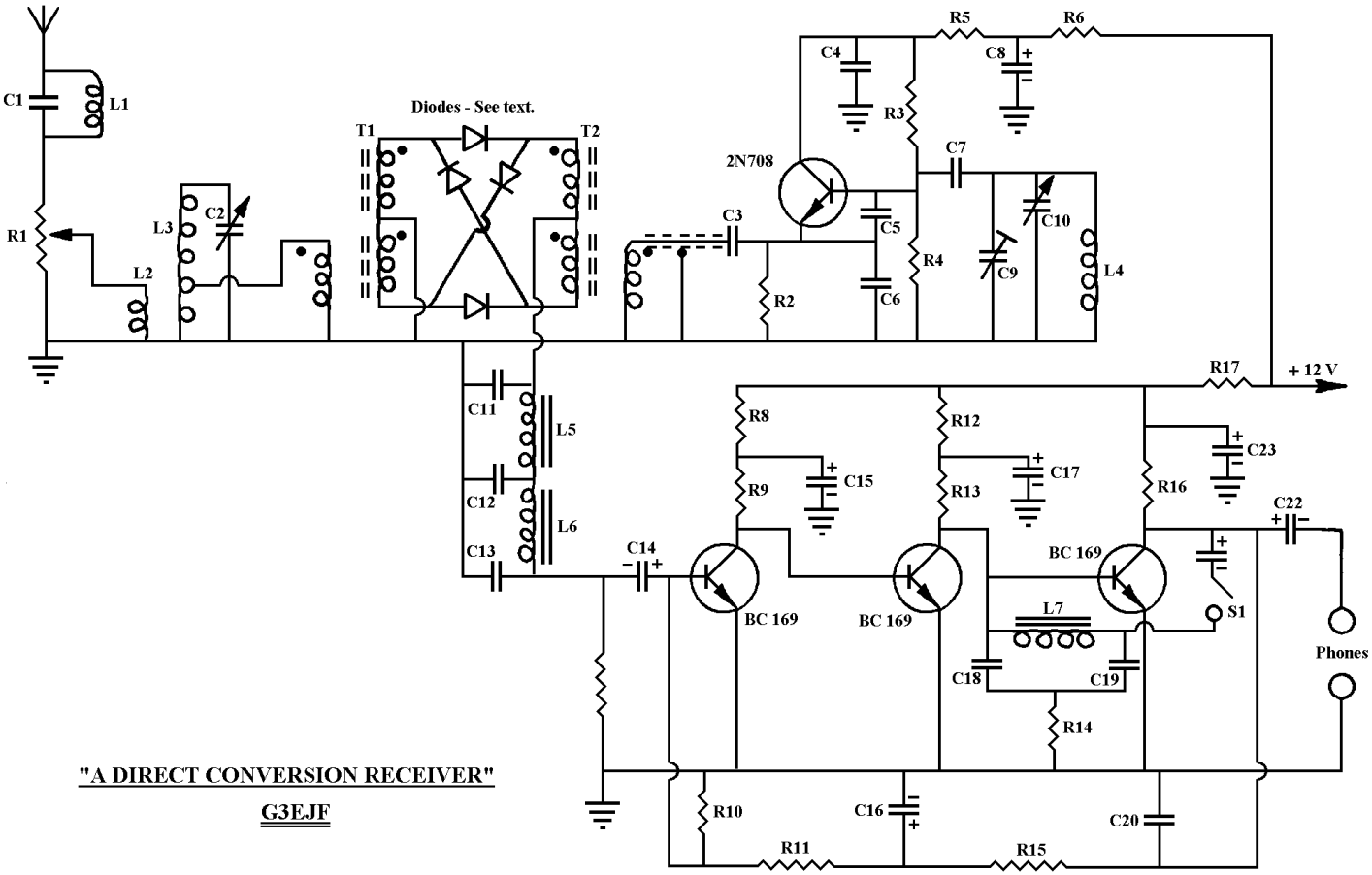
In order to measure the cross-modulation characteristics the following procedure was used :-

Two signal generators set 10 kHz apart were connected to the receiver antenna socket, a 68 ohms resistor being placed in each generator lead. The receiver was zero-beat to SG1 which was 30% amplitude modulated and the receiver output voltage noted. SG1 was then switched to CW and SG2 switched to 30% AM. The amplitude of SG2 was increased until the same receiver output voltage was obtained and the ratio of the generator outputs noted. The tests were repeated using different levels of signal from SG1 and consistent results were obtained. These results may be expressed as follows :- In order to 30% cross-modulate the wanted signal, an unwanted signal 10 kHz off frequency must be 50 dB above the wanted signal. Thus to 1% modulate the wanted signal it must be 20 dB greater. Very few cross-modulation specifications for commercial receivers are available but the figure for the Racal RA 17 for 1% cross-modulation is given as not less than 16 dB under similar conditions to the above test.

Battery drain was 5½ ma at 12 volts.

Used for actual QSOs on 3·5 mHz CW it has proved to be a perfectly practical and usable receiver, SSB reception is equally good but A3 signals are less easily received. If the received carrier is zeroed out the signal can be resolved provided it has no drift and no frequency modulation, and it is noticeable how many A3 signals have these faults. The receiver performance may be compared with such receivers as the BC-348, R 107 etc..

Ideas for further development include the addition of an RF stage using an FET provided this does not degrade the cross-modulation performance and the construction of a CW transceiver using the same oscillator for both TX and RX.



"A DIRECT CONVERSION RECEIVER"

G3EJF

Component values and coil winding data are given below.

R1	1	Kohm carbon pot
R2	1	Kohm
R3	4·7	Kohms
R4	3·3	Kohms
R5	2·2	Kohms
R6	470	Ohms
R7	1	Kohm
R8	12	Kohms
R9	47	Kohms
R10	12	Kohms
R11	22	Kohms
R12	2·2	Kohms
R13	22	Kohms
R14	39	Kohms (see text)
R15	43	Kohms
R16	2·2	Kohms
R17	330	Ohms

C1	20 pF
C2	100pF variable
C3	100pf silver mica
C4	0·1 µF
C5	3000 pF silver mica
C6	1000 pF silver mica
C7	150 pF silver mica
C8	25 µF 15 volts
C9	50 pF trimmer
C10	25 pF variable
C11	0·15 µF
C12	0·3 µF
C13	0·15 µF
C14	5 µF 15 volts
C15	50 µF 15 volts
C16	10 µF 15 volts
C17	50 µF 15 volts
C18	0·02 µF
C19	0·02 µF
C20	0·01 µF
C21	10 µF 15 volts
C22	2 µF 15 volts
C23	25 µF 15 volts

Coil Data.

L1 25 turns 28 swg on 3/8" dia. former.
L2 2 turn link of PVC covered wire.
L3 45 turns 28 swg on 3/8" dia. former tapped at 10 turns.
L4 20 turns 24 swg on 3/8" dia. former.
L5 88 mH toroid or small choke of similar inductance; but see text.
L6 88 mH toroid or small choke of similar inductance; but see text.
L7 5 H choke.

DID YOU KNOW.....?

That call-sign type badges, but showing a membership number in place of the call-sign are available from HQ price 7/6 post free.

THOUGHT.

There was a young fellow named Weir, Who hadn't an atom of fear, He indulged in a desire to touch a live wire..... Almost any last line will do here! CHC Extra News letter.

THE "DELTA" ALL-BAND ANTENNA - Part I.

GW3ASW.

The aim of all amateurs that I have known is to possess, to them, the ultimate antenna. To my knowledge, this has yet to be attained, and unless one has the space - and the dinari - to specialise for each band, then a compromise is, of necessity, forced upon them. The most common way is to erect an antenna for the preferred band, then be satisfied with the often indifferent bonus's if it should happen to get out on the others. Hence the popularity of the harmonic radiators such as the Zepp, trap dipoles, loaded verticals, long wires and what have you. They can all be made to work in some manner or other.

My QTH has very little ground, but due to a very lucky QSP with a Milan "I" way back in 1947 which was duly passed on to a local farmer whose land abutted on to mine, the whole 300 odd acres became mine for antenna erection, provided I kept to hedgerows and paths. GW3ASW, in those days, was very proud of his "mediocre variety" of a couple of rhombics, a pair of vees (one stacked), and a little length of wire which, even on Top Band, could be termed a medium long Beverage. The world was really mine in those days!.

Those halcyon days came to an abrupt end in 1958 - tempus fugit, assisted by that grim bloke with the scythe resulted in the complete collapse of the antenna empire, and I became the (not very) proud possessor of a piece of wire 104' long including the insulators!. Coupled with a long illness which nearly smothered the radio bug for aye, nearly 7 years passed with only one very short resurgence before the "bug" was restored to health and vigour (XYL interjects "For health and vigour read ill-health and madness!"). I suppose that if I had returned to my normal band - 20 - a 66/67' wire centre fed would have sufficed. However, I came back via Top Band and low power 80 and the maximum amount of wire was imperative. Also, like a good many other contemporaries, I found out that 40 was still a very good inter-G phone band, and an excellent DX CW Band. Very little choice was available, so like many others I opted for an antenna that appeared to be having a measure of success - the G5RV. Centre fed with tuned line it loaded up as a quarter-wave on Top Band. I belong to the school of thought that never worries about an extra dial to "twiddle", believing that the disadvantages of having to tune another dial, more than outweighs the so-called "advantages" of co-axial cable feed. If comparative VSWR's are studied it is easy to see why. For instance, how many realise that the measured resistance of a half-wave aerial can be as little as 160 ohms (no, that's not a "mismatch" - I HAVE written 160 ohms) if the antenna is close to the ground. This point-was rammed down me many years ago (vide Signal Training 1936 (Amended 1942) Volume II, Part II, Chapter XVII, Section 92/7). Trap dipoles fed with 70 ohms? Wonder if this is what caused that 6HF5 to give up the ghost? Generally speaking, the G5RV performed as well as its designer claimed and served its purpose for nearly two years but dissatisfaction arose due to the very critical tuning necessary particularly on 80 and VSWR's were very high and even on the design frequency of 20 I was not entirely satisfied. The problem seemed to be insoluble. I was getting out, but.....?

One day whilst turning out some pre-war "rubbish", I started to browse through an old lecture note book, taken, I think, in Bulford well before the War, dealing with, of all things, Brigade Signals Organisation. Noted in pencil in the margin was the cryptic note - "...the gain of a 2 element collinear is a function of its spacing, and is, at ½-Wave, 3 dB....." No more - just that!. I cannot recall the reason, when, how or why. I do know that about this time I doubt if I knew the difference between a dB and a Hertzian Wave, but I expect it looked and sounded good when I returned to the Shutters, Lucas Lamps, Helios, Flags, D III's and No.1 Sets! Anyhow, this set the

old grey matter (very, these days) churning with almost forgotten memories of the "2 x ½ waves in phase", "Double Extended Zepps", "The Collins Multi-Band", etc., and, with a little research, things began to move.

The 2 x ½ waves in phase device has a gain of 1·9 dB, the double extended Zepp has a gain of approximately 3 dB, whilst the gains of the G5RV and the Collins (very similar devices to the double extended Zepp, in general principles) have gains depending upon their mode of operation. The "ideas" began to coagulate, and the following design, after a lot of false starts, is the result. It is, briefly, something of all, but, I believe, an improvement, if only because of the very much lower VSWR's. Before describing the design let us first consider these 2 collinear devices. This will then simplify the explanation of the subject of this spiel.

(a). The 2 x ½ waves in phase aerial consists of a top of one wavelength, fed in the centre from a stub of 600/300 ohms line a quarter wavelength long. Maximum gain is 1·9 dB. See Fig. 1. The fields of this collinear combine at a distant point to give this increased gain. It can be fed either by continuing the tuned line back to the ATU or from a length of co-axial cable attached to the end of the stub. Another method is to short the base of the stub and feed from any end with 600 Ohms line. In this case extreme care is required in tuning. Normally, it is practice to feed collinears from an electrically balanced point.

(b). The double extended Zepp is an improvement on this as the two halves of the radiator are "separated" or spaced by a metallic "insulator". Operation can be readily understood if you imagine that as the inner ends of the two half waves in phase are pushed outwards, so the lobe is distantly "focussed". At about 0·3 wavelength spacing the gain has increased to approximately 3 dB, which will increase to 3·3 dB approximately at a point between 0·45 and 0·5 wavelength. From this point on the gain will start to drop and at 0·7 wavelength it is 3 dB, until at, and over, 0·9 wavelength spacing the gain levels out at about 2·9 dB. Therefore spacing over about 0·5 wavelength is unnecessary, and, in practice, it is kept to 0·28 wavelength spacing, which, with the spacing of the 600 ohms feeder, becomes nearly 0·3 with a gain of approximately 3 dB. Top dimensions, therefore, are 0·64 wavelength in each leg. The section at the centre carries very little current, so little, if any, radiation will occur. Radiation will be very sharp, and in common with all collinears will be broadside. Very small minor lobes do occur but can be forgotten. See Fig. 2.

N.B. It is theoretically possible, for single band operation, to feed this antenna at a point 0·11 wavelength from the centre along the 600 ohms feed-line with co-ax. Operation would be a little tricky if this length were not accurately matched. However, by extending the feedline to 0·61 wavelength no trouble would be experienced. Again, however, the use of 600 ohms line is to be recommended and preferred, particularly so, as it is possible to use this system on a number, if not all, bands, if one accepts the obvious losses due to sometimes high VSWR's and the very nasty reactive mismatch on 80. A certain well known and well used contemporary antenna uses, with very little length variation, this method. To those who have not come across the Collins it will be sufficient to say that, very roughly, it is similar in operation to the G5RV, but using 600 ohms line for the feeders only.

So, from the use (with occasional tribulations) of these, was born the GW3ASW "Delta" all band antenna, sans loading coils, sans traps, but a good "gainy" antenna on 20 and 40, good centre fed long wire arrays on 21 and 28 and a good all-round working wire on 80 operating as a nearly correct dipole, NOT a shortened compromise.

Qualification of the use of the word "Delta" in the title is necessary as the antenna is NOT, in any way, a Delta fed device, but is purely a description of what, in the air, the antenna looks like. In fact, local amateurs, until corrected, described it as "that Delta '3ASW has got up"..... so, for want of a better word, "DELTA" ALL-BAND it is - and don't forget the $\overline{RR}$. The basic design is shown

in Fig. 3 and is based upon a design frequency of 14·1 Mc/s (sorry mHz!). On this band the operation of the antenna is a 2 x ½ wave collinear with approximately 0·5 wavelength spacing and giving the very useful gain of 3 dB in the horizontal mode plus a vertical lobe which does not in any way hinder the gain of the antenna, in fact, it appears to supplement it.

Design figures for 14·1 mHz are as follows, based upon the normal formula of

$$\text{½ wave length in feet} = \frac{468}{f(\text{mHz})}$$

		are:
Top	0·64 wavelength	42 feet 6 inches
Phasing (Delta)	0·36 wavelength	23 feet 11 inches.
Top spacing	0·18 wavelength	11 feet 11½ inches (12 feet)
	0·24 wavelength	16 feet 0½ inch
🗁 wavelength for 14·0 mHz		33 feet 5⅝ inches)
🗁 wavelength for 14·25 mHz		32 feet 9-3/4 inches) for peak performance
		) on any chosen frequency

it is only necessary to make the necessary adjustments at the feed point, cutting, or adding, as required. It is not imperative that other adjustments need be made, as if the centre is trimmed the movement of current along the top radiator will be minimal and can be completely ignored.

Spacing at centre. Slightly better gains are made by leaving the spacing at 0·18 wavelength (about 0·15 dB) but performance is then slightly degraded on 80 and 40, and at 0·24 wavelength spacing VSWR's on 40 and 15 are considerably improved so if you can spare the extra few feet in length then this is recommended. Closer than 0·15 wavelength spacing the antenna begins to operate like a G5RV and VSWR's begin to soar. N.B. There is nothing mystic about the top length of 0·64 wavelength - it's just about the maximum possible if distortion of the main lobe is to be prevented, with, if this does happen, severe loss of gain (and increasing VSWR's).

OPERATION.

80 metres. On 80 metres the "De1ta" all band antenna operates as a dipo1e but with considerable vertical polarity. By reports received from around the land the polar diagram appears to be fairly circular with an obvious emphasis in the broadside direction.

40 metres. Basically the antenna is a full wave centre fed radiator, but by careful selection of the feed-line length (77 feet in my case) the antenna, instead of taking on the cruciform pattern of the full wave, gives very good "gainy" lobes similar to those expected from a 2 x ½ Wave collinear. Small minor lobes appear, due, in part, to the interaction of the vertical section. For inter-G 'phone working the polar pattern again appears to be almost circular to such an extent that if I hear 'em I can work 'em!

20 metres. Whilst the design figures for the top and spacing are based upon a 2 element wide-spaced collinear it does not require a slide rule to see that by lengthening the "Delta" legs to 0·36 wavelength, should, in theory, turn the device into a 2 wavelength centre-fed aerial. However, this is not apparently so as the antenna radiates with very pronounced broadside lobes. It is reasonable to assume that due to the comparative1y close spacing of the first quarter wave of the vertical section that this portion is acting like a feeder..... , (remember my comment about Zo above?) and so permitting the array to operate as a two element wide spaced collinear. Maximum lobes are very definitely broadside from this QTH. (Late Flash! - Alignment of the vertical section (away from the vertical) does, after about 3 - 5° of movement, commence to distort the broadside lobe). Some small lobes occur at about occur at about 60°.

15 metres. Here the antenna operates as a 6 half waves antenna, but due to the layout, the main horizontal lobes are cruciform with very pronounced broadside supplementaries from the vertical

section. There has been little practical operation on this band, as it is not a favourite or mine. VSR with tuned line is better than 1 : 1·4 at worst.. Very little heat losses here!!!.

10 metres. Four full waves centre, fed. Vertical polarity very pronounced.- Contacts have been few - about 40 in all - all continents having been worked during two successive periods of operation. VSWR very low, with 600 ohms line.

General.. VSWR's are not worse than 1 : 1·9 on any band but 1 must qualify this by adding "'avoid, like poison, any length of feeder that is, on its own, resonant, or nearly so, on any band". Your GDO is your best friend in this respect. To save you hunting through your books here are a few that you CAN use : 40, 58 (be careful of 7 Mhz here), 77 (as used at this QTH), 95 and 110 feet (with these last two some trouble may occur on 10 Metres). Remember that the job of your ATU and the feeder is to match into the feed impedance of your antenna. There's a limit to how much "slack" your ATU can, or will, "pull-in" so please help it by the intelligent choice of feeder length. This applies also to co-axial feeders to a different degree. I use an old ATU built years ago with plug-in coils and fixed links using a series condenser to load and tune out reactance. There are better designs. A "lash-up" of the design by G5RV in the RSGB Journal of November 1966 appeared to be a first-class job and matched the antenna well both in this version and the co-axial fed version to be described below.

(Part II of this article will appear in the next issue of "Mercury". This will include details of results on the HF bands, and the answer to the question "Will it work with co-ax.?" and diagrams.)

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RSARS QSL BUREAU.

The RSARS QSL Bureau provides a service for all members of the Royal Signals Amateur Radio Society. The Bureau handles QSL cards TO AND FROM MEMBERS ONLY. If you are expecting cards from the Bureau please send some SAE to Dave, G3HSE.- A fourpenny or fivepenny stamp is usually sufficient. If you do not wish to collect cards from the Bureau, please let Dave know - these can then be returned to the senders, although it would be better if you told your contacts that you do NOT require QSLs.

The address of the Bureau is :-

RSARS QSL BUREAU, C/o G3HSE, 78, BROCKLEHURST STREET, NEW CROSS, LONDON, S.E.14. Telephone : 01-639-1594.

If sending queries to the Bureau by post, please enclose SAE - Tnx.

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PUBLICATIONS RECEIVED

RSARS HQ gratefully acknowledges receipt of various publications including those from FOC, RAIBC and The Nigerian Amateur Radio Society. A recent copy of "Break-in" from the New Zealand Association of Radio Transmitters has also been received. Thanks to the Editor this issue contains not only a letter from the Gen. Sec. RSARS pointing out that past and present members of the R.N.Z. Signals are eligible for membership but complete copy of the Membership Application form. Our thanks to N.Z.A.R.T. for their generosity.

HELP WANTED.

A letter from Ian Jelly, member No. 605, recently asked for some information. Unfortunately, this information is not available at HQ, therefore it is passed on to members, with whom, we hope, it may a bell or two. Quoting from Ian's letter.....

.....Last week we acquired a "Aeria1 Coupling Unit, D.F. No. 2, ZA 15515, Serial Number 156" for a couple of bob from a surplus store in Manchester in the hope that it may be of some use. I wonder if you know anything about these items or where I can get information on it. It is a pretty vintage item judging by the paint (the old matt brown not olive green). I will give a description if it helps :-

8 inches wide, 5 inches high, 7 inches deep. On the front are a) a 7 position switch marked "Range Switch", Loop B positions 1, 2 and 3, and Loop C positions 1, 2a, 2b, 3a and 3b". Position Loop B 3 and loop C 1 are the same position. b) a 3 position switch marked "Search", "D/F", and "Sense". c) a large knob marked. "Tuning". There is also the name plate which also shows Frequency Range, Loop and Switch Position, and "Range Switch Position". On the left hand side there are three terminals (similar to the aerial terminal on the R 107) marked "A", "R/L", and "E" "E" is earthed. On the back is a two-pin socket (polarised) marked "Loop". On the right-hand side are two screened leads about six inches long with primitive screened plugs on them. They are marked "Output".

If any member has one of these, or any details, please write to Ian B. Jolly, RSARS 605, HQ 45 (Winsford) Detachment, Royal Signals A.C.F., A.C.F. Centre, Dean street, Winsford, Cheshire.

****

DID YOU KNOW……...?

That Ian, member No. 605 (see above) recently took his detachment to the top of Ben Nevis (4,406 feet) and operated a Cadet Force Net station there from, giving them the record of the highest Cadet Force Net station in Great Britain. The four and a half thousand feet climb was accomplished in five hours after a 600 mile drive from Cheshire - and this was carrying a 19 set, Batteries and Aerial Gear. Well done AFF 4 and RSARS 605. Not content with this the Detachment went on to the Isle of Skye and then joined the rest of the Detachment at Bala in North Wales.

****

DO YOU KNOW..…….?

Where Member No. 605 (Yes, Ian again!) can obtain any information on a source of supply of the Manual for the CANADIAN Wireless Set No. 19. He would like to purchase one if possible and the edition he is after is the one containing circuit diagrams and other information and NOT just the Working Instructions.

****

HEARD ON THE NET.

G9XX : "Got a crank-up tower here, Jack"

G4RS : "That's embarrassing for you, OM. Can't you get him down?"

G4RS : "Any more breakers?"

???? : "#%-*@@!+$??/£#'*$$&

G4RS : "There are about five of you in there. Sort yourselves out.....Now, go ahead the loud one first...."

G4RS : "You may be an old Yale man but you certainly are a bit shaky on the key, OM"

COMMUNICATORS - PHOOEY!!

By Malus Pumila

(Our contributor who naturally wishes to remain anonymous has chosen for his non-de-plume the Crab Apple. This is a slander on a noble tree whose fruits aren't anywhere near as sour - Ed.)

Now I know that Radio Amateurs are always considered by those not so afflicted as being a bit weak in the head, but you listen on the bands - we're not mildly touched - we' re raving lunatics!. Not only do we do the most inane things but we're fast losing the power of communication, at least. the communication of something intelligent. I mean to say, you go on any of our HF bands and work a dozen stations, and you'll find that each QSO was an almost exact replica of the previous one, only call-signs, names and QTH will be different; not even the name will differ very much. they're nearly all called Vlad, anyway. I once knew an RTTY station who had the whole of his end of the QSO on tape, all he had to do was print call-signs and report and sit back while the tape ran through the head. Fine if you want to nip down to the pub for a noggin during the QSO but hardly sparkling conversation. Look, while my duodenum is firing on all four ulcers, let's dissect the way some people behave.

Take that guy at the LF end of the band. He starts with a lot of weird dits and dahs which must be Babylonian cuneiform Morse for "CQ". After a while he stops to adjust his key, more cuneiform, then back to "CQ" again - the aerial current isn't high enough - hold down the key and tune up. Of course, his PA pulls his VFO and off he goes again a few kHz up the band. Now he's in real earnest and sends "CQ" thirty-two times before he gets round to sending his call-sign. Eventually, he finishes; if you're still with him you've got an unselective receiver, more patience than I have, or a job to do in the shack and like a bit of QRM in the background like some people have Radio One on all day. Perhaps you decide to go on the air yourself, you either answer a reasonably sane sounding "CQ", or, if you're a masochist, call "CQ" and take pot luck on what it produces. So you get a QSO - then what do you find?. You give him a snappy "599" (He really IS "599"), the QTH and name once only and hand it over. What happen???. He sends8 UR RSTRSTRST589589589. He follows that by informing you that his QTH a is a town with three names - all the same, and that his name is JOEJOEJOE. Never met anyone called JOEJOEJOE - have you?. When he gets around to telling you about his rig you find that his antenna is a LONG WIRE of such a length that it is rather less than one sixth of a wavelength. How long is a piece of wire, anyway?. So it grinds to the inevitable SURE PSEPSEPSE QSLQSLQSL HPE CUAGN - he won't, you know, not if I can remember his call-sign. Yet another rubber-stamp QSO goes into the log-book to be forgotten as soon as it is written. I tell you, we're as nutty as a fruit cake!.

Being a glutton for punishment, you decide to go higher up the band and inflict your voice on the suffering multitudes. Do you meet beings with some flicker of intelligence? - NO, you do NOT. Their "CQ's" are interrupted by whistles, strange sounds like HAA-HAA-HAAAAA, odd hammerings, and the XYL's voice shouting "You're coming through on the telly". Then there is the question of phonetics, - if half the effort that is put into dreaming up strange combinations of words were put into making stimulating conversation, we'd be a lot better off. Supposing some character gives you a very quick call after your "CQ" do you give him a report on the basis of a five-second transmission? If you say you'll give him a report on the next over, it' s almost certain he will say "I didn't get my report". Talking of reports have you ever noticed how many times you've been given Readability 5, and then asked to repeat your Name, QTH or something? All that I can assume is that he left the shack for a while or noticed something interesting in the new issue of a magazine or something. Then there are the people who think you can't spell - "The name here is Bill - BRAVO, INDIA, LIMA, LIMA". Apart from assuming that you can't spell they think you have no knowledge of geography and insist on spelling their location even though it's London or Liverpool or some such outpost of civilisation. Mind you, if you're working a foreigner and you live in a place like Llansantffraid Yn Mechain there may be something to be said for spelling it. There'd be much more to be said for moving house or saying that you're near Welshpool though.

Then there's the business of power. At least, the AM blokes always talk about Power Input, but on SSB you don't know whether he means 180 Watts peak input or output. He said his rig was a Gonk ZZ999 so making polite conversation you ask him what he thinks of it. Funny how he's always pleased with it, never says it's a heap of junk, even though you notice it's drifting like snow in a gale. Well, he's mortgaged his next two years pay to the Finance Company so he's got to kid himself along I suppose, but why try to kid you, when you are listening to his signal? Did you realise that nearly all phone operators are either Royalty or Newspaper editors? If they're not, they must have split personalities, or why do they insist on saying "WE" are located near Ugglebarnthorpe, and "WE" are running 50 Watts to an 807. "WE" often work this band, but "WE" also chase DX on 15? Who the heck's there with him? You notice they never say "Our XYL" so it's not a case of polyandry, more likely it's me and MY ego. So you think I'm just being vicious - leave the TX switched off and just listen to the others on the bands - nuts, I tell you!

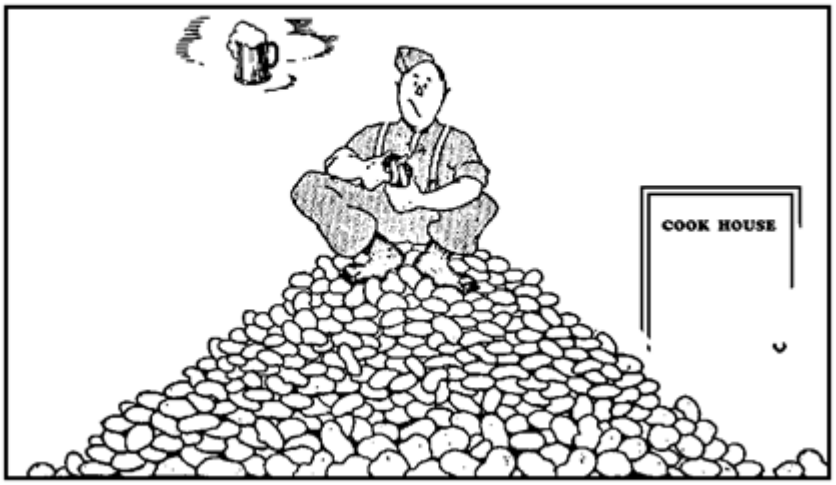
Well, I feel better now, so I think I'll go on the air for a couple of hours!

****

QUICK-QUIZ

Islands this time. The following is a list of the fifteen largest islands in the world. Can you place them in their correct order of size, area-wise.
Ellesmere (Canada), Java (Indonesia), Madagascar (Malagsy Rep.), Baffin (Canada), Celebes (Indonesia), New Guinea (South Pacific), Honshu (Japan), South Island (New Zealand), Great Britain, Borneo (Asia), Greenland, Victoria (Canada), North Island (New Zealand), Luzon (Philippines), Sumatra (Indonesia).

****



The RSARS Net station who cannot get on the frequency

"IN" TRAY.

(The "In" Tray at HQ sees many, many letters. Some contain orders, others suggestions, a few, complaints, but all are welcome. Occasionally, a more-interesting-than-usual letter comes to the top. The following is an extract from one such letter. This one came from G2WH who donated the early copies of various radio journals from which was taken the article "Before my time" which appeared in a previous "Mercury". Among other things, Bill says ..... - Ed)

"... I had forgotten that I had asked for reports on AQ5WH. The original 5WH was acquired in 1926 at 2 Div Sigs, Aldershot (Eric Cole was in the same Unit at that time) with an alternate address at my home in Virginia Water, Windsor Great Park. The first amateur station in a Royal Park.

AQ5WS ran from July 1928 to about February 1929 when I was serving in "Iraq Signal Section", the last kick of one of the Divisional Signals of the Mesopotamian Campaign in the First War. Capt. "Pop" Cunynghame was OC and Lieut. C.D. Hinds was 2 i/c. 177 Thomas, T., 680 Cowley, J.A., and 556 French, R., were the Sergeants, 539 Cpl Bloodworth, S., (later CSO Malta) was among the Corporals, and Sigmn Evenden (later at Signals Association) was Storeman. I have a complete list if any Old Timer is interested.

The aerial was a Zepp on two pairs of airline poles, erected with Evendens assistance. The lead-ins came through two holes ("drilled" with two shots from a ·38" automatic pistol through the galvanised iron sheet underlying the mud roof of my quarter) - I had previously made sure my bearer wasn't underneath making the bed!. "Works and Bricks" very kindly gave me a special 400 Volts DC on an overhead line.

The TX was a Tuned Plate-Tuned Grid circuit using an AT-25 valve. CW, of course, and no crystals or MOPA. The RX was an O-V-2 built into an old Fullerphone case with the coils on top. Fan noise was a nuisance when they were on in the warmer weather (120° in the shade) completely unfiltered, and signals from Europe not very good. I only worked a couple of EF's (France), AI2BY (India), LA1K (Norway, as now), EU61RB (somewhere in Russia) and ES2NN (Helsinki), but heard a number of others. The new Empire (we had one then!) station 5XX came in quite well. Early in 1929 I built a set for a friend in the Irrigation Department and we tried mains HT. Filtering was a bit of a headache - even using the field coils from a couple of 20 Kw generators. His workshop cast the case with a screening compartment and top and bottom plates in 𝄻-inch aluminium. Screening was quite good, and actually the set wasn't too bad with GEC double spaced slow motion condensers and open work "Dimic" Coils.

After leaving Iraq I went to "A" Corps Signals, Karachi, but amateur licenses were not issued in that part of India for some silly reason. I don't think any harm would have been done....."

".....but it may be of interest that amateur radio was first authorised in Palestine after the War in March 1947, but only on 10 Metres. There were one or two stations on the air in the six months before that, but they were unauthorised. I believe Ken Ellis (G5KW) was one of the first on the air with a ZC call. He and I formulated the license rules.

I am glad to see that Cyril Collins (G8SC) is now with us. I took over Custodian of G3IHH from him when he retired from REME. I myself had to hand it over again when I relinquished my RO job at Aborfield in 1967. Best wishes to him if he reads this....."

****

DID YOU KNOW……?

GM3PFU made up the Auto Keyer described in "Mercury" some time ago and finds that it works FB. "But very different from the Post Office sounder on which I trained under Tommy Hatton in Catterick in 1939" says 'PFU.

OTHER AWARD SECTION.

Several Awards this issue, and, once more, starting near home we have : -

THE WHITE ROSE AWARD.

This Award is issued by the Pudsey and District Radio Club, and comes in three classes for working stations in the County of Yorkshire as follows :-

Class III - U.K. stations contact 10 stations in Yorkshire. European stations contact 5 stations in Yorkshire. DX stations contact 3 stations in Yorkshire.

Class II - U.K. stations contact 20 stations in Yorkshire. European stations contact 10 stations in Yorkshire. DX stations contact 4 stations in Yorkshire.

Class I -U.K. stations contact 30 stations in Yorkshire. European stations contact 15 stations in Yorkshire. DX stations contact 5 stations in Yorkshire.

Stations in Yorkshire must work 5 extra stations in each Class. Directory rules apply. Log data only (QSL's NOT required). Available to SWL's. Cost 5/-, $1 or 8 IRC. ADMB/M may be repeated. Custodian is M.S. Gaunt G3WGW, 1 Woodlands Court, Pudsey, Yorkshire, England.
(Looking through the Membership List (before pruning) it is possible to make the Class I White Rose Award by contacting members only. Who will be the first to make a RSARS/White Rose Award? Look for, among others, G8TP, G3SQB, G3ONU, G3RUS, G3DNF, G3DBU, G3NXM, G2KK, G3VIS, G3IAB, G3VAN, G3YQK, G3VGN, G3WTJ, G3DMK G3RAZ, G3XHA, G2HNL, G3FTV, G5VO, G3JZP, G3EJF, G3JVD, G3JXL, G3VDR, G3TBP, G3RFI, G3HRU, G3NZY, G3NOB, G3HPJ, G3UZ, G3UCT, G3VYZ, G3XWI, G3WOD, G3AES, G3EHZ, G3XYF etc.)

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WORKED ALL MALAYSIA AWARD.

Although the WAMA is a well established award, Jimmy (9M2DQ) recently sent along the latest data. Not an easy award - 9M6's, 9M8's and VS5's aren't easy to come by these days - which probably makes it all the more worth having. Details are : -
Issued by the Malaysian Amateur Radio Transmitters Society, P.O. Box 777, Kuala Lumpur, Malaysia for the following contacts, 10 VS1 or 9V1/9V0, 10 VS2/9M2, 1 VS4/9M8, 1 VS5, 1 ZC5/9M8. Total 23. Log data should be endorsed by two members of Club or Society declaring QSL cards checked and data verified. Application should be in writing together with data and 10 IRC or $l US. and addressed to the Hon. Sec.

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Thanks to G8TK we have details of a couple of new Awards, both DX ones.

THE NEW ZEALAND COUNTIES AWARD.

Issued by the New Zealand CHC Chapter 67. Applications should be addressed to : ZL2GX, Jock White, 152 Lytton Road, GISBORNE, New Zealand. This Award consists of an attractive multi-coloured certificate which is available with the usual endorsements. The basic rules are :
1. Initial Award is for 20 counties confirmed.
2. Endorsements are available for 40, 60, 80 and 100 counties.
3. A Special certificate is available when all 112 counties confirmed.
4. Endorsements available for each band, all 'phone, all CW or mixed operation

5. All CHC Rules apply.
6. Charges are : for initial certificate with any endorsements, 4 IRC or 10 IRC Air Mail.
7. Endorsements - 2 IRC, Check Sheet - 1 IRC.

Application is to be made on a special check list, which gives the names of towns and cities in each county as a guide. Send 2 IRC for a copy. Note. : Counties and boundaries were taken from maps supplied by the Lands and Survey Department - there will be no disputes about boundaries. In the case of Cities these are put in the County area which is appropriate, e.g. Gisborne is in COOK County. DX-peditions : The operator of a DX-pedition to a county may claim that area as a credit for his own NZC Award application.

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THE GISBORNE AWARD.

This Award was instituted especially for the Cook Bi-Centenary Year. This is most appropriate, as it was at Gisborne that Capt. Cook not only sighted New Zealand, but also made his first landing in 1769. The certificate is a multi-coloured aerial picture looking over the city towards Young Nick's Head and the South coast. Requirements : Overseas stations require contacts with 2 stations in Gisborne. Contacts must date on or after 1st January 1969. No QSL's required but send full log data together with 3 IRC. Applications to ZL2GX (see above).

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DIPLOMA 100 EAs CW.

(The following details are printed, as received, in order not to give an incorrect interpretation.)

1. Both OM's and SWL's under licence in their respective countries may apply for a Diploma.
2. Callings will be bilaterally carried out on the authorised bands, and according to the international agreements.
3. In order to may apply for this Diploma, it will be necessary to prove by means on QSL's, 100 QSO's CW on EA stations. It will be reduced to a half for the stations considered DX and to a fourth for those considered DZ. Proved QSL's will also include an arranged short list.
4. It is absolutely necessary to prove work on seven EA's Districts and, at least, four callings per district.
5. To be computed as a different calling, it must, at least, mediate three dates in QSO's belonging to the same Stations, on different band.
6. At least, work on three bands must be proved.
7. Except for special cases, U.R.E. will accept lists proved by the respective Associations, which, on their own hand, accept similar U.R.E. Lists. EA's stations will also show QSL's stations. EA station granting QSL and proving of a calling on CW which will be noted on the above Diploma, and it must be sent - if so required by U.R.E. - at least five proofs QSL's concerning having carried out CW callings on some other EA's stations, which are otherwise well-known on this field, and having fulfilled this tasks for not over two years. In case that this would not be proved, immediate disqualification will then be extended to both stations.
8. U.R.E. will send Diploma and return QSL's and so on... to the Stations, whose Associations act on the same way. Otherwise, similar economic contribution will be required.
9. Listening stations may also apply for a Diploma, having into account the positions 3, 4, 5 and 6. It is also absolutely necessary to give proof by the corresponding QSL's of listening to CW calling stations, on which OM EA must not be in the same locality, at last for the third part of the computed QSO's as to each of the above conditions.

10. Diploma 100 EA's CW will have three categories, i.e. Normal, DX and DZ.
11. Following rewards will be granted, i.e. Golden Medal, Silver Medal and Bronze Medal for those OM and SWL stations, which get the first three places on the Diploma and as per their normal category. Golden Medal will be granted for the first classified one on both DX and DZ for the Spanish stations as well as the Foreign stations.
12. Decisions taken by the Board of Directors formed by U.R.E. members must be accepted by everybody else.
13. QSL's will be required under the conditions which are internationally accepted for getting Diplomas.
14. Callings started from list January 1966 onwards will be considered as valid.
15. If possible, rewards will be granted at the same time as the social ceremonies carried out by U.R.E. Meetings, Conventions and the like, otherwise this should not be refused by the interested party. U.R.E. Box 220 MADRID (Spain).

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THE CERTIFICATE "YU".

The Certificate "YU", is issued by Savez radio Amatera Jugoslavije (SRJ) that in this way wants to acknowledge outstanding achievements of foreign and home amateurs in their radio contacts with YU amateurs.

The Certificate will be issued to those amateurs who contact the certain number of YU radio amateur during one calendar year.

The following number of contacts with different YU stations (different call-signs) regardless of band or kind of emission, is necessary for claiming the Certificate :

a) Amateurs from Yugoslavia

50 contacts

b) Amateurs from Europe

15 contacts

c) Amateurs from Asia, Africa, North America 5 contacts

d) Amateurs from South America and Oceania 3 contacts

The contacts which YU amateurs make with radio stations from their own town are not valid for the Certificate.

Each application for the Certificate should be followed by a list of call-signs from the log, without any other data, but this list should be confirmed by two operators or by the Club Committee. Besides, YU amateurs should enclose 10 ND and foreign amateurs 5 IRC. All applications should be addressed as follows :

Savez radio Amatera Jugoslavije, Awards Manager, P.O. Box 48, BEOGRAD, Yugoslavia.

The owner of radio station who gets this Certificate three years in succession can claim a separate badge if he encloses additional 25 ND (YU Amateurs) or 10 IRC (foreign amateurs).

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SPEAKING OF AWARDS.....

Bert Browning, G8TK tells us that RSARS members are already fairly active in the Awards field and lists the following members :

No. 247, G5GH - CHC 1550 Award, No. 526, G3VNX - CHC 400 Award, No. 344, G8TK - CHC 200 Award (CHC 400 Award application awaiting confirmation, HTH 500 Trophy under application), No. 051, GM3PIP - CHC 200 Award, No. 340, G8VG - CHC 200 Award, No. 070, G3PQF - CHC 200 Award, No. 080, G3XCS - CHC 100 Award. Well done, fellahs!!!.

ODE TO ANNUAL MEMBERS.

(The following poem was sent along by Harry, 9H1BE, who saw it in The West Side Radio Club Magazine from Canada, to whom acknowledgements are duly made).

Forget the hasty unkind word,
Forget the slander you have heard,
Forget the quarrel and the cause,
Forget the whole affair because,
Forgetting is the only way,
Forget the storm of yesterday,
Forget the knocker and the sneak,
Forget the bad days of the week,
Forget you're not a millionaire,
Forget the grey streaks in your hair,
Forget to even get the blues,
BUT DON'T FORGET TO PAY YOUR DUES!

REMEMBER - ANNUAL SUBS BECOME DUE ON THE 1st JANUARY 1970 - DO IT NOW.

****

COINCIDENCE.

(The Amateur Radio World is full of surprises and coincidences. The following extract from a letter received from G3MKR (Note the call-sign) tells of just one more - Ed.)

..... Some two years ago I worked K2MKR/MM, then on a tanker in the Med., which gave us both a great kick. Last Wednesday I was on a cruise in the Med. leaving Venice calling at Messina, Naples, Isle of Capri, Palma, Majorca (where I had an eye-ball QSO with my good friend EA6BN), then to Gib., Casablanca, Tunis, Malta, Dubrovnik and back to Venice. However, on arriving in Tunis on the Wednesday I saw an American Hospital ship and we anchored alongside it and I noticed a TA-33 Jr at about 100 ASL, so I decided to investigate. On getting on board who should I find to be the operator, but non other than K2MKR/MM, so you can imagine what a kick we had from that eye-ball QSO .....
Bernard goes on to say : …. I did a similar trip in May with a P. & O. Liner, the Oronsay and the Radio Officer was none other than G3RJS/MM so we managed to get some exotic DXing done using that call-sign from the Med.. I did work Paul (G3RJS/MM) when he was at anchor in Sydney Harbour about one month ago, and he was just about ready to pull out for a cruise round Fiji, Samoa and The South Sea Islands, etc., and to think he gets paid for the job!! I think I would do it

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SWL's - PLEASE NOTE.

All non-licensed members now have their own SWL Section. Your Section Manager is :-

W.G. (Gordon) Beaumont, RSARS 213, 40 Hollydale Road, Erdington, BIRMINGHAM 24.

Gordon is waiting to hear from all non-licensed members (and licensed members also, if you have anything of interest for the SWL's) regarding DX heard (members or non-members) Times, Dates, Frequencies, the equipment you are using, Antennas, QSLs received, DX-peditions, QSL managers, equipment designed or built, etc., etc. Detail will be collected by Gordon and it is hoped that a regular SWL page will be appearing in "Mercury". So, let's be hearing from you!

GW5BI .

Members will have heard, or read, of the passing of GW5BI, Vic Bartlett of Roath, Cardiff. G6HB sent along the following appreciation, which shows what an experienced, active and well-liked person Vic was.

Vic Bartlett was an Old-Timer, being first licensed in the 1930's and was a member of the Old Timers Club. He served in World War II and was an active member of The Burma Star Association. He was very active on both 'phone and CW, and was well-known world-wide. His activities were concentrated on all bands Top to 2. Vic spent a lot of time visiting the sick in hospital, particularly if they were "hams". Seldom missed any "ham" gathering and was recently a welcome guest at the RSARS Blandford Rally. His only known relative was his brother to whom we again express our deep sympathy in this great loss.

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ENGINEERS AMATEUR RADIO SOCIETY.

The above Society has been established by G3WET, RSARS No. 584 (Ex Royal Engineers) to include engineers from all countries World-wide. A Founder Members Committee is being formed and will include DX as well as UK engineers.

The response to date has been most encouraging and there is every prospect of a successful society which, in due course, will probably seek affiliation to the Radio Society of Great Britain. The Society will not be restricted to Transmitting Amateurs but will also welcome SWL engineers. Rules are being drafted and prospective members are most cordially invited to write to :-

John G. Evans, G3WET, 104 Sonnall Road., Aldridge. Staffordshire, with brief details of their connection with any branch of engineers.

The Royal Signals Amateur Radio Society passes its best wishes to G3WET and the Engineers Amateur Radio Society and looks forward to a long and happy association.

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DID YOU KNOW.....

That if, in response to a "CQ RSARS" call, a YU7LCT comes back to you, don't tune off - it was, is or will be Member No.156, perhaps better known as G3UOL. If you haven't worked Bill as either YU7LCT or G3UOL, check the Log for F0JA, ON8IT, G3UOL/LX or EI6BB - Bill has held them all. If you are still waiting for a QSO with Member No.156 listen next summer for Bill operating with a CT call, or better still keep an ear open for a "CQ RSARS" from Andorra. Nothing fixed yet, but we hope Bill will keep us informed. By the way, Bill, how about a write-up on your travels?

That E.R. Chilvers, BRS 26222 of 1 Grove Road, Lydney, Glos. GL15 5JE is the QSL Manager for the following stations : MP4TCE, VP8FL, VP8KO, VP8JH. VP8JQ, VP8JI, VP8JG, VP8JW, VP8KN, G3JOC, GB2DX. BRS 26222 is also the QSL Manager for the I.S.W.L.

FURTHER ADVENTURES OF THE POOR SIDEBANDER.

G5YN

The VACKAR VFO described in the Autumn issue of "Mercury" has proved a great success and many good sideband QSOs have been enjoyed on 21 Mhz. The majority of these QSOs have been with South America and have been obtained as a result of CQ calls. This is quite logical, as there are many active stations in that continent and propagation in that direction has, at the time of writing, been good. A few QSOs have been obtained by calling other stations when their frequency was close to that on which the VFO-SB 10U-Linear Amplifier-ATU complex was set up so that only a small change in frequency was necessary to "net" the VFO.

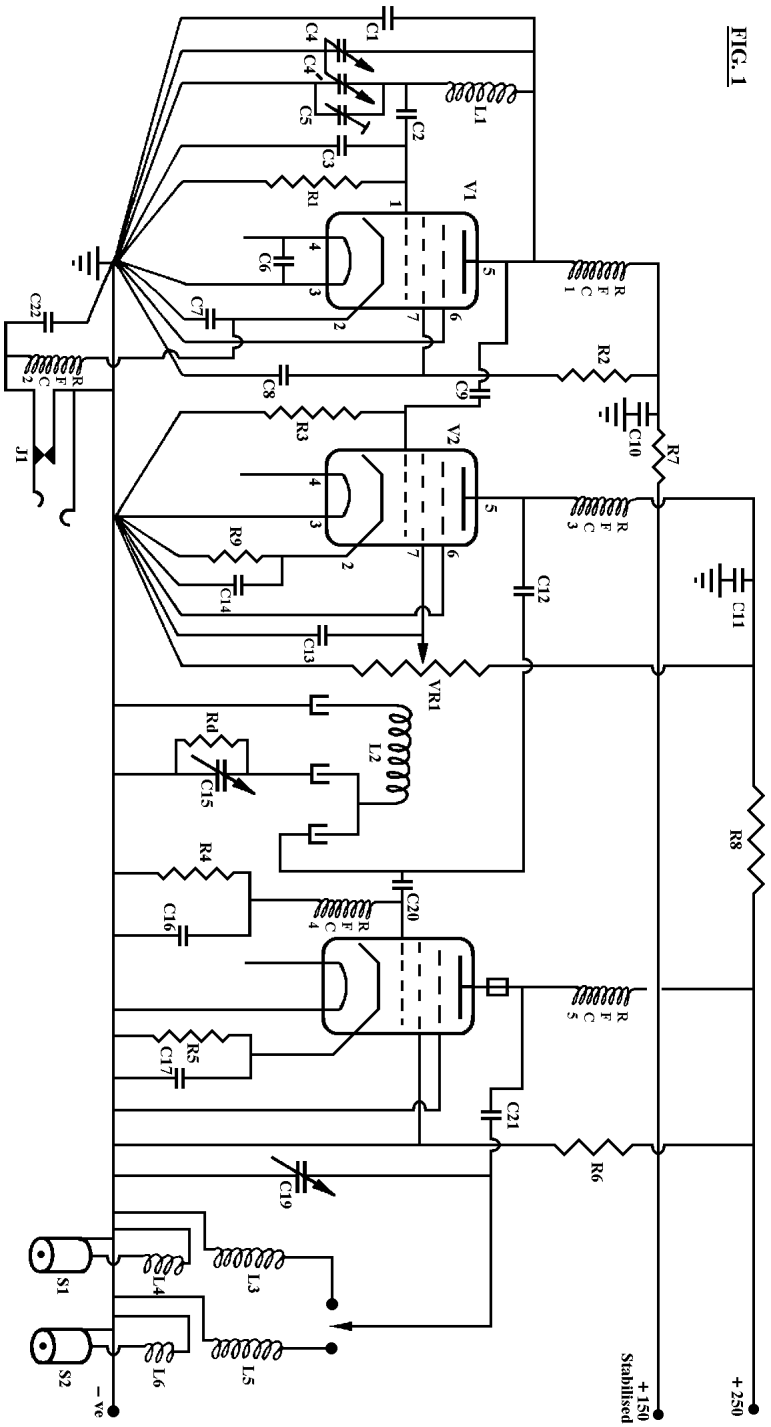
The frequency stability of the VFO has proved very good. During the total warm-up period, which is no more than 20 minutes, the change in frequency is not more than -500 Hz on the fundamental, -1·5 Khz on 21 Mhz. Flushed with this success the major shortcoming of my old 3·5 Mhz VFO, several Khz frequency shift during the half hour warm-up period, seemed intolerable. Further, I considered that I should equip myself for sideband on Top Band and 7 Mhz. As you are aware, the SB 10U does not provide output on Top Band. However, this problem is neatly solved by a mixer/amplifier described in "Technical Topics" in the Sept 1966 issue of the Short Wave Magazine.

It was, therefore, decided that the new VACKAR VFO should have output on 3·5 and 7 Mhz and that the oscillator should operate on Top Band. Reference was, therefore, again made to the article in the March 1964 issue of the RSGB Bulletin. The circuitry of Fig. 7 on page 157 and the values given in Table 2 were followed almost exactly. The main exception was that the only tuning condenser avai1able in my spares box suitable for use in the oscillator section was a 146 + 146 pfd split stator condenser, made by Cardwell, 4-3/4 inches long including spindle and assembled on 1-3/8 inch square ceramic end plates. Rather than parallel the sections it was decided to use them in the split-stator configuration as on page 159 of the Bulletin article - see Fig. 11 of that article. A three valve circuit is employed, see Fig.1. A 6AM6 is used as the VACKAR oscillator, a second 6AM6 is used as a buffer/doubler and a 5763 as a doubler/output stage. When output on 3·5 Mhz is required the second stage is untuned having an RF choke as a load. To obtain 7 Mhz output a coil is plugged in tuned to 3·5 Mhz.

The tuning condensers for the second and output stages come from a BC 610 plug-in tuning unit. The oscillator coil is wound on a 1-inch diameter paxolin former, stripped of its original winding, taken from the same source. The second stage three pin plug-in coil and its socket are marked "24KA76 5305 KC/s/ANTENNA." The equipment from which it came is not known. The two coils for the output stage came from the harmonic amplifier stages of an RAF VHF Tx similar to the SCR 522 but working on a lower frequency band. Some rough calculations were made with the aid of the RSGB Radio Data Reference Book, page 9. Redrawing the L/C part of the oscillator and making the necessary calculations of condensers in series and parallel it appeared that the minimum capacity across the coil, assuming 15 pfd for the minimum value of C4 in parallel with trimmer C5, would be about 278 pfd. This required an inductance about 24 μH to resonate at 2 Mhz. This required 34 turns of 24 swg which occupied the 1-inch winding length on the 1-inch diameter former. I only had 26 swg so I wound on 32 turns of this which occupied about 0·7 inch winding length for the same inductance. This, however, would not tune down to 1·75 Mhz with the capacity available. I therefore wound the former full of 26 swg and removed turns till, with the variable condenser full in and the trimmer at half capacity, the required frequency was obtained. This came out at 32 turns. My original calculations were not far out!. The full tuning range came out at 1·75 to 1·94 Mhz, this, when doubled, more than covers 3·5 to 3·8 Mhz.

The VFO was constructed in a rather old-fashioned way on an 11" x 6" x 2½" chassis with a 12" x 7" panel. Two transverse screens were fitted below the chassis to separate the three stages. At this point it is of interest to note that the only items which had to be purchased were the chassis, panel

FIG. 1


C1
C4
C4'
C5
L1
C2
C3
R1
V1
C6
C7
C22
C8
C9
R2
C10
R7
R3
V2
R9
C14
C13
VR1
C12
C11
Rd
L2
C15
R4
C16
C20
R5
C17
C21
R6
R8
C19
S1
S2
L4
L6
L3
L5
J1
– ve
+ 150 Stabilised
+ 250

and screens from Smiths of Edgware Road at £1-1-10, seven 0·01 μfd disc ceramic fixed condensers at 8d each and a B9A socket and screen for the 5763 at 1s 6d.

When the mechanical construction work was finished each stage was wired and tested in turn. Apart from the adjustment of the oscillator coil the only other major adjustment was that of RF voltage levels. It was found that the output of the oscillator was far higher than was necessary to drive the buffer to the output needed to drive the output stage. Believing that the lower the level at which an oscillator runs the more stable it is, the output was reduced by lowering the HT. When the required output was obtained, 2·5 volts RMS at the grid of V2 through a 100 pfd coupling capacitor, the HT had been reduced to 40 volts by making the decoupling resistor R7, 60 Kohms.

This, however, did not work out as expected. When I endeavoured to call in on my usual Sunday morning Net I met with no response but I heard one member remark that a frightful unintelligible noise spreading over 10 Khz was coming up at intervals. Later a CQ call raised one of my usual contacts who told me that there was terrific FM and that he could only resolve me with difficulty with his receiver adjusted for AM reception. This trouble was cured by restoring the full HT supply, a 5 Kohm decoupling resistor gave 140 volts HT from the 150 volts stabilised supply, and reducing the coupling capacitor to 5 pfd as shown.

It is true that the strength of oscillation should be held down so as to avoid the production of excessive harmonics if a stable oscillator is required. This, however, must be achieved by controlling feedback. This is effected by circuitry and component values in such circuits as this and the Clapp, Series Colpitts, oscillators.

An output of 1 Watt in 75 ohms was given by V3 when acting as a doubler when driven by 15 volts RMS at its grid. To produce the correct gain in V2 when acting as an untuned Buffer the screen voltage had to be set to 140 volts by VR1. When the tuned circuit was plugged in so that V2 was acting as a tuned doubler its screen voltage had to be reduced to 40 volts to produce the same gain. This was a nuisance as also was the fact that the tuning was very sharp. Various values of damping resistor were therefore connected across the tuned circuit so that with the same screen voltage the same output was obtained. 20 Kohms produced the correct result. This also had the effect of flattening the tuning so that retuning is not necessary when changing frequency within the limits of one band.

Coils L3 and L5 are changed with a wander plug. Although crude it is simple and works and saves buying a switch, which I did not have, as well as the work of mounting it.

Any temptation to use up old stacked mica condensers in moulded cases as C1, C2 or C3 in the frequency determining circuit must be absolutely resisted. They are not stable enough. I used one at first as C1. The result was a peculiar form of instability in which the frequency jumped back and forth about 1 Khz around the mean value in an irregular way. This, as can be imagined, called forth rude comments from the Net. Fitting a proper silver mica capacitor cured the trouble. Only the highest grade silver mica capacitors must be used in this part of the circuit. The stability of the oscillator is entirely dependent upon them.

Having stabilised myself on 80 metres I next tackled the Top Band convertor. This proved a most interesting exercise. It was basically the SWM circuit. The important modification was the addition of the wide band coupler. The original circuit shows the right hand side of C7, Fig. 2 connected direct to the control grid of V2. At the anode of a mixer you get the two original frequencies (7 and 5·2 Mhz), their sum (12·2 Mhz) and their difference (1·8 Mhz), (and probably some other horrors, as well!). These would all be amplified by V2 and because no practical valve amplifier is 100% linear all their many sum and difference frequencies would also appear. There would only be one tuned circuit to attenuate the unwanted frequencies. Its loaded "Q" would be low and therefore appreciable power could be radiated outside the amateur bands.

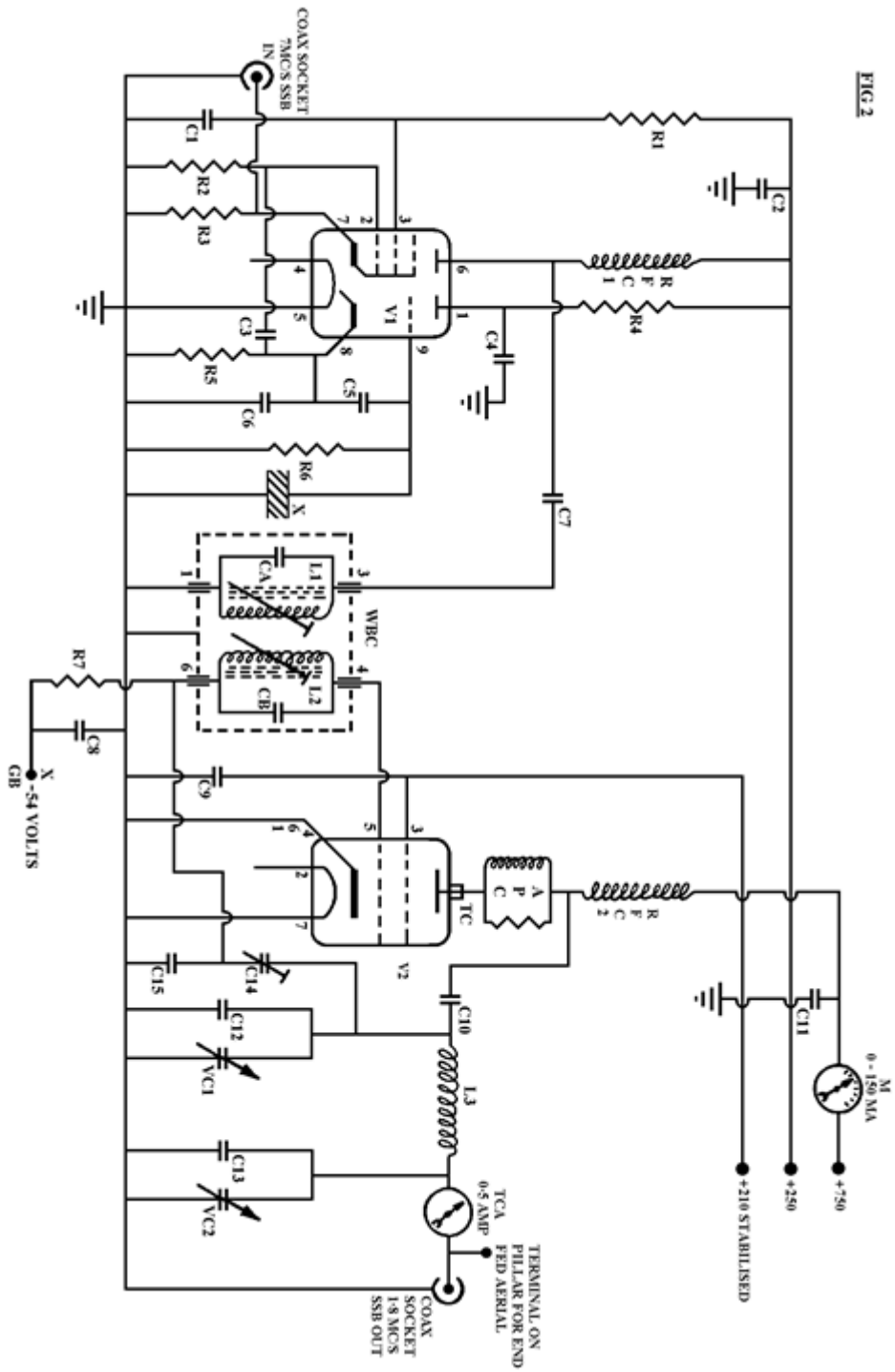

COAX SOCKET 7MCS SSB IN
C1
R1
R2
R3
C2
V1
RFC1
R4
C3
C4
R5
C5
C6
R6
X
C7
CA
L1
WBC
L2
CB
R7
C8
X
GB
-54 VOLTS
C9
V2
APC
TC
RFC2
C15
C14
C12
VC1
C10
L3
C13
VC2
TCA
0-5 AMP
TERMINAL ON PILLAR FOR END FED AERIAL
COAX SOCKET 1-8 MCS SSB OUT
C11
M
0 - 150 MA
+210 STABILISED
+250
+750

FIG 2

I therefore decided that I must have a tuned circuit in the anode circuit of the mixer. This would attenuate the unwanted frequencies and also increase the conversion gain and make a higher voltage at the wanted frequency available to drive V2. Not wanting the bother of another variable tuned circuit I ordered from KW Electronics a wide band coupler as used in the KW One-Sixty transmitter.

The size and layout of the chassis was determined by the components I proposed to use, in particular, L3. This was wound with 18 turns of 16 swg copper wire, 4-1/4 inches in diameter and 2-1/2 inches long. The turns, spaced roughly one wire diameter by eye, were wound by hand, using a "Bath Oliver" biscuit tin as a former, on four strips of celluloid. They were stuck in place with liberal quantities of celluloid cement and the tin then bashed out. It dates from about 1930 and has an unloaded "Q" of over 200. SWM specify 365 pfd for VC1. The best I could do was a 100 + 100 pfd split stator with the two sections in parallel. This is a Cornell Dubilier 100 pfd, 3 KV working rated at 2 Amps at 3 Mhz. For VC2 a 3 x 500 pfd capacitor was suggested. I only had a 2 x 500 pfd split stator capacitor so I connected C13 in parallel. This is a veteran baseboard mounting TCC 0·001 μfd stacked mica capacitor in a green bakelite case.

Having decided on the location of each component I marked and drilled the chassis. I then mounted and wired up the crystal, ECF 82, the wide band coupler, and the associated small components. On applying LT and 250 volts HT I found that the crystal was oscillating merrily and that there was 1·5 volts RF at the control grid of the pentode section of V1. This seemed a bit mean so I increased the value of C5 from 22 pfd as specified in SWM to 50 pfd which gave 3 volts. I subsequently changed the value of C6 from 250 pfd to 150 pfd and R4 from 10 Kohms to 6·8 Kohms to increase the drive to 4 volts. I found that low drive at the control grid of the pentode section of V1 restricted the 1·8 Mhz output. The 4 volts drive enabled ample output to be obtained to drive the 6146 linear amplifier.

I then applied 7 Mhz drive from the VFO to the cathode of the pentode section of V1 and was relieved to find that 1·8 Mhz output was appearing across the wide band coupler. I had a little difficulty at first in tuning this up, and eventually found that the best technique was to screw both cores full out, then peak them together at 1·9 Mhz. The VFO was then tuned to give 2 Mhz from the mixer and one core was repeaked at this frequency, the other core was then repeaked at 1·8 Mhz. The output, was now level enough across the whole band.

I now wired up the linear amplifier, at first without the neutralising components C14, C15 and R7. To begin with I applied 270 volts to the anode and 150 volts stabilised to the screen of V2 and adjusted the grid bias for 25 ma standing current. The crystal was not plugged in. All was stable - nothing violent happened. The convertor was then moved to its operating position, provided with 250 volts HT to V1, 550 volts to the anode and 190 volts stabilised (VR 105/30 + VR 75/30) to the screen of V2, the crystal plugged in and drive applied from the VFO. A 60 watt bulb was connected to the output. This has a resistance of about 60 ohms cold and 960 ohms on full load. The output of this linear is not sufficient fully to load this bulb so the resistance of the bulb should lie within the range of adjustment of the "pi" coupler. Grid bias had again been adjusted for 25 ma standing current. As drive from the VFO was increased, plate current increased steadily. The tuning and loading capacitors were adjusted, bulb brightness increased and the horizontal line on the monitor 'scope became a nice wide band.

The SB 10U was then introduced to the scheme and the application of audio drive, 1,200 Hertz sine wave, again produced proper output. A two tone test was then applied and drive, tuning and loading adjusted for the biggest undistorted figure on the 'scope. At this stage it was found that when the SB 10U was turned off the linear stage oscillated. A sheet of aluminium was then held at x --- x (Fig. 3). Stability was restored. Each component, crystal, ECF 82 and wide band coupler was then screened alone in turn with a small piece of aluminium. It was found that the crystal was

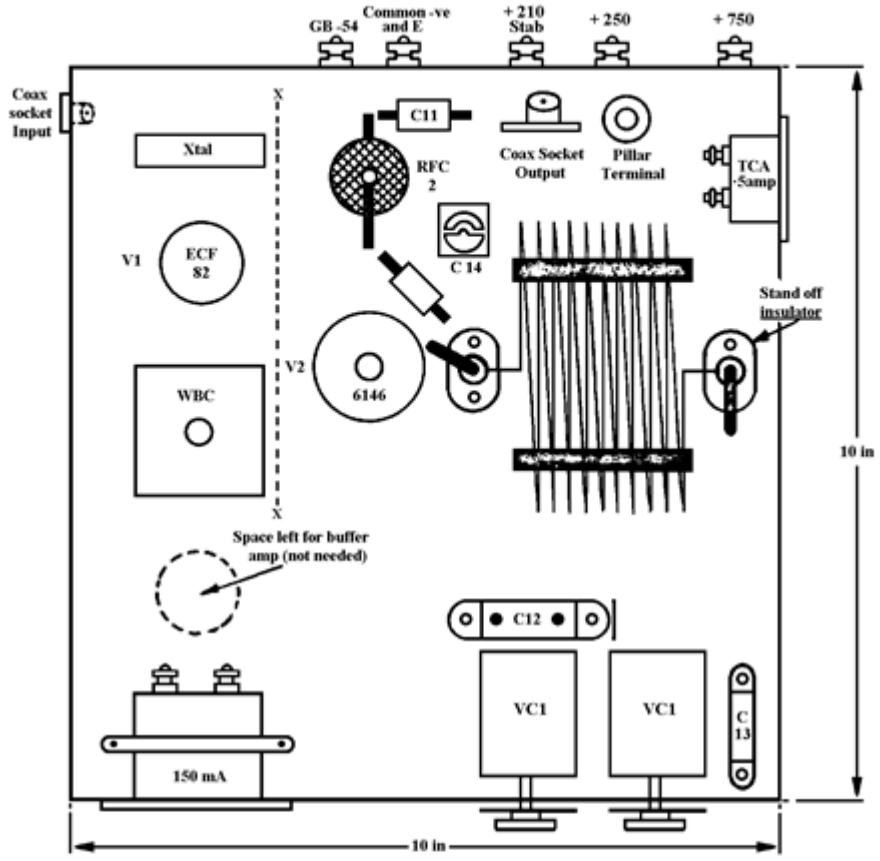


FIG 3

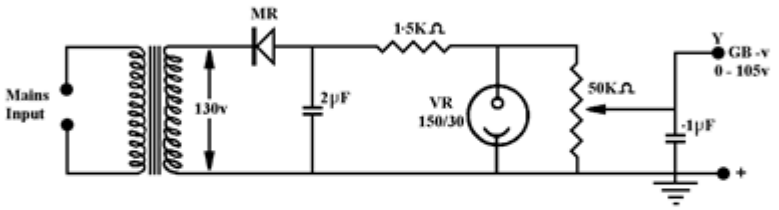


FIG 4

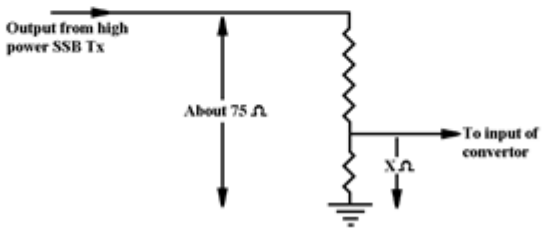


FIG 5

Component List - Fig. 1.

C1	556 pfd silver mica
C2	4700 pfd silver mica
C3	556 pfd silver mica
C4 C4'	146 + 146 pfd Cardwell
C5	3 - 30 pfd Phillips trimmer
C6	0·01 µfd disc ceramic
C7	0·01 µfd disc ceramic
C8	0·01 µfd disc ceramic
C9	5 pfd ceramic
C10	0·01 µfd disc ceramic
C11	0·01 µfd disc ceramic
C12	0·0005 µfd mica
C13	0·01 µfd disc ceramic
C14	0·01 µfd disc ceramic
C15	100 pfd variable
C16	0·001 µfd disc ceramic
C17	0·005 µfd mica
C18	0·01 µfd disc ceramic
C19	100 pfd variable
C20	0·0005 µfd mica
C21	0·001 µfd disc ceramic
L1	24 µh 33 turns 26swg 1" dia 0·7" winding length
L2	Tunes to 3·5 Mhz
L3	Tunes to 3·5 Mhz
L4	3 turn link
L5	Tunes to 7 Mhz
L6	2 turn link
R1	5 Kohms
R2	33 Kohms
R3	100 Kohms
R4	75 Kohms
R5	100 Ohms
R6	15 Kohms
R7	5 Kohms
R8	1 Kohms
R9	220 Ohms
Rd	20 Kohms damping resistance
VR1	40 Kohms wire wound
J1	Closed circuit jack
S1 S2	Belling-Lee co-axial sockets

Component List - Fig. 2.

C1	0·01 µfd disc ceramic
C2	0·01 µfd disc ceramic
C3	100 pfd mica
C4	0·01 µfd disc ceramic
C5	50 pfd mica
C6	150 pfd mica
C7	100 pfd mica
C8	0·01 µfd disc ceramic
C9	0·01 µfd disc ceramic
C10	0·001 µfd 2,500 volts wkg mica
C11	0·001 µfd 2,500 volts wkg mica
C12	100 pfd 3,000 volts wkg 2 amps at 3 Mhz
C13	0·001 µfd mica 250 volts wkg
C14	15 pfd air trimmer Eddystone
C15	0·001 µfd mica
VC1	2 x 100 pfd split stator (connected in parallel)
VC2	2 x 500 pfd split stator (connected in parallel)
V1	ECF 82
V2	6146
M	150 ma meter
TCA	0·5 Amp thermo-couple meter
X	5·2 Mhz crystal (mine is actually 5·263 Mhz)
WBC	KW Electronics Top Band wide band coupler
R1	27 Kohms
R2	100 Kohms
R3	100 Ohms
R4	6·8 Kohms
R5	1 Kohm
R6	27 Kohms
R7	1·2 Kohms

the culprit. It was wrapped in aluminium foil which was connected to the earthy pin and all was well. HT to the linear was increased to 750 volts on the anode and 210 volts on the screen (two VR 105/30's) and final adjustments made to the wide band coupler. These adjustments were made with no HT on V2 anode and screen and the grid bias reduced until grid current just started. An 0·5 ma meter was temporarily inserted between point "X" (Fig. 2) and point "Y" (Fig. 4).

With the full HT and the wide band coupler properly adjusted instability was again apparent when the SB 10U was switched off. It did not appear to affect the shape of the two tone test figure or the purity of the speech. It did, however, block the receiver with a rude growling noise unless the HT power pack for V2 was switched off. Screening was ineffective. The neutralising components C14, C15 and R7 were, therefore, added. The arrangement was cribbed direct from the circuit of the KW One-Sixty transmitter. The main difference is that I have made C14 variable and C15 fixed instead of vice versa.

On completion of the converter one evening about midnight the converter was loaded into the aerial, a "CQ" call put out and a reply obtained from Manchester with a report of R5 S8. A subsequent "sked" with a local station, G2FIX, at 7 miles confirmed that speech was clean and that there were no spurious emissions within the band. A subsequent long QSO with G2AUD in Buckinghamshire produced a most enthusiastic report as to quality. This reflects not only the linearity of the converter but also the high quality of the output of the SB 10U. I have the greatest affection for this piece of gear which has now joined the ranks of those pieces of equipment which I regard as "Old Faithfuls".

Although in my own case I specifically designed this converter to operate in conjunction with my SB 10U there is no reason why it should not be used with any SSB transmitter which, while not having a 1·8 to 2·0 Mhz range, has output on 7 Mhz. There is one very important point which must be catered for. Even though the output of the SB 10U is only about one watt, the whole of even this small output is not required to drive the converter fully. Where a complete transmitter is used, a 75 ohms non-inductive resistor capable of dissipating the average output of the transmitter must be connected across its output. The input to the converter must then be tapped across sufficient of the resistor or across a separate small resistor connected in series with the main load resistor, to tap off the two or three volts necessary for full output see Fig. 5. For a 25 watt output SSB transmitter "X" will be about 6 ohms (not more), for 100 watts output, 2·6 ohms, for 200 watts about 1·8 ohms, for 500 watts about 1·16 ohms, and so on. This point is made because there are undoubtedly many more complete SSB transmitters in use which do not have output on Top Band than SB 10U Sideband Generators.

SSB, for long popular and effective on the HF bands, is now increasing in popularity on Top Band. Noise and congestion on this Band at night are increasing severely. This mode, with its lack of wasteful and QRM-producing carrier, reduced bandwidth and increased power available where it is wanted - in the sidebands -is enabling DX telephony QSOs to be enjoyed once more. CW, the ultimate in SSB, is, of course, still the most effective, but SSB is still not far behind.

G5YN.

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DID YOU KNOW.....?

That you can qualify for the SHIZUOKA AWARD by working (or hearing) JA stations as follows : Class I - QSOs with 2 members of the Shizuoka Amateur Radio Club, Class II - QSOs with 5 stations in the Shizuoka Prefecture including at least 2 members of the Club. QSLs, 6 IRC and List to : S.A.R.C., P.O. Box 153, SHIZUOKA, Shizuoka City 420-91, Japan.

THIS ISSUES CATALOGUE

This issues catalogue arrived at HQ via the post. From the start it strikes one as "different". Not only does it contain a lot of colour but also a lot of mouth-watering equipment. It is LASKY'S AUDIO-TRONICS 1970 Catalogue issued by LASKY'S who have five well-known branches in London, 207 Edgware Road, 33 Tottenham Court Road, 152/3 Fleet Street, 42-45 Tottenham Court Road (High Fidelity Audio centre) and 118 Edgware Road (also an Audio Centre). Home shoppers should note that all MAIL ORDERS MUST GO TO : 3-15 CAVELL STREET, TOWER HAMLETS, LONDON, E 1. But on to the catalogue. The front page (in colour) shows some of the items supplied by LASKY'S in use, including tape recorders, turntables, a ham rig, test gear, kits, and transistor radios. Perhaps the thing that catches the eye most is a 50/- voucher, valid during the month of August 1970 when used with orders of £29-0-0 or over on goods shown on pages 6,7,8,9,13,14,15,16,17 & 18 (This includes microphones, test gear, tuners and amplifiers, turntables, microphones and speakers). Over the page and we see a wonderful collection of tape recorders from several ranges, Phillips, Ampex, Sanyo, Fantavox, Sony and Akai. Included in the later range is the fabulous Akai M-9 complete with cross-field head. Even in the Far East these are in the higher price range but although the list price in U.K. was £195, LASKY'S offer same for £159. And by the way, if you purchase a Sony cassette recorder from LASKY'S you get a £4-10-0 wrist watch FREE!. The next pages cover recorder accessories such as demagnetisers, splicing kits, head cleaners, connectors, etc. On the next page no fewer than 26 different types of microphones are displayed together with PA amplifiers up to 50 watts. Meters come next ranging from the well-known AVO Model 8 Mk III to TMK meter kits. At the bottom of the page is an interesting Model SE-405 SWR meter by Sansei. Works from 1 to 150 Mhz with an insertion loss within 0·2 db. 0K for 1 KW 'phone or 2 KW PEP. Also included is the TE-15 grid dip meter, 44 Khz to 280 Mhz. Interested in the latest Garrard record players. Turn to pages 10 and 11. These pages also include stylus cleaner, cartridges etc. These are followed by more players by Thorens, Phillips etc and even a FB tuner/amplifier unit from Denmark. The centre pages, again in colour, show various "Package Deals" i.e. Trio KA-2000 16 + 16 watts stereo amplifier, 2 KEF Celeste speaker systems, Garrard SP25 Mk II 4-speed single play deck, Garrard WB1 base for the deck, also SPC1 cover, and Audio Technica AT66 stereo mag.cartridge - all for £123-4-3. The second half of the catalogue starts with more audio gear including the new 1 Micron head Akai 4000D tape recorder and a Leak HI-FI amplifier. Speakers and headphones fill two complete pages next, but perhaps the most interesting items are over on pages 20 and 21. These show an extensive range of TRIO "Ham" gear including the TS-510 transceiver, the VFO-5D, the PS-510 power supply unit, the JR-310 "Ham" band receiver, the 9R-59DE receiver, and the JR-500SE. Exclusive to LASKY'S is the Skyrover Mk II SW and AM receiver at only £13-10-0. Lafayette is represented by their 5 band AM/CW/SSB amateur receiver, and TTC offer a range of accessories which include field strength meters, SWR meters, semi-automatic bug keys and antenna selectors. The smaller items are not forgotten and pages 22 to 23 show a host of small parts including transistors, capacitors, plugs, sockets, knobs, transformers, batteries, lubricants, cables, wires - even wire strippers. Transistor radio follow next and an extensive range is offered including one incorporating a digital clock. Want to get into the IC line? LASKY'S offer such items as the 5 watt integrated monolithic circuit amplifier and pre-amplifier for only 59/6. Size ? - 1" x 0·4" x 0·2"!! Want a good watch? - LASKY'S offer an electronic wrist watch lasting about 1 year on each minute battery! Or if you prefer portable television, there's one on the back page for only £85. Only a few of the items shown have been mentioned, but if you really want a first-class catalogue and don't have this latest issue - drop a line to LASKY'S.

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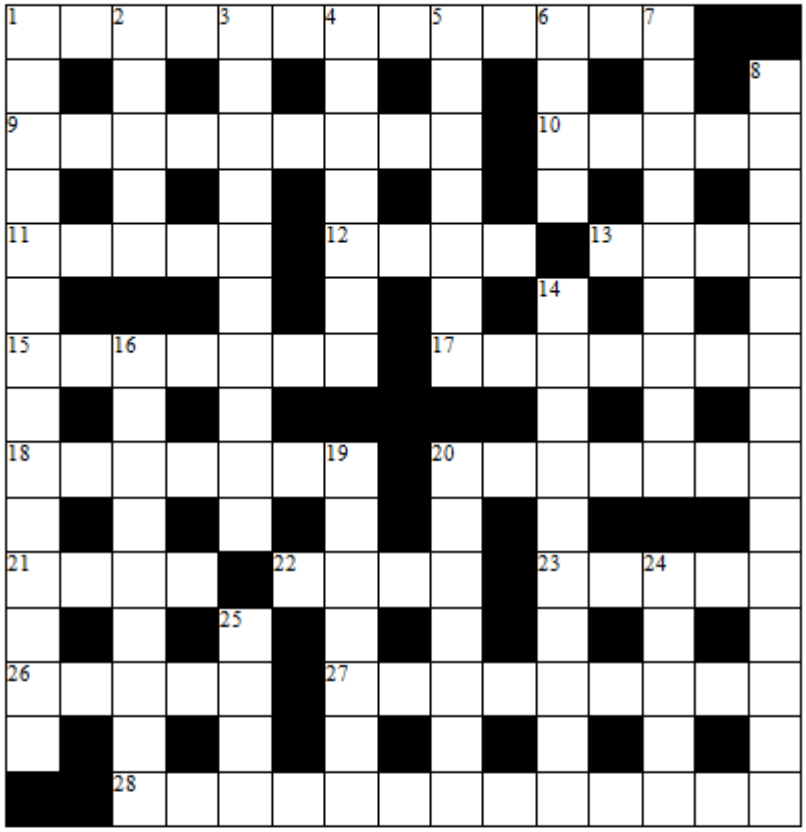
NETWORDS No. 3. Tony Teasa

(As no-one wrote him any rude letters about Networds No. 2, Tony has once again produced another Networds. He hopes that you will find it interesting - Ed.)



CLUES ACROSS

1. Traditionally the home of the military. Here dwells the scribe who issues the scrolls and tablets.(9-4).
9. Left uncared for. (9)
10. Concise. Eleven itself eleven. (5)
11. Do this to a relay, do it to trees. (5)
12. A horny growth. If you see the point hammer it home. (4)
13. The shaky CW operator is sometimes advised to use the other one, (4)
15. One would expect to get other that back-chat from this. (3-4)
17. This impediment would play havoc with the VOX. (7)
18. The vertical fitted with these will run rings around the one without. (7)
20. He is to be found in a northern sea-side town. What happened to Pip and Squeak. (7)
21. The first of the two-ton-up boys?. (4)
22. Cause to be suspended. (4)
23. He sets his sights firmly on the target. (5)
26. Gnaw away. (5)
27. Should the 4X4 from here adopt a "holier than thou" attitude? (9)

Clues across - Contd.

28. Paradoxically, some of them should lead South. (8-5)

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CLUES DOWN

1. Persistent breakers constitute a …….. …….. (7)
2. You should find a CT1 on this river. (5)
3. The kind of energy that keeps the Net ticking. (10)
4. Existing in high degree. The chap who is this evidently favours decimation. (7)
5. Somebody's harmonics. (7)
6. Diligent workers who are at their best when high. (4)
7. One who takes part, or a part. (9)
8. Sprint teams (Retd). Sounds like it (Anagram). (3-5-6).
14. Sounds like Mark Anthony starting a Met report to his Lord and Master. (4-6)
16. Should not the DL member from near here have been numbered RSARS 57?
19. From this torrid zone comes a ray of sunshine. Particularly on 21,380. (7)
20. He's prepared to back his hunches. (7)
24. Harry's perfectly happy here, but it once made George cross. (5)
25. Sometimes found in the Polar regions. (4)

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DID YOU KNOW…….?

That member G3OOD may be heard around 3,778kHz, 1000 GMT on Sundays, with, GEHWL, G8PV, G3VIE etc., on the ex-VQ4/5Z4 Net. All ex-VQ4/5Z4 (and other East African areas) are invited to call in.

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QUICK QUIZ

This issue we move over the boarder into Canada. The numbered list shows the Provinces or Territorial Government. Can you match them up?

(1) Newfoundland, (2) Prince Edward Island, (3) Nova Scotia, (4) New Brunswick, (5) Quebec, (6) Ontario, (7) Manitoba, (8) Saskatchewan, (9) Alberta, (10) British Columbia, (11) Yukon Territory, (12) North-West Territories.

(a) Toronto, (b) Halifax, (c) Edmonton, (d) Ottawa, (e) Fredericton, (f) Charlottetown, (g) Regina, (h) Whitehorse, (j) Quebec, (k) Winnipeg, (l) Victoria, (m) St. Johns.

(For VE members only ; Give the largest Incorporated City and state which one(s) has/have/had over One Million population according to the 1961 Census AS WELL)

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THE LF NET

The LF Net is as popular as ever with more and more stations checking in. A Net QSY is in the offing due to persistent QRM around 3780. The new frequency will be announced on the Net and in "Mercury" when this is decided. A comment by a non-member prompts a suggestion. "The netting on the RSARS Net doesn't say much for Royal Signals! (!!!). Please check that IRT control when zero-beating. IRT should be OFF or at zero when setting up. Oh, and one more thing, please DON'T load up on the Net frequency - it causes QRM!!!

WELCOME * WELCOME * WELCOME*

Once again, we bid a very hearty welcome to the following new members.

641 G3IAR Mike Crowther-Watson, Highfield House, West Kingsdown, Kent. Mike, who was a S/Sgt with REME also operated under the call ZB1AR. Saw the Army between 1944 and 1952. Otherwise known as 14857598.

642 G3XWI Ernest Tredgold, 17 New Windsor Drive, Rothwell, Leeds, Yorks. Joined Royal Signals on 15th November 1945 and served until September 1948 part of the time in Cyprus. Re-enlisted in August 1950 as a volunteer, serving until February 1952. Held the trade of Operator Special but served in Korea as an OWL.

643, G2DHV George V. Haylock, 28 Longlands Road, Sidcup, Kent. George has long been well-known in the Amateur world both on and off the air. Not satisfied with raking in the DX around Sidcup, George has held (according to his application form) such calls as PA9DHV, ON8IR, DJ0AA, G3HEV, F0KI, 3A2CK, etc. George saw service with Royal Signals as 6018525 from 1939 - 1946 and in such Units as GHQ Signals 8th Army CMF/MEF, "J" Service (S.I.S.) CMF, 12 L of C Signals CMF, 56 (London) Div Signals CMF/MEF, also 169 Infantry Brigade attached to The Essex Regiment. George spent his time working as an Operator Wireless and Line B II, Operator Keyboard and Wireless A III, and Radio Mechanic A III.

644 ----- Capt. Leslie B. Bagley, Tor White, Granville Road, St. Margarets Bay, Dover, Kent. Les was introduced to the R.S.A.R.S. by Member No. 502. In common with many other members with similar membership qualifications, Les merely states "SCU 3 Special Branch" and "Queens Regiment" on his application form. Welcome, Les.

645 ----- Major Edward G. Wood, 17 Rigault Road, London, S.W.6. Another member introduction - this time by member No.- 630. Edward's application form makes interesting reading and is reproduced below : Joined Royal Corps of Signals 1924. Trained Crowborough and Maresfield. Posted 3 Div Sigs Bulford (with Pack Sections). 1926 Posted to India - Jubbulpore - Rawalpindi. "B" Corps Signals. Operator Murree and VV Group. Instructor, Northern Command Signal School, Upper Topa.- 1930 Returned to U.K. as CSMI with 49 Div Sigs (TA) Leeds. 1933 Posted to Egypt during emergency (Abyssinia and Italy trouble). Moved on to Palestine for emergency. 1936 Returned to U.K. 4th Div at Canterbury and re-posted to India.- "B" Corps Signals at Rawalpindi - did all trials on No. 3 Set. 1938 Posted to Ceylon as RSMI Ceylon Defence Force. 1939 Commissioned - Adjt. - Peshawar District Signals. 2 i/c 19 Indian Div Signals. 2 i/c - 208 L of C, C.O. - 208 L of C. Staff Officer STC Bangalore. 1946 Returned to U.K. Posted to Germany with Air Formation Signals. 1948 - Demobbed.

646 G3JIY George L. Treece of 56 Grasmere Crescent, Sinfin, Derby, DE2 9HT was introduced by C. Drinkwater member No. 484. George also says little on his application form, just : 1931 -- T.A., Royal Signals (2567683) -- 1946. It is felt that this small statement hides a big story or two! Welcome, to you, George.

647 G3WEB George W. Gardiner, 11 Langdale Avenue, Ramsgate, Kent. George was 22136171 to Royal Signals and visited Catterick in May 1949 for a Wireless Operator Course and during 1950 and 1951 was in the Muenchen Gladbach and Iserlohn areas of Germany.

648 G3KJW Patrick Allely, 54 Fountains Road, Cheadle Hulme, Cheshire. Patrick served in Royal Signals but does not say too much about when or where. The fact that he has also held 5A4TZ might indicate a while spent in the North African sun!.

649 W3RX William L. May, 9312 E. Parkhill Drive, Bethesda, Maryland, 20014, U.S.A. Bill was elected an Honorary Life Member of the R.S.A.R.S. at the Annual General Meeting of the Society in recognition of the wonderful work he did to assist the VS5RCS trip. Bill retired five years ago after 31 years of R & D of Electronics gear for Nava1 aircraft. Bill as well as wearing a Naval uniform donned Air Force Blue for four years, and was based at Pearl Harbour (Sri, Harbor!), but spent most of this time on Pacific Islands. Welcome, Bill, we are pleased to have your wealth of experience with us.

650 W5VA T. Frank Smith, Post Office Box 840, Corpus Christi, Texas, U.S.A., Frank was elected to Honorary Life Membership at the same time as Bill - this was in recognition of the large amount of time, money and experienced help that Frank gave to VS5JC. Frank is no newcomer to the radio game, either amateur or commercial. This year marks the 50th anniversary of his first "Ham" license, and during this time he has held, or still holds, every class of licence authorised in the U.S., both commercial and amateur. Still actively engaged in commercial TV, he also holds the call W5IA.

651 ----- Mrs Ivy Cooper, 15 Valley Road, Blandford Camp, Bandford Forum, Dorset. The long suffering XYL of the Editor cum General Secretary. Elected to Honorary Life Membership of the Society.

652 G3RVO Capt. Stuart G. Thain, 36 Dovedale Avenue, Clayhall, Ilford, Essex. Stuart bumped into the Society at the Exhibition and also shows an interesting list of service connections. Catterick 1931 - Aldershot ('A' Corps Sigs) - India, Kohat District Signals, N.WF.P. - Poona - Rawalpindi - Command Signals, Aldershot - F of S, 9 Armd Div, 1941 - F of S, 1 Armd Div. - T.M.O., 10 Army Sigs, Persia - T.M.O., 33 Corps Sigs, India - T.M.O. 33 Corps Sigs, Burma - T.O.T. TA Sigs - Capt. 61 HQ TA. - Capt Eastern Command Sigs - Retired 1957.

653 ----- William C. Livens, 1 Victoria Road, Broad Lane, Tottenham, London, N.15. Bill does not tell us too much on his membership application form, except previous service in Roya1 Signals. He also held the AA call 2CKB.

654 G5FA Percy R. Solder, 35 Torrington Gardens, New Southgate, London, N.11. Percy saw service with S.C.U. which makes part of a large R.S.A.R.S. section with this service connection.

655 G3FWR Sidney A. Morley, 22 Old Farleigh Road, Selsdon, South Croydon, CRl 8PB. Sid mentions just the following on his Application form "2601542", "The Farmyard, April 1942", "Barnet to July '46". - sufficient for many of our members to realise his service connections. Sid also holds the call G3SRC, on behalf of the Surrey Radio Contact Club.

656 G4BU Richard H. Draper, 20 Prior Street, Lincoln. Richard has similar service connections to Sid (655) above. Welcome, Richard, and hope to hear a lot from you there in Lincoln.

657 G8CIA Geoffrey Austin, 38 Willow Crescent - but we don't know where!. As mentioned in the last "Flash" Geoffrey did not complete his address on the application form. However, we do know that Geoff served in Royal Signals from January 1950 until January 1952 including being stationed at 1st Training Regiment at Catterick and HQ BAOR Signal Regiment at Herford.

658 ----- John C. Proudfoot, 2A Southey Street, Radford, Nottingham, NG7 4JG. John started his Royal Signals connections at Catterick Camp with 2 Training Regiment in 1950, but before this was with the Royal Army Service Corps from 1947 until 1950. John was also with Beverley Signal Squadron as a Lineman Field, 1st Commonwealth Division Signals at Fort George, Korea, 18 Brigade Signal Squadron in Kuala Lumpur, Malaya, and 22nd Special Air Service Signal Squadron at Sungi Besi, Malaya. Johns number was 21050527 and he is a War pensioner.

659 ----- Capt George Scott, The White House, Milton Abbas, Blandford, Dorset. Another new member with a considerable military history. George starts off by telling us "Enlisted Boy A/T in "F"' Coy, 2nd January 1933. He joined Mans Service on 4th May 1936 where he was mustered as an Instrument Mechanic A. III. - He then became a member of "M" Section, 2 Div. Sigs, at Aldershot on the 18th May 1936. Posting then took him to 3 Section, Palestine Force Signals in October 1937. Started off at Sarafand. When 14 I.B. moved to Nablus, the Section moved also. In May 1940, George joined 3 G.H.Q. for duty at Polygon Wireless Station, Abbassia. It was here that he. met G8KW. Moved to 8th Army Signa1s only to find that G5YN was 2 i/c!. Was employed with 534 Heavy Wireless Section and then detached permanently to South African Army Signals (U.D.F.). Left Libya and Italy in November 1943 on posting to U.K. where he joined 2 War Office Signals for duty with 13 (Multi-channel) Wireless Section. The Unit was disbanded in August 1945, and George was posted to 1 (BR) Corps Signals, for duty with the T.M. Section Instrument Repair Workshop. Then back to U.K., this time to North Devon and the Combined Operations Signal School, working in the Wireless Repair Workshops, Army Wing. This was followed by a move to the T.M. Troop of the Edinburgh Squadron of Scottish Command Signal Regiment at Milton Bridge, Edinburgh. March 1953 saw George on the move again - this time to No. 1 Installation Troop, Royal Signals at Aldershot. The Unit was the last para A.A. Command and the Units role was the recovery of all radio stations in A.A. Ops Rooms throughout U.K.. The next posting, in September 1958, took George to the School of Signals in Wireless Group, Catterick Camp. In February 1961 a move South was afoot and 659 joined 30th Signal Regiment at Blandford (Your Editor remembers this day well - he was Orderly Sergeant at 30th Signal Regt!) George took over T.M. Troop and in March 1963 was commissioned from the Technician Roster when be joined 28 (NATO) Signal Regiment as MT0. The next move was in November 1963 to 239 Signal Squadron which was later amalgamated with 238 Signal Squadron and 605 Signal Troop to form 10th Signal Regiment. Georges role was OC T.M, Troop and Regimental Training Officer. He has now retired and settled at Milton Abbas in Dorset.

660 VQ8CR Raymond J. E. Mills, NP 4321, Admiralty Office. Vacoas, Mauritius. One of our Overseas members this time. Despite the somewhat exotic address Raymond was part of Royal Signals as 19048374 from 7 August 1947 until 27 February 1953. Ray has also held the calls G3LCJ and VQ4IQ, and has already appeared several times on the HF Net.

Tony Donald Bridgman, 26 Saxon Way, Witney, Oxon.. OX8 7ES. Catterick Camp saw Tony from August 1946 until August 1948 when he was at 1 TR first as a trainee Radio Mechanic later becoming 19025400 Sgt Bridgman as an Instructor.

662 G3IES Bruce S. Sutherland, 336 Charlton Road. Westbury-on-Trym, Bristol. Well-known in the Mobile world, Bruce had a varied Service carer, starting with 1st AA Div Sigs between 1937 and 1939, then transferring to Aircrew with RAFVR.

663 G3VA J. Pat Hawker, 37 Dovercourt Road, London, S.E. 22. No doubt every member will have seen Pats name and/or call heading the well-known articles in various magazines. Service connections? - Pat just says, "SCU 1941 - 1946, SCU1 and SCU3 in UK, SCU9 in France, Belgium, Holland and Germany". Regimental number? - 2600077.

664 G3KKI Andrew A.J. Fraser, 8 Duchy Road, Harrogate. Yorkshire. Andy was in Royal Signals Boys Service from 1925 until 1927 and continued in Mans Service from 1927 until 1964. Your Editor served with Andy when he was Lt Col (QM) just before retirement.

665 G3YNT Anthony Stevenson, 19 Johnstone Road. Newent. Gloucestershire. Tony was with the Glosters as 23853863 in the TA and was employed in the Signals Section. Medically discharged in 1961 Tony came into the amateur game via G8AIH before becoming G3YNT.

666 G2CVV Frederick C. Ward, 5 Uplands Avenue, Littleover, Derby, DE3 7GE. Member No. 484 introduced Fred to us and the application form shows another varied Service career. 1939 - 1941 Northamptonshire Regiment (Signals Section), 1941 - 1943 Service with the Royal Air Force, 1943 - 1947 Royal Electrical and Mechanical Engineers.

667 G3GHE Charles M. Nairn, "Taharaa", Whitehouse Road. Woodcote, Reading. Berkshire. R.E.M.E.. also saw Charles from June 1944 to December 1947 where he served as a Sergeant. Introduced by Member No. 344.

668 ----- George Hare, 18/19 Main Road, Leadenham, Lincoln. George may be known to some as BRS 2270 or to our RAFARS Members as No. 216. He served with the C.M.P. as 7683752 CQMS Hare and was mobilised on 1st September 1939 after which he served with 1st Corps Provost, and later (1940 - 1945) with 81 C.M.P. (TC).

669 G3XIP David J. Aspinall, 216 Kineton Green Road, Olten, Solihull. Dave is a L/Cpl with the Signal Section of King Edwards School C.C.F. Birmingham 15. Dave also holds the C.C.F. call 33A and, no doubt, operates the School C.C.F. call, 21B.

670 G3YOYH. Donald L. Clark, 222 Kineton Green Road, Olton, Solihull. Donald is a neighbour of G3XIP and is Sgt i/c Signals Platoon at the King Edwards School. Also associated with C.C.F. call-sign 21B.

671 GI3KVD David M. Jones, 6, Mullagh Place, Limavady, Co. Derry. David joined the Society at the Exhibition in London and his Service connections show "5th Bn Royal Inniskilling Fusiliers (TA)." Other calls held by David include EI9BR, G3KVD and GM3KVD.

672 G3PUW Stanley Pennington, 6 The Limes, Bletchley, Bucks. Stan had quite a while with the C.C.F. from 1946 to 1951. Visited the stand at the Exhibition where Ron, G3VIS got Stan filling in forms, application, RSARS type.

673 ZL2AUI R.S. (Bob) Banks E.D., C/o Post Office. Paihia, Bay of Islands, Northland, New Zealand. Bob was the first NZ member enrolled due to the letter published in "Break In". Bob served with 2 Comm. Z Signals Squadron. Roya1 New Zealand Signals (T.F.). Welcome. Bob, and hope that a lot of your ZL friends can join us. (Don't forget there's a years membership free if you can introduce 10 new members!).

674 VE3CDM Thomas B.J. Atkin, 55 Havenbrook Boulevard, Willowdale 426, Ontario, Canada. Introduced by Peter, GM3PIP. Tom is another new member with a varied career, starting between 1943 to 1947 with R.N.V.R. Combined Operations, followed by a spell (1948 - 1952) with the Hereford Light Infantry (TA) Signals, and then from 1953 until the present time as TB 17167 on the Supplementary Reserve of Officers with the Royal Canadian Signals.

675 ----- W.O.II Frederick George London, M.Q.I., Terandak Garrison, Malacca, Malaya. Fred is, no doubt, enjoying the sunshine at Tarendak as well as the facilities of 9M2RH. His Service connections are extensive - Enlisted 6th January 1938, 2nd Regt. R.H.A. until 1943. Over to 1st R.H.A. during 1943 and 1944. From 1944 until 1955 Fred was with RA OCTU (Deepcut) and M.O.C.S. (Aldershot). From 1950 to 1958 it was back to 1st R.A. followed by a spell during 1958 to 1960 with 94 Loc. RA. 1960 to 1963 it was 40 RA and during 1963 and 1964 A.I.O. Kirkcaldy. Overseas again from 1964 to 1966 with Army Camp Commandant Aden, and 1966 and 1967 was spent with HQ 1 (BR) Corps. 1967 saw the move to Malaya. Where next, Fred?.

676 ----- David R. Sampson, 282 Guiness Trust Buildings, Fulham Palace Road, London, W.6. Introduced by Member No. 108, David is 23849834 L/Cpl Sampson when with Line Troop, 41st Signals (T & AVR) at 140 Hammersmith Road.

677 ---- Stewart W.T. Neilson 7 Flight, Army Air Corps, Terendak Camp, C/o G.P.O. Malacca, Malaya. Stewart joined the Service in September 1966 and served in U.K. during 1966 and 1967. He has had 8 months with 9M2RH. Hope to hear you chaps with 9M2 calls soon, Stewart.

678 ----- Allan Fredrick Roe, 7 Flight, Army Air Corps, Terendak Camp, Malacca, Malaya. Allan is a Gunner with the A.A.C. at Terendak and made his contacts with the Society via 9M2RH. Allan enlisted in November 1964 and served with 17 Training Regiment RA, and 1965 to 1967 saw him with 39 Missile Regiment RA in BFPO 16. He has been a member of 7 Flight for 2 years and a Club member at 9M2RH for 2 years also.

679 G3XWE Gladys Crooks, 4 Victoria Grove, Fairfield, Stockton-on-Tees, Teeside. Here we say welcome to another YL operator. Gladys, who at one time was known as 282124 served 4 years with the A.T.S. and for some time was attached to Royal Signals at Lytham St. Anns, near Blackpool. Introduced by Les, G3VYZ who promptly left the country to become GI3VYZ! Welcome, Gladys, we all hope to hear you on the bands soon.

680 G3YMR George William Rodgers hails from 51 Piper Hill, Colburn, Catterick Camp, Yorkshire. George was previously a Society member as RSARS 421 (now Alf, G3WQI) and rejoins us as 680. From 1948 until 1953 G3YMR was with R.A. Regimental Signals followed by a spell with R.T.R. as a Dvr/Sig (A.F.V.).

681 G3COP Des Iles, 23 Dryleaze Road Stapleton, Bristol. Des joined us w.e.f. 1/10/69 and the back of his application form is just about full. It reads : "Service training at Prestatyn approx. Dec. 1942 - July 1943.. Passed Instr. Mech. A3 and posted to Catterick, then on to Otley with the Tanks. Posted Overseas on "Orontes" to Algiers and joined 6th Air Formation Signals in 45 T.M. Section. The Unit moved to Naples around October 1943 and I was stationed at Battipaglia for a short while. Then posted to 8th Army Signals and joined 4th British Infantry Division working with 6 Bn Black Watch, West Kents and Fusiliers, up to Florence. Posted back to Naples and served with 2nd Air Formation Signals and 2nd and 11th L of C. Passed from Instr. Mech A3 to A2 and finally A1. Took and passed Teleprinter Course at Nola with a 90% pass. Promoted to Cpl and put in charge of T.M. Workshops in Naples and with HQ III District for a time. Next posted to Caserta, Allied Force HQ just before demob in Feb. 1947.

682 G3OPL Another renewed membership from Arthur A. Milham, of 41 Dane Crescent, Ramsgate, Kent. Arthur (or, as he is better known perhaps, Buster) was RSARS 119 (now G3VDR) and is an ex W.O. II (Sgt Maj. Instr. Sigs) with the R.A. with whom he served from 1946 until 1968. Buster previously held the calls GW3OPL, DL2AM and ZB1CP. Welcome back, Buster.

683 G3EDG William G. Pitfield, 36 Ecclesden, Grove Hill, Brighton BN2 2NG. Bill, an old friend of the Editors from the early 50's days made himself known to the Society at the Exhibition Stand in London where he had just arrived from taking a Morse Test to renew his licence (successfully - Ed.). The back of Bills' application is also pretty full and runs somewhat parallel to 681s. Bill tells us: Joined Royal Signals 3rd S.T.C. at Whitby in January 1940, then saw the following Units : 1st D & D Company, Harrogate Yorkshire, July 1940, 4th Air Formation Signals, Orpington, Kent, August 1940, 51st Medium Signal Section, 51 Division, Bedford, October 1940, 3 Div. Sigs., "D" Section at Chorley Wood in January 1941, then to the same Unit but "B" Section at Lymington, Hants in April 1941 and moved with the Section to Boughton Lees, Kent in January 1942. Then to "N" Company 1st GRTD British North African Forces in Algiers in March 1943 followed by a change to 55 Heavy W/T Section with 3 Company, 15 Army Group Signals in Tunis in August 1943.The following month saw Bill with 10 Medium W/T Section at Syracuse in Sicily and in November 1943 a move took Bill and the Unit to Sanspirito in Italy. Then "hither and thither" around Italy until August 1944. In July 1945, another Unit this time 184 Medium W/T Section with 15 Army Group visiting Siena, Florence, Bologna and Verona. Bill completes his history with "QRT'd at Casserta March 1946. Among the above dates there were odd times when I was gadding about at Florence, Rome, Lake Garda, Aquila, etc., - and in the NAAFI!

684 G3BWV Frank K. Springate of 150 Mackenzie Road, Beckenham, Kent, BR3 4SD. Another Exhibition recruit, Frank tells us that from 1942 until 1945 he was employed as a F.O.P. Tank Crew Wireless Operator with 13th H.A.C. Regiment R.H.A. with 11th Armoured Division. From 1945 until 1947 Frank was with the School of Artillery in India where he was responsible for control of radio (CW and Telephony) link between HQ Deolali (seem to associate this place with some sort of "tap", Frank!) and jungle posts. Also training of Indian Officer Cadets in operating techniques and procedures. Maintenance of the Schools' No. 19 Sets (R.E.M.E. or Royal Signals personnel on establishment) and control of Nets during schemes etc. Transfer to Royal Signals was accepted in 1944 but withheld indefinitely owing to D-Day embarkation.

685 G3OOQM. J. W. Webb, 14 Townsend Road, Tiddington, Stratford-upon-Avon, Warks. Michael was a National Serviceman with the Corps from 1949 until 1952 and trained as a Radio Mechanic at 1 TR Loos Lines Catterick Camp, and was later posted to 2 TR where he was responsible for maintaining the Signals Telephone Exchange. He is also a Life member of the Catterick Amateur Radio Club.

686 G3LZN George Ellison, The Bell House, Rowington, Warwicks. Introduced by RSARS 016 (G3HCM) George saw service as Radio Mechanic between November 1953 and 1955 and was with 7 TR, 44 TR, 1 TR and No. 10 WTS at Loughborough.

687 GM2CQI James McNab, 166 Kingswood Drive, Glasgow, S.4. Jim does not say too much on the reverse of his application form but very neatly lays out his connections as follows :- 1939 - 2nd London Corps Signals, 1940 - 5th London Corps Signals, 1940 - Auxiliary Unit Signals, GHQ Home Forces, 1945 - Malta Command Signals.- Welcome, Jim.

688 G2DJM Ernest V. Chilton, 2 Brecklands, Mundford, Thetford, Norfolk. Ernest is, at present, employed as ME Tels in the SWS Troop with 10 Signals Regiment detached at STA Stanford West Tofts. He has been with Signals Works Services for 8 years and before that was with the Green Howards from 1927 until 1935, and during WW II served with the R.A.F. (1940 - 1946).

689 ----- Ian David Suart of 12 Ryley Field Road, Milnthorpe, Westmorland. Ian is a member of the Heversham School Combined Cadet Force Signals Section. Ian is quite keen and is known to some as A 6765. Welcome to the Society, Ian.

690 GW3HUM Harold Walter Powell, 21 Tanybryn Estate, Valley, Near Holyhead, Anglesey. It would seem from the application form that GW3HUM may be generally known as Arthur. His application form shows a rather unusual list of Service connections and reads : 1941, Member of the War Department Fleet (Engineer), later became R.S.S.C. Fleet now known as the Royal Corps of Transport. Still serving as 2nd Engineer on the RCT Motor Vessel "Trevose". Overseas service, 1941 - 1951 in Malta (RA.SC Water Transport, 80 Company). Arthur also holds the Royal Signals Certificate of Trade Proficiency as Operator Wireless and Line, obtained in Malta, 12 February 1950. Arthur is at present employed on target towing for all guns coastal and ships, also aircraft.

691 9J2BC Peter Anthony Conway, C/o 122 Westwood Road, Sutton Coldfield, Warwickshire. Peter may have met you by way of G3UFI or VQ2BC, or if you were a National Serviceman between 1956 and 1958 perhaps you remember 23282709. Peter was a Teleprinter/Cipher Operator- No news if Peter is active from 9J2 or, if so, from which part, but hope to hear 9J2BC perhaps on 15.

692 G3YSK Alfred John Button, 2 Rowlings Road, Weeke, Winchester, Hants. Alf puts little on the back of his form but tells us that he was 23249830 and served in the Corps for 3 years followed by 4 years Reserve service. Quite a few members have met Alf by way of the 80 Metre Net.

693 ----- Peter John Barnes, of Hutton House, Burton, Carnforth, Lancs. Peter is another of our Cadet members and is at the moment with the Combined Cadet Force Signals Section at Heversham School.

694 G3LPS Eric Pickering who lives at 7 Hob Green, Mellor, Blackburn, Lancs, BB2 7EP. Eric served 2 years in the Corps as a National Service Radio Mechanic A III from August 1947 until August 1949. No. 21025139, as he was known then, also served with 2 Wireless Regiment, near Famagusta in Cyprus.

695 G3DWS William Ernest Massingham, 173 Black Haynes Road, Birmingham 29. Introduced by Les, G3WMZ, Bill enlisted in the Territorials (Royal Signals) in April 1939 and was an Instructor at 2nd R.S.T. from September 1939 until May 1941. He then became Section Sergeant with 6th Command Signals in Northern Ireland followed by a F of S Course which was successfully completed. Bill then served as a Foreman of Signals with 30 Armoured Brigade, 14th Air Formation Signals in Northern Ireland, and, in 1943, with 33 Armoured Brigade. From D-Day until demob in December 1945 Bill served in Europe.

696 ZL2BBT Keith E. Grove, 81 Tama Street, Lower Hutt, New Zealand. Keith served as a Corporal with the Royal New Zealand Signals both at Home in New Zealand (2 years 230 days) and Overseas for 2 years 24 days. We hope that Keith can enlist a few more Kiwi members for us. In the meantime, welcome to you Keith and hope that we can QSO perhaps on 20 or 15.

697 ----- John Henry Wollacott, 64 Nene Road, Oxmoor Estate, Huntingdon, Huntingdonshire. Another Exhibition enlistment, we say welcome to John who is a keen SWL and holds BRS 30924 and ISWL G33. John served from June 1940 until January 1946 in Royal Signals as an OWL B2 (Operator Wireless and Line to our younger members). Units include London District Signals, 100 Anti-Aircraft Brigade Signals, and 30 Corps Signals.

698 HB9AMS Leonard Fank Jarrett, Case Postale 78, Geneva 4, Switzerland. Welcome to our first HB9 member who has also been G3UXZ and VE3EW. Turning over Len's application we read : Service in Royal Signals. No. 2575851. Rank Corporal. Units, 1938 - 1943 1st A.A. Div Signals (later became 1st A.A. Group Signals, I believe) A territorial Unit. 1943 - 1946 47 A.A.O.R. Signals, 53 A.A.O.R. Signals. 1946 to demod. 1st L of C Signals. Served in A.A. defence of London to 1943, then A.A. defence of airfields, ports, etc., in Sicily and Italy (until German Airforce "disappeared", when they turned the A.A. Brigade into a combined Infantry and Artillery Force) with no distinction whatsoever, other than that of being probably one of the very few to be demobilised in debt (!! - Ed.) Trade rating was a D II Switchboard Op. although had also a B III operators rating which I refused to accept as I always wanted to transfer to the R.A.F. but never did. As usual in a small detachment, I was a combined Switchboard Operator, Wireless Operator and Lineman. Became interested in Amateur Radio long before the War, but could never do more than build receivers (which usually didn't work!). Just couldn't afford it!. After the War, when I joined the staff of the Boy Scout World Bureau and the Jamboree-on-the-Air started, my Boss (a retired General) said to me "Len, you were in the Signals, you must know all about Radio, you organise the J.O.T.A.". So I did, and in self defence went ahead and got my own license - Canadian.

699 GW3RVG Sidney D. C. Sedgebeer, introduced to the Society by Les G3HWL, comes from West House, Bryn Garn, Pencoed, Glamorgan, South Wales. Already a regular visitor to the Society L.F. Net, Sid joined R.E.M.E. at Cardiff on the 20th September 1950 and was discharged at Leicester on the 19th September 1955. Between these dates, Sid was stationed at home for just under a year, followed by a stint in Malaya from 24th August 1951 until 22nd August 1954 during which time he was attached to 18 Brigade Signals at Kuala Lumpur for 1 year and 8 months. Back home from 22nd August 1954 to 19th September 1955. During these years Sid was a Driver and Class III Vehicle Mechanic and later became a Class II tradesman.

700 G3OFB Ivor L. Whitworth, 101 Malmesbury Road, Shirley, Southampton. A near neighbour to Blandford Ivor is a retired officer (RARO) and if you do remember personal numbers - try 444302.Connected with the T.A. we hope to be hearing, and perhaps seeing, G30FB,, very soon. Welcome to the Society, Ivor.

701 ----- Introduced to the R.S.A.R.S. by Bert Browning G8TK (344) No. 701 is Paul M. Fletcher of 15 Sandringham Road, Watford, Herts. Paul is a SWL and is BRS 31040 as well as being a member of Verulam A.R.C. He is a member of CHC, and also Secretary/Treasurer of The International Amateur Radio Journalistic Society (New one on me, Paul, how about sending along the details sometime - Ed.). Paul joined the R.A.M.C. and was with them during 1949 and 1950. After demob he served 15 years with the R.A.M.C. Territorials in the rank of Sergeant and was with 57th Middlesex R.A.M.C. T.A. at Harrow General Hospital. At present he is a professional Industrial/Commercial photographer and also works as a Press photographer for a local Newspaper.

As several members did not renew their membership during 1969, these numbers are being re-issued. All overdue members were written to individually and many replied. Those who did not were "written off" at the end of December, and the next three new members all carry re-issued numbers. Will members please amend Membership Lists where necessary.

558 VE3GNM George N. Muscat, 3914 Casgrain Drive, Windsor 22, Ontario. A G3COL introduction (Tnx, Harry - Ed), George has or does hold several calls, including G3WJL, 9S1AW, VE2AWO and VE3AHQ and served with the R.A.M.C. 161st E.A. Field Ambulance in Malta from 1942 until 1945. With an easy-to-remember personal number of 60138 George was discharged on 19th June 1945.

562 G3TKX Leslie C. W. Linkins, 21 Lady Ediths Park, Newby, Scarborough, Yorkshire. Introduced by G2KK, Les was with Royal Signals as 14858671 and a B1 Operator from November 1944 until March 1948. His last Unit was No. 1 Special Wireless Regiment, B.A.O.R.

563 G3RCO Louis Charles de la Bertauche, "Westleigh" Fore Street, Beer, Devon, EX12 3EQ. Louis joined Royal Signals in mid September 1939. Trained as an Operator Wireless and Line at Cavalry Barracks, Canterbury. Posted to Harpenden, Herts, Queen Anne's Mansions, St. James Park, London, on Radio Duties. Left for Catterick in 1942 on draft to India. Saw service in India and Burma until 1945. Returned via Air Trooping to Catterick and demobbed in 1946. Trade Operator Special. Introduced by RSARS No. 108 - G3WXX.

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DID YOU KNOW.....?

That reference the "DID YOU .....? on page 56 of the last "Mercury" about G3WQQ and the "Gratitude" - if it's not G3WQQ you hear it may be his son, who is now G3YCP, and who often sails with him.

Also on page 48 of the last issue we mentioned Dave Hirst and gave call as VP2KQ. Just after issue this call was changed to VP2EQ. So still looking for Anguilla - look for Dave, VP2EQ.

That the Cambridge University Wireless Society is off on its annual DX-pedition to GD in 1970. No location given but they should be there from March 17th for about 10 days. All bands 160 to 70 cms will be used and one of the operators will be G3UPT, Dave Beare, RSARS No. 611.

That W4WHN is getting his local Boy Scouts Group (Explorer Post) interested in Ham Radio and has about 15 interested. He would appreciate contacts, particularly with other Scout stations.

R.S.A.R.S. OPERATING AWARDS.

The present rules for the R.S.A.R.S. Operating Awards are reproduced below. These remain effective until 31st December 1969. At the A.G.M. held in London on the 4th October 1969 certain changes to the rules were proposed and accepted TO BECOME EFFECTIVE 1st JANUARY 1970. These changes are shown IN BRACKETS AND UNDERLINED below. The object of these changes was to allow contacts with stations working /P and /A and more easily define "Home" and "Overseas" members. Generally speaking, the new rules allow ONE contact to count with any membership number within the bounds of Zone 14 for a "Home" contact irrespective of the call-sign or suffix in use, always providing that the call-sign in use has been officially issued to the member holding that particular membership number. For instance, a contact with (say) G3AAA/A membership number 999 will count as ONE point for a "Home" contact. Subsequent QSOs with G3AAA, G3AAA/P, G3AAA/M, G3AAA/MM, G3AAA/AM, GM3AAA (plus all suffix combinations), GW3AAA (plus all suffix combinations) etc., WILL NOT COUNT AS AN AWARD POINT. However, when a membership number moves OUTSIDE ZONE 14 he is again eligible to count as a point ONCE ONLY per membership number, irrespective of change of suffix or prefix. It is, therefore, possible to work G3EKL/046 for a "Home" point, and later work MP4TDA/046 for an "Overseas" point. It is always possible to claim the first point for a QSO with any suffix (or lack of suffix), always bearing in mind that subsequent contacts will not count. It is not intended to start the list again from 1st January 1970, previous contacts under the old rules will count, but QSLs for contacts after 1st January 1970 must be in accordance with the new rule.

1. The following RSARS Operating Awards are available free of charge to Ordinary and Associate members and to Clubs Affiliated to the Society, with effect from 1st January 1970 :

Class III - Certificate, Class II - Certificate, Class I - Certificate, Special Award - Plaque.

2. Transmitting members located at "Home" (defined below) must submit confirmations, or a list of two-way contact with other member stations, including G4RS as follows :-

Class III - 25 Confirmations, Class II - 50 Confirmations, Class I - 100 Confirmations, Special Award - 200 Confirmations (but see Para. 20).

3. Listener members located at "Home" (defined below) must submit confirmations, or a list, of having heard transmitting member stations as in Para 2 above.

4. Transmitting members located "Overseas" (defined below) must submit confirmations, or a list, of two-way contact with other member stations, including G4RS as follows :-

Class III - 12 Confirmations, Class II - 25 Confirmations, Class I - 50 Confirmations, Special Award - 100 Confirmations.

5. Listener members located "Overseas" (defined below) must submit confirmation, or a list of having heard transmitting members as in Para. 4 above.

6. Home members stations are defined as those located within the bounds of Zone14.

7. "Overseas" members stations are defined as those located outside the "Home" area as defined in Para. 6 above.

8. "Overseas" members who move "Home" may count any confirmations gained "Overseas" towards the Awards in Paras 2 and 3 above.

9. "Home" members moving "Overseas" may NOT count any confirmations gained at "Home" towards the Awards in Paras 4 and 5 above.

10. Contacts with member stations operating /A or /P WILL count toward RSARS Awards but only

inasmuch as a contact with a fully paid up membership number is eligible ONCE only per "Home" or "Overseas" location (total - two contacts). The call-sign of the member worked must have been officially issued to that member. Contacts by a member using another persons' call-sign are NOT permissible. Therefore, contacts with a membership number within the bounds of the "Home" and "Overseas" areas can only be claimed ONCE per area. irrespective of the call-sign, prefix or suffix used. A member moving from the "Home" area to the "Overseas" location (and vice versa) can be contacted ONCE only in each area.

11. Members will ensure that operating practices are maintained to the highest standards. Unassisted two-way contact must be made between the stations concerned. Relaying of reports, etc., by a third station is not permitted for Award purposes. Terms of license must be strictly observed and members who are granted temporary licences for operation in other countries may be asked to submit proof of authorisation to R.S.A.R.S.

12. Members are required to exchange i) Signal Reports, ii) Membership numbers, iii) Names and iv) QTH to qualify for confirmation of contact.

13. Claims for Awards will be made to the Awards Manager only, whose details are published below.

14. Claims for the Awards may be made by Certified List, as laid out below, signed by an Officer of a National Radio Society, or by two other licensed amateurs, one of whom must be a fully paid up member of the R.S.A.R.S. A check-list of the call-signs and membership numbers must be included together with return postage or I.R.C. This rule can only be waived by the President and Council of the R.S.A.R.S.

We, the undersigned, acting on behalf of the Royal Signals Amateur Radio Society, hereby certify and declare that we have personally inspected and checked a total of ..... QSL cards received by (name).....(Call-sign) ..... (Address) ..... RSARS No. ..... for contacts made by the above member. To the best of our knowledge and belief these represent contacts made by the above member in compliance with R.S.A.R.S. Operating Award rules (a copy of which has been seen by us) and in the true spirit of Amateur Radio under the terms of his official Amateur Radio Licence. We know of no reason why the issue of the appropriate Award should not be made.

1st Witness - Name : Call-sign :
Address :

Appointment (National Society)

2nd Witness - Name : Call-sign :
Address :

Appointment (National Society)

Claimants Signature : Date :

Analysis of cards inspected :-

SSB "Home" :
SSB "Overseas" :
CW "Home" :
CW "Overseas" :
Other modes "Home" :
Other modes "Overseas" :

Total cards :

15. The Awards Manager will retain the Certified List and Check List returning any confirmations and the Certificate awarded to the member. The Certificate will be forwarded under separate cover.

16. Subsequent claims need not include the previous confirmations.

17. The Awards Manager will submit an "Application for RSARS Special Award" form to the General Secretary who will order the Plaque in the case of claims for the Special Award. The Plaque will be forwarded to the member concerned as soon as possible.

18. Contacts for the RSARS Operating Awards are effective from the 1st January 1969 until 31st December 1969 (under the old rules) and from 1st January 1970 onwards under these rules. Contacts made in either (or both) years count towards the RSARS Awards providing they are made within the rules current at the time of the contact.

19. All claimants for RSARS Awards must have one contact with Headquarter station G4RS. This contact may count for all subsequent awards in the Class III, II, I and Special series.

20. Applicants for the Special Award (both transmitting and receiving) must ensure that claims include 5% "Overseas" members (in the case of "Home" applicants) and 5% "Home" members (in the case of "Overseas" applicants) minimum, and that 10% of all confirmations are for CW contacts.

AWARDS MANAGER : G3VIS,
"Heatherlea",
12 Linton Rise,
Catterick Camp,
Yorkshire.

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R.S.A.R.S. JUBILEE AWARD.

Further to the detail published in the last issue of "Mercury", it is confirmed that QSL cards will not be required when submitting scores for this award. All participants are asked to submit log extracts laid out as follows :-

Zone	Date	Time Start	Frequency	Call-sign	Report Out	Report in	Name	RSARS No.	QTH	QSO points	Total points

Log extracts are not required at the end of Part I (January 1970) but should be sent to the General Secretary together with log extracts of Part II (June 1970) as early in July as possible. We would, of course, be interested in your score and, if sufficient scores come in early in February, we will publish a "Points Position" Table in "Mercury". To everyone taking part - Good Luck!.

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FOR SALE.

AR-88 complete with loudspeaker, S-meter and a set of spare valves. Also complete set of EMERS (Technical details). In perfect working order but with home-made PSU. £18-0-0, buyer collects. Also a TS-34/AP C.R.O. with service handbook and high voltage divider and probe (for voltages up to 20,000 Volts). 110 Volts input. £8-0-0 buyer collects. Both items can be seen at the following address BUT PLEASE WRITE OR PHONE FIRST. Lt Col M.J. Conway (Retd.), Treyarnon, Epsom Lane North, Epsom Downs, Surrey. Telephone : Burgh Heath 53012.

DONATIONS.

The Council of the R.S.A.R.S. wish to thank the many members who have sent along donations towards the Society expenses. These have varied from "keep the small change" to sums in the region of £'s. Large or small these are very much appreciated and go a long way to help out with such Society expenses as postage, which, since May last year, has reached the enormous sum of £70. This, of course, includes "Mercury" posting, As mentioned in a previous "Mercury" any unwanted IRC (or fourpenny stamps!) are always welcome at HQ. Once again, many thanks to all concerned,

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WITHOUT COMENT.

(The following is an extract from a letter received at HQ from a member - 'nuff said!)

"... .I have made one of the supreme sacrifices for Ham Radio. For years my wife has been on to me about my devotion to "those B..... radios, up there". Gradually it progressed to "If they don't go, I will" etc. etc.

Well, on December 1st I came home to find something missing - yes, my wife and all her clothes, etc.

The only snag is - I'm not putting in as much time on Ham radio as before, because I have a hell of a lot more work like cooking etc. As the Old Saying goes "What you lose on the roundabouts, you also lose on the swings", but thank goodness for small Murphies - small ones, in tins. They are easier to do.....Hi!"

****

THANKS.

(Another extract from another letter, this time from Bert G3XSN. Bert, a Scouse, has been visiting London on business, and says .....)

"…..... If it wasn't for the R.S.A.R.S. I think I would be very lonely in London. So possibly in the next "Mercury" you might like to thank all the boys on my behalf ....."

Happy to do so, Bert, especially to G3RKN, G3RYF, G3HSE etc.

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OTHER INTEREST SECTION.

In response to the suggestion in the last "Mercury" that other members may be interested in your activities other than "Ham" radio one or two members have written giving details. Why not drop a line saying what YOUR outside interests are?

G3EJF - 004 - Drinking Ale in congenial company, Ornithology, growing vegetables, and talking Cricket to fellow Yorkshiremen.(Well, nobody else talks sense, they think other counties can play Cricket!). (Ooooh!, I am NOT getting dragged into this one - Ed.).

G3UXH - 172 - Stamp collecting, but specialising in United States issues. Peter would like to hear from members with similar interests.

****

DID YOU SEE.....?

In the January 1970 issue of "Radio Communication" that the R.A.F. boys in the Trucial States who operate the R.A.F. Amateur Radio Club station MP4TCE are no longer allowed to use the services of their QSL Manager BRS 26222 E.R. Chilvers, 1 Grove Road, Lydney, Glos. GL15 5JE This, apparently, on orders from "Higher Authority". Cards should now be sent to P.O. Box 176, Sharjah, Trucial States, although this is only temporary.

CONTEST NEWS.

You have to have rules for Contests, or else things do get out of hand. Reproduced for your benefit is a set of General Rules for R.S.A.R.S. contests. These may be amended at various times to suit individual contests.

The scoring system is one which is in use, successfully, by other organisations and is simple and easy to operate. We hope it poses no problems for members.

There will be a CW contest over the Easter Week-end (see Page 2 - Ed.), twenty-four hours, 1700 to 1700 hours. Hope to see some of you in the WW DX CW contest. 73 Dave (268)

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GENERAL RULES FOR RSARS CONTESTS.

1. VALID CONTACTS. Only contacts between fully paid up members of The Royal Signals Amateur Radio Society are valid for Contest points.

2. CONTEST CALL. "CQ CQ CQ RSARS de ....." (CW) or "CQ ROYAL SIGNALS AMATEUR RADIO SOCIETY FROM ....." ('phone).

3. SCORING. The scoring system is based on the Chart/Graph issued with the Autumn 1969 edition of "Mercury". Further copies may be obtained from HQ (4d stamp please).

Some explanation of the chart may be of value to entrants. It will be seen that stations located in THE SAME ZONE may work each other for a valid contact and score ONE POINT, Stations located in one Zone may contact member stations located in any other Zone and score the number of points indicated on the chart i.e. G3QQQ works G3ZZZ (Zone 14 to Zone 14) and each score ONE POINT. G3QQQ works VS6ZZ (Zone 14 to Zone 24) and scores 24 points as does VS6ZZ.

4. LOCATIONS. Zones are those as indicated on the Radio Amateur Zone Map. Portable or Mobile operation where a station may cross Zonal boundaries is permitted for valid contacts, only where an official license to operate from the /P or /M location has been issued, or where the license under issue to the operator contains provisions which allow such operation Proof of a doubtful operation may be requested, but will not be mandatory.

Locations must be clearly stated in the contact report on Voice and CW/RTTY. Contests.

5. CONTEST REPORTS. Reports are to consist of :

a) Readability and Signal strength,
b) CW Tone reports during CW contacts
c) Zone Number,
d) QTH,
e) Name,
f) RSARS or AFF Number.

(Not necessarily in the above order)
i.e. 56914 Blandford Dave 268 (CW) or Readability Five Strength Nine Zone Fourteen QTH Blandford Name Dave R.S.A.R.S. No. 268 ('phone).

6. LOGS. Use of the Log Sheet only, and rule off to provide the following columns :-

Date	Time Start	Freq.	Call	Report Out	Report in	Name	RSARS No.	QTH	Zone	QSO points	Total points

Each Log Sheet must be headed with your call-sign, Full name, Full QTH, Title of Contest and Date(s), i.e.
G3TAN (268) D.T. LLEWELLYN, 2O COLLEGE ROAD, BLANDFORD CAMP, DORSET, RSARS 1970 CW CONTEST MARCH ?? 1970.
Total points claimed to be shown on last Log Sheet submitted. Log sheets need not be signed.

7. AWARDS. A suitable Award, to be determined by the Awards Committee, will be awarded to the station(s) which have scored the highest number of points according to rule and accepted by the Award Committee, in the following categories :-

Transmitting Only Contests : Leading Home (Zone 14) station.
Leading Overseas (Outside Zone 14) station.
Transmitting and Listening Contests :
Leading Home (Zone 14) station (Transmitting)
Leading Home (Zone 14) station (Receiving)
Leading Overseas (Outside Zone 14) station (Transmitting)
Leading Overseas (Outside Zone 14) station (Receiving)

8. BONUS POINTS - A bonus of TWO points to Home stations and FIVE points to Overseas stations will be awarded to stations making their first contact on each band with G4RS.

9. FREQUENCES. All Contests will cover all officially allocated HF frequencies, and those VHF frequencies specifically noted for Home Contests.

For CW operation the first 20 kHz of each officially allocated CW band will be used so that RSARS activity will be concentrated. However, contacts made outside these limits will not be invalid and may count for points. It should be noted that G4RS will not normally operate outside these limits and therefore bonus points will only be available within them.

10. SCHEDULES. G4RS will be active on different bands on time schedules which will correspond with frequency predictions for the Contests periods, and, as far as possible, the RSARS Activity Period Time Schedules, during the last Sunday in each month. Advance publicity will be given in "Mercury".

11. GENERAL. All Contests Logs submitted will be checked. The winning stations Logs will be cross-checked by two HQ station officials before the final announcement is made. (See Note 1).
Queries on Contest organisation, rules, dates etc., should be addressed to :-

D.T. Llewellyn G3TAN,
20 College Road,
Blandford Camp,
Blandford Forum,
Dorset.

NOTE 1. It must be emphasised that only members who are fully paid up at the time of the Contest are eligible to make valid contacts, and receive Awards. One of the checking officials will be the TREASURER.

****

DID YOU KNOW.....……..?

That the call-sign WB6RER was issued to Andy Devine. May not mean much to our younger members, but OT who may have been the original "Stage Coach" will, no doubt, remember the gravel-voiced driver of that Western epic.

"MERCURY" ANSWER PAGE.

By now you should have completed Tony Tessas Net-Words No.3 and it is hoped that your completed square will look like the one below

1C	A	2T	T	3E	R	4I	C	5K	C	6A	M	7P		
O		A		L		N		I		N		E		8T
9N	E	G	L	E	C	T	E	D		10T	E	R	S	E
T		U		C		E		D		S		F		N
11R	E	S	E	T		12N	A	I	L		13F	O	O	T
O				R		S		E		14H		R		I
15L	I	16P	M	I	K	E		17S	T	A	M	M	E	R
P		A		C						I		E		E
18R	A	D	I	A	L	19S		20W	I	L	F	R	E	D
O		E		L		H		A		C				T
21B	E	R	T		22H	A	N	G		23A	I	24M	E	R
L		B		25B		R		E		E		A		A
26E	R	O	D	E		27J	E	R	U	S	A	L	E	M
M		R		A		A		E		A		T		P
		28N	O	R	T	H	E	R	N	R	O	A	D	S

QUICK QUIZZES

So you noticed that there were TWO Quick Quizzes? Fine, as long as your answers are as shown here!

ISLANDS - Greenland (840,000 Square miles) - New Guinea (317,000 Square miles) - Barnes (287,400 Square miles) - Madagascar (229,811 Square miles) - Baffin Island (183,810 Square miles) -Sumatra (182,859 Square miles) - Honshu, Japan (88,000 Square miles) - Great Britain (84,186 Square miles) - Ellesmere Island (82,119 Square miles) - Victoria, Canada (81,930 Square miles) - Celebes 72,987 Square miles) - South Island, New Zealand (58,093 Square miles) - Java (48,763 Square miles) - Luzon (46,636 Square miles) - North Island, New Zealand (44,281 Square miles).

CANADA QUIZ - Newfoundland = St Johns, Prince Edward Island = Charlottetown, Nova Scotia = Halifax, New Brunswick = Fredericton, Quebec = Quebec, Ontario = Toronto, Manitoba = Winnipeg, Saskatchewan = Regina, Alberta = Edmonton, British Columbia = Victoria, Yukon Territory = Whitehorse, Northwest Territories = Ottawa (which is also the capital of Canada). Montreal had a population of 1,191,062 at the 1961 census.

S.W.L. SECTION.

The SWL Manager, 24. Gordon Beaumont, 40 Hollydale Road, Erdington, Birmingham,

"Having been appointed as you SWL Manager, I had better give you a brief account of myself. I joined the Royal Signals in 1923 and after the usual 'Square Bashing' at Crowborough, and Trade Training at Maresfield, I was posted to Colchester as a fully blown D.R. Class II. Whilst at Colchester I went in for V/T but, although I qualified, I was retained as a D.R. The Shanghai Defence Force was formed and I had my usual two doses of various inoculations, but, for some reason, I never went to China.

During this time I was busy, as a D.R., dashing down to the Post Office with telegrams to the Commanders of many ships in various ports of the world. During this time the authorities kept taking my motor cycle from me to send to the docks. Eventually, I was left without one so I went to the Stores and took one out of a packing crate along with a sidecar.

During the day I had to take an officer to the bank, and right in the middle of High Street Colchester the sidecar parted company with the motor cycle. The officer was left in the sidecar, whilst I travelled on to the bank. All this was reported in the "Wire" of that time.

The next move was to Dover for duty during the Genera1 Strike. Two of us (Sigmn Hart and myself) were stationed in the telephone exchange in Dover Castle. It was our job to carry mail from Dover etc to Manston where it went by air to London. Some notable volunteers were at Dover during this period including the late Major Seagrave, the once famous racing motorist, who was driving a lorry from the docks to the fort (A very risky business in those days, with all the strikers about!). We were all issued with loaded revolvers, by the way!.

The next port of call was Kohat on the North West Frontier of India where we found that the Officer i/c was none other than the (then) Major Henderson, later, of course, Commandant of the School of Signals.

June 1939 was Calling Up time for we Reservists and it was Bulford, followed by Catterick, then it was 23rd Armoured Brigade until the end of the War. Like a good many more I joined the Post Office Engineering Department where I stayed until December 18th last year when I retired with the rank of Instructor, Engineering.

Now, all you S.W.L's let me have a list of the stations you have heard and the equipment you are using, or write to me on anything you feel would be of interest. My list, for this last week or two, includes :

EA8GZ, TF3WL, VO1CW, VE3XQ, 4X4KM, 4X4YM, PY2DGG, OH2BCP, ON2VG, SM3ABG, CT1CD, LA9KM, plus the usual load of W/K stations on 21 and G's on 3·5.

73

Gordon.

(I can only echo Gordon's words, chaps, let him have your SWL details, lists of stations heard whether SHF, VHF, HF, Medium Wave DX, DX TV, details of equipment built and/or used, antennas, QSL returns, DX QTHs etc., etc. - Ed.).

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PRINTING BLOCK.

Thanks to the generosity of George, G3VBE, we now have at HQ a "Jimmy" printing block. Anyone who has seen George's QSL will agree that it is a quality block. It is approximately 3" high by 1 -5/8" wide at the scroll. Any member requiring a loan of the block are asked to send about 6d postage to the Gen. Sec. Tnx, George.

LETTERS TO THE SOCIETY.

From : T. Frank Smith, W5VA/W5AI, R.S.A.R.S. Honorary Life Member No.650, Post Office Box 84O, Corpus Christi, Texas, U.S.A.

Dear Mr Secretary.

I am deeply moved to learn of them great honor given me by your organisation by electing me to Honorary Life Membership of the R.S.A.R.S. and it is my sincere hope that I can conduct myself in the future to be a credit to the Society.

I think that you would like to know that this month (November 1969 - Ed.) marks the 50th year since I was first licensed as an operator by our Government and I either have held, or still hold, every class of license, both commercial and amateur, ever authorised.

Radio, to me, has always meant much more than it seems to mean to so many people, it means an opportunity to communicate, to make friends, and to become more knowledgeable of far off parts of the world which would otherwise not be accessible. I have had a special hobby of finding operators of the Royal Signals all over the world, and in the limited list of members and in the material you sent me I recognize a number of people who are old friends of mine over the air.

I will look forward with great interest to receiving my copies of "Mercury" magazine and will be in contact with the membership through the Nets and individually.

Yours very sincerely
(Signed) T. Frank Smith W5VA/W5AI.

(Other letters, expressing appreciation of election to Honorary Life Membership have been received from Bill, W3RX and No. 651. Pressure on space does not permit print, but the good wishes are appreciated and it is hoped that your stay with us will be a long and happy one - Ed.)

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XTAL TIP. G2AUA (520)

It may not be generally known that metal cased crystals such as 10XAJ and FT 241/243 types have their legs "sleeved" on wire pins similar to HC6/U types and these can be interchanged easily. This can be more convenient than changing holders or using adapters which increase the shunt capacity therefore lowering the frequency and activity. Quite often surplus crystals have no activity to spare!!!

The types which can be adapted are the metal cased ones with the pins coming through a glass seal and designated Style "D" (HC6/U), Style "B" (10AXJ), and some of the FT 241/3 Style "C", types. Style "B" are standard pin types, Style "C", are thinner and Style "D" are just wire pins - all are 🗁-inch spacing. All types can be stripped of the legs and will then fit Style "D" holders, or spare legs from dud Style "B" or "C", can be fitted to all types to standardise the base fitting.

The sleeves can be removed by the application of a hot iron for a few seconds and a quick shake will cause them to drop off. When fitting a sleeve it is advisable to place a piece of thin metal between the glass seal and the sleeve to leave a gap of about 1/8-inch.

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QUESTION - What have the following prefixes in common? CE, CO, CN8, CR3, CR4, CR5, CR6, CT1, CT2, CT3, CX, DL, DM, DK, EA, EA8, EA9, EA0, EI, EL, F, FG7, FM8, FP8, FS7, FY7, G, GC, GD, GI, GM, GW, HH, HI, HK, HP, HR, JW, JX, KC4, KG4, KP4, KS4, KV4, KZ5, LA, LU, OH, ON, OX, OY, OZ, PA0, PJ, PY, PY0, PZ, SM, TF, TG, TI, TJ, TN, TR, TU, TY, UN, UA1, VE, VO, VP1, VF2A, VP2D plus a lot more. See the Next "Mercury"!!!

LITTLE BITS OF HISTORY.

Hidden away in attics, cellars or even shacks there are probably hundreds of items of militaria and, among members, a lot of this will have personal or military communication connections. The Royal Signals Museum, located at the School of Signals at Blandford, may well be interested in those items that you have been going to throw away for years. Send details to the Gen. Sec. who will pass them along to Mr Bailey, the Curator. Shoulder flashes, medals, documents etc., all welcome.

VISITORS TO HQ.

The Visitors Book at G4RS continues to be filled with many names of those whose company we have had the pleasure of sharing. Starting back at the August Rally we see that the following have suffered the rigours of Blandford :

G3LQC, G3SGH, G3BA, G2FYT, G3BHT, G3FPX, G3SIQ/M (together with Susan, and Jill), G3RYF, G3WZQ, G3HWL, G3UZL, F8TH/G5AOV, G3HCM, G3EMO, G3ABM, G3YDV, BRS 27649, G8BKU, A 5466, A 5643, G3YPL, WB2NWI, G2ANG, G3WUT/M, G3HBE, G2KK, G3XBU, G3XAS, G3XCS, G3RPJ, G3PC/G3ISO, G3WDG, G3YIF, G3YQK, G3UXH, WA6CEB, G3TAN, A 5O43, G3UAA, G3SYW, ZC4IM, G3TZQ (Stan a rep. of the R.N.A.R.S.).

The 17th October almost filled a page on its own, as this was Jamboree-on-the-Air Week-end, and we see representatives of various loca1 scout groups including 1st Longham, Blandford, 1st Ferndown and 1st West Moors.

All members, and friends, are invited to visit Headquarters. G4RS is usually manned at all times, but a quick note to the Gen. Sec. will ensure that you are not disappointed. Try and make it on a day when you can visit the Signals Museum, but don't make the mistake that many visitors have done and only allow 10 minutes for the Museum visit, it can't be done!. 73 Jack, (Station Manager)

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THE INTERFERENCE PROBLEM.

As members are well aware, the amateur radio population of this world is ever increasing. However, the frequency allocation to the "ham" remains just about constant and the possibility of additional frequencies coming our way seems remote, to say the least. It is, therefore, essential that we are allowed to utilise those frequencies we already have. On "shared" bands we have no quibble - the QRM is just as entitled to be there as we are, perhaps more so, but on "exclusive" amateur bands "interlopers" are most unwelcome. The assistance of all members is solicited to check on unauthorised transmissions WITHIN THE EXCLUSIVE AMATEUR BANDS. What we need to know is :

a) Date and Time (GMT)
b) Frequency (exact, if possible)
c) Mode of transmission (i.e. CW, DSB, RTTY, etc.)
d) Call-sign(s).
e) If Voice, type of traffic and language used.
f) If CW, type of traffic and rough indication of speed.
g) If RTTY, a sample of page copy if possible.
h) Any other detail which would help to identify he station.

Just as one swallow does not make a summer, one QRM report does not make a case. The regular cause, of QRM can be more readily identified, therefore please note any regular schedules etc that the "problem" station may have. Details to the Gen. Sec, please, who will collate them and, where useful, will forward same to the R.S.G.B. But let us get our own house in order first, no out-of-band operation, no 'phone in the CW end etc., etc. Not that any member appears guilty of these infringements but its much nicer to complain to the law-breakers when one is wearing ones halo at a jaunty angle!

MEMBERSHIP DRIVE.

As members will know, the Society is endeavouring to raise the membership to 1,000 or more by the end of 1970 in conjunction with the Royal Signals Jubilee year 1970. To assist with this, members introducing 10 members between 1st September 1969 and 31st December 1970 will be awarded one years free membership (if annual members) or be credited with 10/- towards Society supplies.

Recently, several applications have been received from potential members who do not qualify for membership by rule, i.e. ex R.A.F. or ex R.N. amateurs. As these amateurs are very well catered for by the R.A.F.A.R.S. and R.N.A.R.S. it is regretted that they cannot be accepted for membership of the R.S.A.R.S. However, membership of the R.S.A.R.S. is open to a variety of SWL and Amateurs, and, to clarify the position, the following is an extract of the R.S.A.R.S. rules regarding membership eligibility.

MEMBERSHIP

3. The Society shall provide for the following classes of membership :

a. Ordinary Membership. Shall be granted to any serving or retired member of Royal Signals including Royal Signals T & AVR.

b. Associated Membership. Shall be granted to the following who are not eligible for Ordinary Membership :

(1) Any serving or retired member of the British Army and T & AVR.
(2) Any person serving with, or employed by, a Royal Signals Unit.
(3) Any serving or retired member of the Commonwealth Signals Corps.
(4) Any member of the C.C.F./A.C.F. and University O.T.C.
(5) Any past or present member of the United States Army Signal Corps who have been attached to, or worked in close liaison with, Royal Signals.

c. Affiliated Membership. Shall be granted to :

(1) Any Royal Signals Amateur Radio Club, Regular and T & AVR.
(2) Any Amateur Radio Club in the British Army, Regular and T & AVR.
(3) Any Amateur Radio Club in a Commonwealth Signal Corps.
(4) Any Amateur Radio Club of the C.C.F./A.C.F. and University O.T.C.

Blank membership application forms are available from the General Secretary at HQ. Please send a 4d stamp only (envelope not necessary) to HQ and we will send along half a dozen forms. The latest membership number issued (early January) is 701, although we have quite a few "gaps" to fill where membership has not been renewed. However, if two out of every three members introduce one new member each during the coming year we will make the thousand. Good Luck, and here's hoping to see YOUR number in the "Introduced by ....." space on a few forms.

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STAMPS * STAMPS * STAMPS.

Thanks to several members, but particularly G6QM, G3XUH, G3HSE etc., for sending along stamps for the R.A.I.B.C. So far 1,500 have been sent to the R.A.I.B.C. and, at the moment, HQ is holding a further 6,600.When this reaches 8,500 a further parcel will be forwarded, making 10,000 stamps in all. Will YOU help to reach the 10,000 mark? Please tear off stamps (British, Commonwealth and Foreign) leaving a small portion of the envelope attached, and pop them into the envelope the next time you write to HQ - Mni Tnx.

ROYAL SIGNALS AMATEUR RADIO SOCIETY
RECORD OF THE 1969 ANNUAL GENERAL MEETING HELD AT THE ROYAL HORTICULTURAL SOCIETY'S NEW HALL ON SATURDAY 4TH NOVEMBER 1969.

Present :

Brigadier A.D. BRINDLEY	President
Lieutenant P.D. SMITH	Treasurer
WO I (F of S) J. COOPER	General Secretary
Captain I.D. SCOTT	MOD Secretary
R. BAINES	G3YBO
A.L. BROWNING	G8TK
I.A. COBBOLD	G3RPJ
R.P COLE	G6RC
C. COLLINS	G3WEQ
C.E. COX	BRS 27649
W. FITZGERALD	G3DCA
D.C. FRENCH	G3HSE
J.M. GEORGE	G2CAV
P.L. MALONEY	G5PM (RMA Sandhurst)
R. McGILL	G3WZQ
T.W. MITCHELL	G3LMX
J.F. NEVILLE	WA6CEB
H.O. PARGETER	G6MA
A. RIX	G3RYF
R. RAMSEY	G3ARM
C.J. SQUIRES	G3XCS
D. SUGDEN	G8BHL

Apologies : Major General E.S. COLE

AGENDA ITEM 1.
Presidents Address.

1. The President welcomed those present and thanked them for attending. He said that the overseas members, who could not be present, must not be forgotten and thanked those members abroad who had sent greetings, in particular Captain Ray WEBB, who had handed over his job as General Secretary and departed to Sharjah.

2. The President stated that the Society was in a very healthy condition, as would be heard in the reports from the Secretary and Treasurer and membership was now in excess of 600.

3. As members would know, 1970 would be the Golden Jubilee of the Corps and it was intended that the Society should not be left out of the activities. The three major amateur activities projected were :

a. A series of DXpeditions.
b. A Rally at Blandford.
c. A stand at the 1970 Radio Exhibition

4. Finally, the President said that he wished to thank the committee members Lt Col D.A. BARRY and Capt. R.A. WEBB, who had relinquished their jobs on posting and was sure that members of the Society would endorse his thanks for the great deal of effort and enthusiasm they had shown during their time in office.

AGENDA ITEM 2.
Minutes of the 1968 Annual General Meeting.

5. The minutes the 1968 Annual General Meeting of the Society were accepted as a true record.

AGENDA ITEM 3.
Election of Officers.

6. The following appointments to the committee of the Society were confirmed :

a. Capt. I.D. SCOTT
MOD Secretary

b. WO I (F of S) J. COOPER
General Secretary

c. Lieutenant P. SMITH
Treasurer

AGENDA ITEM 4.
General Secretary's Report.

7. The General Secretary said that since he had taken over in May 1969, the Society had continued to flourish as members' interest had been maintained. 57 new members and 2 Affiliated Clubs had been recruited. He would like to see membership reach the thousand mark during Jubilee year if possible. All letters from members would be answered, but with the amount of correspondence being received some might take a little time.

8. The Rally at Blandford had gone well and the weather had been kind. However, staffing had been a problem, mainly because the date selected had been during the Summer break at the School of Signals and this would have to be borne in mind for next year. Several members had raised points on the Rally for future reference, mainly that those who travelled long distances, would like to start events much earlier in the day and that more advertisement of the Rally should be done in the future. Thanks would be passed to the Dorset Police and to Trade firms who had provided stands.

9. The Secretary said that the meeting would wish to thank those members who had made donations during the year. Much of this money went towards the ever increasing postage bill which was inevitable if correspondence was to continue.

10. Tuning to the Headquarter station, improvements were constantly being made. The Nets were very active, in fact almost overcrowded at times. To spread the activity, it was hoped to extend the Net operation to more nights a week. Further ideas were under consideration, namely a CW Net and a Sunday 40 Metre Net. Consideration was also being given to the setting up of a 2 Metre station. The HQ station had a KW-2000-A which was used mainly on Top Band but there did not seem to be much Society activity on this band, and more would be welcomed.

11. The Secretary apologised for any inconvenience caused to members by the recent lapse of slow morse transmissions. This was due to a fault at G4RS but it was hoped to have the transmissions back again soon. Reports on the slow morse transmissions were welcomed, so that some idea of their coverage could be obtained.

12. Finally, the Secretary said that the HQ station was run for the members of the Society, it was a pleasure to see members, who would be welcomed at almost anytime.

AGENDA ITEM 5.
Treasurer's report.

13. The Treasurer said that the current statement showed an increase of £418 for the year. This included a grant from the Nuffield Trust of £243. However, there was a continuing increase in postal charges, due mainly to the despatch of "Mercury". There was no prospect of reducing this in the future.

14. A Stocktaking Board had been held at Blandford, which had marked up depreciation to reflect the true market value of the property. The Board had also revised the depreciation rates to make them more realistic.

15. A Standing Order Scheme had just been inaugurated and it was hoped that members would take advantage of it.

Points Arising.

16. G3ARM said he considered that much more cash could be transferred to the deposit account where it would earn interest. This was noted by the Treasurer.

17. G3HSE suggested that postage for "Mercury" could be paid by the members. After discussion, the President said that he would prefer this matter to be left to the Committee to discus.

18. G3YBO said that he might be able to help with Society printing. The General Secretary agreed to discuss this outside the meeting.

19. The Treasurer said that he had experienced considerable difficulty over the holding of cash. He found that, if he did not visit the Bank daily, he was over the limit of loose cash which he was permitted to hold. As it was not always possible for him to get to the Bank in Blandford every day he requested that his allowance be raised to £50. After considerable discussion the President said that this would have to be examined in detail by the Committee, as there was a question of insurance to be considered.

AGENDA ITEM 6
Society DXpedition 1970

20. The MOD Secretary said that three areas were under consideration for DXpeditions during the Jubilee year :

a. Nepal
b. Brunei
c. Qatar

It was not yet certain whether the necessary permission could be obtained to go to Qatar, but this was under investigation by Captain Ray Webb. The organisation of the other two was in the hands of Captain Maurice Caplan.

21. There was a possibility of getting one or two members from UK out to the Far East for this, but because of regulations governing RAF indulgence flights this would have to be restricted to serving members only.

22. The dates of the DXpeditions would be published in "Mercury" when confirmed.

23. G5PM said that it was hoped to mount a Sandhurst expedition during 1970 and asked if the Society could help. It was agreed that the MOD Secretary be approached if help was required.

24. The possibility of mounting a DXpedition to ROCKALL was discussed but it was agreed that the Society could not consider this scheme unless a firm proposal was put forward, in detail, by a member.

AGENDA ITEM 7
Corps Jubilee Year.

25. The Secretary said that it was intended to hold a Rally at Blandford during the summer. May or June had been suggested as possible alternatives. Help would be required for the organisation of this and a small sub-committee would be called for early in the New Year.

26. The Secretary said that the question of a stand at next years Exhibition would have to be discussed within MOD. Some consideration was being given to a possible three Service stand. A possible theme was History of Military Communications.
This would be handled initially by the Committee, but help would be requested from other members when the form of display was more settled. Once again it was intended to form a sub-committee to handle the detailed arrangements. The Secretary considered, as a result of comment at the Exhibition, that there should be a section of the Stand devoted to the Society and manned by its members (not necessarily serving members only).

AGENDA ITEM 8
The Award Scheme

27. The Awards Manager said that as of the 1st October, 67 Awards had been gained by members :

Class III	-	35
Class II	-	23
Class I	-	9

Several members had queried part of the rules with him and possibly one or two members present would like to raise specific points.

28. G3XAV said that the area which caused him concern was the banning of contacts with or by members operating /A or /P. Not all members operated from permanent home stations and these people were therefore excluded from the Awards Scheme. He recommended that /A and /P count as contacts, but that a contact could only count once with any particular member, whether he was /A or /P.

29. G3XSN suggested that the scheme be based not on call-sign but on membership number.

30. The second suggestion led to considerable discussion in an attempt to ensure fair play for overseas members. The President agreed that a very real problem existed and said that this would be argued out in Committee.

31. G3XSN said that many members had great difficulty in obtaining Awards because they could not get the QSL cards to submit as evidence of contact. He suggested that a certified list of log entries be accepted. This would overcome the problem and also save postage charges for overseas members. .

32. After discussion, the meeting agreed the proposal that the Award rules be changed. The meeting further agreed that :

a. QSL cards would be required as confirmation from members in Zone 14.
b. A certified list of contacts, given as log extracts and countersigned by another member, be accepted for member stations operating outside Zone 14.

AGENDA ITEM 9
Amendments to Membership Rules.

33. The meeting agreed an amendment to the rules of the Society to allow Associate Membership to be opened to members or ex-members of the United States Signal Corps for amateurs who had been attached to British Forces during their military service, at the discretion of the President and Committee .... each case would be judged on its merits.

AGENDA ITEM 10
Any other business.

34. The following proposals for Honorary Life Membership were agreed :

a. That in view of the services rendered to the Society as a whole and the VS5RCS DXpedition in particular, W3RX be made an Honorary Life Member.
Proposed DL5YB (085), Seconded G3DPS (090).
b. That in view of services rendered to the Society as a whole and to VS5JC in particular W5VA/W5AI be made an Honorary Life Member.
Proposed G3DPS (090) Seconded DL5YB (085).

c. That Mrs Cooper (XYL of the General Secretary) be made an Honorary Life Member, in view of the assistance she has given to the Society. Proposed G8VG (340), Seconded G3UXH (172).

35. There being no further business, the President closed the meeting by thanking all members present for their support and sent greetings to all those who could not be present.

G3SYW
MOD Secretary R.S.A.R.S.

ROYAL SIGNALS AMATEUR RADIO SOCIETY
MEMBERSHIP LIST
(As at 31st December 1969)

Call-sign	No.	Call-sign	No.	Call-sign	No.	Call-sign	No.	Call-sign	No.
DL2AH	225	G2DTO	609	G3COL	615	G3HWL	400	G3NCZ	429
DL2VR	AFF2	G2FAS	208	G3COP	681	G3HZP	257	G3NDJ	240
DL5XG	423	G2FHF	258	G3CRP	043	G3HZW	042	G3NET	433
DL5XW	366	G2FRY	289	G3DAQ	382	G3IAR	641	G3NJM	007
DL5YA	536	G2FYT	478	G3DBU	130	G3IDG	024	G3NKO	227
DL5YB	085	G2HDO	445	G3DCA	355	G3IES	662	G3NKR	203
DL5YQ	AFF6	G2HHD	436	G3DCZ	325	G3IFM	384	G3NOB	613
DL5YT	418	G2HKU	295	G3DHB	377	G3IGI	565	G3NOL	092
DL5YX	547	G2HLL	512	G3DMK	029	G3INA	375	G3NQT	428
DL5ZC	311	G2HNL	229	G3DNF	185	G3IOI	551	G3NQV	192
DL5ZF	470	G3BA	409	G3DOJ	110	G3IRP	012	G3NUI	140
DL5ZU	378	G3BG	507	G3DPS	090	G3IRR	571	G3NVK	138
DL5ZZ	406	G3BY	513	G3DSS	003	G3IUD	553	G3NWZ	045
DL6AA	379	G3FD	603	G3DWS	695	G3IUH	077	G3NXB	177
G2BQ	461	G3FK	545	G3DWW	197	G3JDJ	244	G3NXM	136
G2EC	001	G3HN	022	G3EBH	473	G3JFW	038	G3NZY	091
G2IO	339	G3HS	321	G3EBO	176	G3JIL	582	G3OEK	164
G2JF	134	G3IV	272	G3ECV	626	G3JIY	646	G3OFB	700
G2KK	530	G3LO	577	G3EDG	683	G3JVD	190	G3OFV	031
G2NJ	492	G3PC	083	G3EDW	323	G3JXL	259	G3OHJ	030
G2OC	538	G3PQ	430	G3EHZ	186	G3JZP	120	G3OKM	363
G2QB	397	G3VA	663	G3EJF	004	G3KAM	465	G3OKX	008
G2TA	372	G3XT	498	G3EM0	010	G3KBN	317	G3OLE	335
G2TN	255	G3ABM	396	G3ENE	274	G3KBQ	482	G3OMH	112
G2TP	018	G3ADS	143	G3ENG	638	G3KJW	648	G3OMT	277
G2TT	291	G3ADZ	039	G3EYD	511	G3KKI	664	G3ONU	076
G2UV	330	G3AES	320	G3FDU	127	G3KKU	279	G3OOD	573
G2UX	480	G3AGO	035	G3FGN	068	G3KLX	206	G3OOQ	685
G2UZ	464	G3AJP	458	G3FMW	131	G3KPQ	099	G3OPL	682
G2WH	146	G3AKF	371	G3FNK	484	G3KWN	463	G3ORY	106
G2WQ	316	G3AMR	493	G3FOP	387	G3KYF	448	G3OUF	189
G2YS	472	G3ARM	222	G3FPC	309	G3KYU	094	G3PCI	627
G2ZZ	509	G3BEC	113	G3FQN	231	G3LAT	283	G3PCV	047
G2ANG	475	G3BEZ	556	G3FTV	367	G3LHJ	359	G3PDS	137
G2ATM	132	G3BGP	326	G3FWD	307	G3LLJ	250	G3PFC	021
G2AUA	502	G3BGR	201	G3FWR	655	G3LMX	025	G3PGM	027
G2AVR	341	G3BHC	476	G3GBS	360	G3LNC	297	G3PHK	144
G2AYQ	178	G3BIC	402	G3GEJ	290	G3LNS	483	G3PMC	529
G2BPW	148	G3BID	381	G3GHE	667	G3LOV	191	G3PNE	079
G2BTO	374	G33BJA	221	G3GJH	554	G3LPS	694	G3PNH	398
G2CAV	332	G3BKK	550	G3GLQ	239	G3LQC	494	G3PNM	410
G2CDN	287	G3BOE	081	G3GVV	104	G3LUN	AFF24	G3POY	534
G2CKQ	568	G3BSW	281	G3GWD	457	G3LXP	162	G3PPK	073
G2CVV	666	G3BTM	412	G3HBE	252	G3MBQ	416	G3PQF	070
G2CVY	270	G3BWV	684	G3HCM	016	G3MCG	276	G3PUW	672
G2DHV	643	G3BWX	620	G3HKR	AFF11	G3MJK	061	G3PYN	569
G2DJM	688	G3BZO	639	G3HMY	634	G3MKR	011	G3RAQ	155
G2DPQ	549	G3CIO	AFF43	G3HPJ	614	G3MUU	165	G3RAZ	019
G2DRT	322	G3CIV	063	G3HSE	352	G3MVT	636	G3RBB	241

Call-sign	No.	Call-sign	No.	Call-sign	No.	Call-sign	No.	Call-sign	No.
G3RBS	180	G3UPY	294	G3XCS	080	G5XB	072	GM3FIZ	369
G3RCJ	157	G3URG	228	G3XEE	405	G5YN	040	GM3GFO	006
G3RFI	133	G3UTI	163	G3XFV	474	G6HB	552	GM3IAA	107
G3RFP	207	G3UTW	535	G3XGT	598	G6LL	393	GM3JIG	471
G3RGE	251	G3UTX	370	G3XHA	336	G6MA	184	GM3JOA	517
G3RGF	135	G3UUA	362	G3XHJ	232	G6QM	510	GM2KLA	087
G3RII	205	G3UUG	086	G3XIP	669	G6RC	064	GM3LWS	089
G3RKD	438	G3UXH	172	G3XRE	AFF3	G6TQ	491	GM3NXA	101
G3RKN	588	G3UZL	411	G3XRS	AFF8	G6UC	531	GM3OJC	128
G3RLM	160	G3VAN	543	G3XSN	343	G6VQ	364	GM3PFU	167
G3RNL	580	G3VBE	456	G3XTL	334	G6ZT	503	GM3PIP	051
G3RNR	267	G3VBL	059	G3XUC	368	G6ZY	235	GM3SAE	193
G3RPJ	242	G3VDF	392	G3XUR	426	G8DK	566	GM3SZK	333
G3RPL	152	G3VDR	119	G3XVO	519	G8JU	161	GM3TDS	337
G3RPV	254	G3VDU	158	G3XWE	679	G8KL/W6	618	GM3TLR	AFF36
G3RQN	236	G3VGN	434	G3XWI	642	G8NY	468	GM3VIO	453
G3RUS	122	G3VIR	224	G3XYF	623	G8PG	026	GM3VVM	467
G3RVO	652	G3VIS	442	G3XZT	612	G8PL	497	GM6RI	125
G3RWM	149	G3VNX	526	G3YBO	386	G8RB	570	GM8SQ	500
G3RYF	599	G3VSA	292	G3YBP	607	G8RF	260	GW2OP	015
G3RYV	256	G3VSF	069	G3YBT	123	G8RY	248	GW3AX	496
G3SAX	198	G3VVE	539	G3YCN	347	G8SC	564	GW3QN	542
G3SDD	479	G3VVH	567	G3YEU	625	G8TK	344	GW3ASW	559
G3SGH	151	G3VYF	327	G3YHL	661	G8TN	533	GW3DIX	488
G3SIG	AFF5	G3VYT	432	G3YIF	635	G8TP	417	GW3GHC	098
G3SIQ	204	G3VYZ	173	G3YJU	610	G8VG	340	GW3HUM	690
G3SJF	200	G3VZP	233	G3YMR	680	G8AFT	215	GW3MSY	262
G3SJZ	234	G3VZQ	AFF42	G3YNB	572	G8ANQ	034	GW3PDD	066
G3SKL	365	G3WBA	243	G3YOB	590	G8APT	071	GW3POD	451
G3SMV	153	G3WBL	124	G3YOY	670	G8AQT	304	GW3RVG	699
G3SNN	209	G3WCP	555	G3YQK	273	G8ARA	525	GW3SVY	285
G3SQB	284	G3WDG	633	G3YSK	692	G8BBP	522	GW3TMH	214
G3SWO	338	G3WEB	647	G3YSZ	179	G8BEI	055	HB9AMS	698
G3SYT	616	G3WEO	446	G3YNT	665	G8BHL	264	MP4TBM	373
G3SYW	183	G3WEQ	060	G4AH	628	G8BKU	632	MP4TDA	046
G3SZQ	266	G3WET	584	G4BC	574	G8BOF	350	MP4TDD	621
G3TAN	268	G3WMZ	506	G4BU	656	G8CDQ	357	PY2PA	595
G3TBP	169	G3WNH	485	G4CJ	269	G8CIA	657	VE3ZM	415
G3TKI	328	G3WNI	521	G4DR	490	G8CIX	424	VE3ZH	141
G3TKL	395	G3WOD	313	G4JT	017	G8DEU	302	VE3CDM	674
G3TLV	604	G3WPW	278	G4LO	499	GI2BZV	501	VE3CQH	067
G3TSR	602	G3WQH	020	G4PX	489	GI2DZG	005	VE3DDR	319
G3TTH	353	G3WQI	421	G4QD	093	GI3ALT	199	VE3GFX	196
G3TUM	121	G3WQQ	468	G4QX	596	GI3HXV	014	VE3GNM	558
G3TXJ	175	G3WRU	631	G4RB	009	GI3IWD	082	VE3RCS	AFF20
G3UAA	454	G3WRY	540	G5FA	654	GI3JEX	544	VK3ET	097
G3UCT	226	G3WTJ	308	G5FG	505	GI3KVD	671	VP1DW	275
G3UDX	217	G3WUT	084	G5GH	247	GI3PUE	AFF7	VP2EQ	425
G3UEV	380	G3WXX	108	G5HZ	023	GI3TZX	346	VP9MI	054
G3UJW	422	G3WZQ	361	G5PM	AFF12	GI5DX	288	VQ8CR	660
G3UNC	459	G3XAV	116	G5PX	265	GI8AYZ	058	VS6AA	282
G3UOL	156	G3XBA	225	G5RY	414	GM2CQI	687	VS6AC	AFF41
G3UOT	356	G3XBR	074	G5TV	182	GM3AVA	583	VS6AF	606
G3UPT	611	G3XBU	194	G5VO	052	GM3AWF	102	VS6AL	440

Call-sign	No.	Call-sign	No.	Call-sign	No.	Call-sign	No.	Call-sign	No.
VS6FX	385	WA8TGA	576	ZL2AUI	673	9H1BE	469	9M2SR	AFF10
W3RX	649	ZB2BC	495	ZL2BBT	696	9J2BC	691	9V1HD	619
W5AI	650	ZC4HS	142	5N2AAF	139	9M2DG	103		
W5VA	650	ZC4IM	435	5N2NAS	245	9M2DQ	300		
WA6CEB	557	ZC4JH	592	5Z4IR	118	9M2GF	210		
WA6HAI	109	ZC4SS	AFF9	5Z4LS	293	9M2RH	AFF45		

MEMBERSHIP LIST
Part II

This Part II contains call-signs which were (and in some cases, still are) held by members. HQ is interested in making this list as complete as possible and if you have held, or still hold, a call-sign not shown in Parts I or II please send details to the General Secretary at HQ.

Call-sign	No.	Call-sign	No.	Call-sign	No.	Call-sign	No.	Call-sign	No.
AC4YN	040	G3HEV	643	GM3VBL	059	VP8CZ	089	ZC4FB	089
D2DA	566	G3HUM	690	GM3VNN	210	VQ2BC	691	ZC4GY	536
D2IZ	090	G3JKO	139	GW3OFV	031	VQ4IQ	660	ZC4LK	405
D2SC	564	G3KVD	671	GW3OPL	682	VQ4SC	564	ZC4SC	564
DJ0AA	643	G3LCT	660	GW8SC	564	VQ4WLH	400	ZC4TJ	225
DL2AD	022	G3LDS	222	LA9YC	040	VS1AF	664	ZC4XX	090
DL2AH	225	G3LWS	089	MD5AJ	097	VS1BJ	638	ZC6DA	566
DL2AM	682	G3NWQ	283	MD5DA	566	VS1HD	619	ZC6JK	564
DL2BB	225	G3PNF	085	MD5EB	664	VS1HG	118	ZD3F	381
DL2BH	438	G3RSV	619	MD7DA	566	VS1LL	022	ZD6SC	564
DL2DA	566	G3RWF	293	MP4BFR	438	VS1LO	210	ZD8TV	254
DL2DO	619	G3SRC	655	MP4BHA	590	VS1ML	031	3A2CK	643
DL2TX	405	G3SRH	439	MP4TAF	588	VS1YN	040	5A3TX	405
DL2VR	566	G3UDU	378	MP4TBU	116	VS2AL	627	5A4TZ	648
DL2YN	040	G3UMI	054	MP4TBW	428	VS5JC	090	5B4BG	536
DL2ZA	454	G3UOL/LX	156	MP4TCM	420	VS5MC	282	5B4CZ	089
DL5XH	116	G3UZX	698	MP4TCQ	329	VS5RCS	085	5B4GY	536
DL5XN	217	G3VIY	418	MP4TCR	437	VS9AHN	022	5B4JY	225
DL5XR	061	G3VNN	210	MP4TCV	447	VS9ALV	506	9H1AW	558
DL5XV	368	G3VPM	435	MP4TCW	601	VS9APR	602	9H1BN	381
DL5XX	031	G3VTU	469	MP4TCX	532	VS9HRV	418	9M2DG	103
DL5YB	438	G3WHS	547	ON8IR	643	VUQ	040	9M2NF	085
DL5YK	405	G3WJL	558	ON8IT	156	VU2YN	040	9M2SR	090
DL5YU	157	G3WME	103	PA9DHV	643	W5AI	650	9M2XX	090
DL5ZX	612	G3WNG	470	PA0XKH	022	XARM	222	9M4LL	022
EI3AH	031	G3XMC	406	PAOXKI	602	XU8DI	566	9M4ML	031
EI6BB	156	G8AIH	665	SU1DA	566	YI3GM	097	9M6AJ	031
EI9BR	671	GI3VYZ	173	SU3GM	097	YU7LCT	156	P/9M6JO	090
F0JA	156	GI3WMZ	506	SV0AL	620	ZB1AR	641	9M8JC	090
F0KI	643	GM2HIK	097	VE2AWO	558	ZB1BE	690	9V1ML	031
G2BPC	118	GM3DPS	090	VE3EW	698	ZB1CP	682	9V1MS	465
G3HN	022	GM3KVD	671	VE3AHQ	558	ZC4BG	536	9V1PF	116
G3EKL	046	GM3NKO	227	VP1HN	022	ZC4CZ	089		

FLASH!

LAST MINUTE LINE UP - ODDS AND ENDS - BITS AND PIECES

++

HQ would like to thank Cyril Cox RSARS 630 and all members of the Reading Amateur Radio Club for the FB collection on behalf of G3YNZ (See previous "Mercury"). Also to members of the Caravan Site who contributed £4 to this very worthy cause.

++

Bill Begg (RSARS 624) collects stamps and specialises in G.B. and Rhodesian issues, but finds Rhodesian stamps a little hard to come by. Anyone else share this interest?

++

R. Webster (RSARS 028) is looking for an ex-German Army valve. Phillips of Holland don't have it and Ron is hoping that someone may have one tucked away somewhere or know a source of supply. The valve is required for a type of receiver previously in use at RAE Farnborough and covers 80 - 500 Mhz and is designated :
UBERLAGERUNGSEMPFANGER R.S. 1/5 UD/42a (FNR 18017).
The valve is a diode and is numbered RD12Ga. Ron is interested in getting the set going and, if successful, would be prepared to sell the receiver for the best offer over £12-0-0. Write to R. Webster, "Citadel", 138 Parklands, Little Sutton, Cheshire.

++

Current frequencies used by MP4TDA and the Overseas members :
14,150, 21,180, 21,325 (pretty rough), 21,380, 28,670 Khz. (Tnx, Ray).

++

I. J. Parkinson (RSARS 608) is now licensed as G3YRQ. He has been on Top band and is now "experimenting" on 80, 40 and 20. A 2 Metre TX also nears completion. He sends regards to all members, especially G3KYF, G3BU and G3SIQ.

++

L. M. Airey of 14 Brandles Road, LETCHWORTH, Hertfordshire, is interested in obtaining technical details of the 5 Inch Mk 5 Heliograph with particular particular to the tolerances of the mirrors with respect to the wavelength of light. Details, please, to Les at above address.

++

G3NUI would be interested in hearing from anyone with a circuit diagram or any details of the "Globemaster" 3 Waveband transistor set, either to sell or loan. Henry's Radio, the suppliers, cannot help. Also G3NUI is now Chairman of a new Radio Club at the North Hulme Evening Centre. New members very welcome and the Club meets on Mondays at 7:30 p.m. (Tnx for the stamps for R.A.I.B.C., OM - Ed.)

++

FLASH

PART 2

G3YSK has also been elected as Chairman of a new Club, this time at Winchester. John also collects stamps mainly Great Britain and Germany - all periods.

++

An interesting letter to hand from G3YSZ (RSARS 179) prompted by the mention in a previous "Mercury" of the "Gin Palace". G3YSZ says ; "..... memories of GIN Palaces and many a rough ride especially one we had in the desert around 1922 to the salt lake area - how we ever got there with those tyres I'll never know - other than by laying earth mats on the sand at times. We were then using 60 Watt sets and 120 Watt sets on C.W., home made, from aerials which we raised on the roof on 30' masts, also 300' twin aerials. We also carried pigeons - just in case! Ships of the Desert! Lt. Kennett B.B. was the Officer in Charge. We supplied the communications back to Cairo for the 3rd A.C.C. from Abbassia who were then on desert trials with armoured cars. Ever heard of the "YIMKIM" set at Polygon?" ('fraid not, but I'm sure someone will be dropping a line saying "Yes" - Ed.)

++

From the Journal of the Nigerian Amateur Radio Society - "Samaru Post Office will now sell and exchange IRCs, but they refuse to accept British ones sold three years ago at 1/-. They will also not look at those date-stamped on the wrong side, or not date-stamped at all; such errors make up at least 2% of those IRCs received here in Nigeria from overseas. Neither will they take the older style of Commonwealth Reply Coupon, i.e. the ones that do not specifically state that the exchange value in Nigeria is 6d." RSARS members please note when sending IRCs etc to Nigeria.

++

The A.R.M.S" in conjunction with the United States Air Force will be holding an Open Day/Rally at Alconbury Base, Huntingdonshire on 4th/5th July 1970. This will take the form of a carnival to celebrate American Independence Day on the 4th and a Rally-cum-Getogether on the 5th. Open to all, so mark the date in your diary!

++

QSL cards for the following VS9 stations are still held at RSARS HQ ; VS9AAI, VS9AAS, VS9ADP, VS9AHN, VS9AOP, VS9APB, VS9ART, VS9ASP, VS9HAC and VS9KAB.

++

All for now, 73 from all at RSARS HQ, Blandford.

ROYAL SIGNALS AMATEUR RADIO SOCIETY
APPLICATION FOR MEMBERSHIP

I wish to apply for membership of the Royal Signals Amateur Radio Society, and, if elected, agree to abide by the Rules of the Society as published and amended. I understand that, if elected as an Annual Member, Membership fees are payable on joining and thereafter on the 1st January each year, except in the case of members joining on or after 1st September when Annual Membership is free for the remainder of the current year. I also understand that current membership fees are as follows :-

Annual Membership : 10/- per Annum

Life Membership : £5-0-0

Club Affiliation : 10/- per Annum or £5-0-0 Life Affiliation

I enclose CHEQUE/MONEY ORDER/POSTAL ORDER/CASH* (Cheques and Orders crossed and made payable to "THE ROYAL SIGNALS AMATEUR RADIO SOCIETY" and cash Registered) to the value of £ : : ., in respect of ANNUAL/ LIFE Membership.
The Society reserves the right to publish details of all members unless any member expressly wishes otherwise.
I DO/DO NOT* object to my membership details etc., being published by the Society.

****

PLEASE GIVE DETAILS OF YOUR SERVICE/QUALIFYING CONNECTIONS ON THE REVERSE OF THIS FORM

****

Rank (if any) Surname Christian Name(s)

Call-sign or SWL No. : Other calls held :

Address for correspondence :

Date : Signature :

(* = delete where inapplicable)

****

Membership if approved, becomes effective from the first of the month in which application is made.
When completed, please return this form, with membership fee, to :-
W.O.I (F of S) J. Cooper, G3DPS, General Secretary R.S.A.R.S., 15 Valley Road, Blandford Camp, Blandford Forum, Dorset, U.K.

****

For Office use : Recd. Chkd. Treas. Card. Merc. No.

****

SUPPORT YOUR SOCIETY - THE ROYAL SIGNALS AMATEUR RADIO SOCIETY

ROYAL SIGNALS AMATEUR RADIO SOCIETY

**********Members Supplies**********

Members Notepaper - At present a new printing of Members Notepaper is being arranged. It is hoped that the new notepaper will be of the same, or better, quality than the old stock but, at the moment, prices cannot be quoted. However, every endeavour is being made to keep the price as low as possible. Details in next "Mercury" or from Gen. Sec.

Members QSL cards - Again a reprint is under way and the new cards will carry a gold overprint "ROYAL SIGNALS JUBILEE YEAR - 1970". It is regretted that there has been some delay in overprinting call-signs, etc., but it is hoped that the back-log will have been cleared by the time this issue is received. Prices should remain as before : Plain - 10/- per 100, 37/6 per 500 both post free. Overprinted with your call-sign, RSARS number, name and address - 52/6 per 500 post free. Minimum quantity for overprinting is 500.

Members Lapel Badges - In light blue, dark blue and green, with RSARS initials at 2/6 each. With your call-sign 7/6 each.

RSARS Ties - In good quality Crimplene and Terylene, dark blue, with alternate "Jimmys" and Society badges. Manufactured by a leading London Colour House. 25/6d Post Free.

Log Books - By N.W. Electronics. Good quality white paper, over 100 pages. 7/6 Post Free.

ORDER FORM.

To : W.O.1. (F of S) J. Cooper, G3DPS
15 Valley Road,
Blandford Camp,
Blandford Forum,
Dorset.

From : _____
_____
_____
_____

Date : _____

Call-sign _____ No._____

Please supply the following goods :-

			£ s d
_____	Sheets of Members headed Notepaper	@ 8/4 per 100	_____
_____	Basic QSL cards	@ 10/- per 100	_____
_____	Basic QSL cards	@ 37/6 per 500	_____
_____	Overprinted QSL cards in (colour) _____	@ 52/6 per 500	_____
_____	Plain lapel badge(s)	@ 2/6 each	_____
_____	Call-sign lapel badge(s) (_____)	@ 7/6 each	_____
_____	Society Tie(s)	@ 25/6 each	_____
_____	Log Book(s)	@ 7/6 each	_____
_____		@	_____

Note ; All prices post free. Overprint colours RED, BLUE, BLACK, GREEN.
I enclose Cheque/Money Order/Postal Order/Cash to the value of _____ to cover cost including postage. Please cross Cheques etc., and make payable to "ROYAL SIGNALS AMATEUR RADIO SOCIETY". Register cash.

Signature : _____