



MERCURY

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OF
THE ROYAL SIGNALS
AMATEUR RADIO SOCIETY

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EDITORIAL

Getting this edition of MERCURY ready has not been easy. As you will see it is not up to the standard of past editions, although we have plenty of news of members there is a grave shortage of technical and general interest articles.

We have an article on modifications to the WS36 transmitter, which will be of interest to our Affiliated Clubs particularly, and some rather offbeat views on how to pass the RAE. The results of the Contests held earlier this year will be eagerly awaited by those who took part and we have taken this opportunity to reissue the Society Rules complete with the amendments approved at the A.G.M.

The list of additions to the membership list published with our last issue shows how rapidly the Society is growing.

Let us be sure that the standard of MERCURY is not in inverse proportion to the numbers of readers. Several members have written to say that they are working on contributions but the number received in the first six weeks of 1965 could be counted on the fingers of one hand.

Whilst MERCURY is struggling there is plenty of interest in Society affairs. The Fund Raising Draw has been well received and many members have asked for further books of tickets, several members have asked us to make Society notepaper available and it is hoped to make an announcement in our next issue. The initial order for Society QSL cards is nearly exhausted and our printers have informed us that the next lot will be more expensive. Nevertheless they will still be much cheaper than buying 500 from one of the well-known QSL printers.

So until next time 73 from all at G3CIO, let's be hearing from you.

ECHO JULIET FOXTROT

LETTERS TO THE EDITOR

Havant,
Hants.

18 Jan 65

Dear Sir,

Record of AGM, 28 Sept 64

I am concerned to note item 22 (Rule 5a) of the above report, as published in Mercury, dated January, 1965.

As a Founder Member of the Society, I suggest that we may have forgotten some fairly recent history. It can be reasonably claimed that the origin of R.S.A.R.S. sprang from the Army Wireless Reserve Amateur Radio Society, formed by my Squadron (now 404 Sqn AER), in 1952. For several years previous to that date, I had been trying, as an individual radio amateur to persuade War Office to permit the formation of an Army Amateur Radio Society. This effort was on the grounds that for many years both RN, and RAF had National Amateur Radio Societies, with official support and finance. Many recruits were gained through the Societies, and they also make a major contribution to hobby activities and technical self-training.

I am as proud as anyone of our Corps, which is the keystone of Army communications, but surely we must recognise the fact that in this day and age, many serving and ex-service radio amateurs are members of other Corps and units. The Army is now technical, as a whole, and in particular I think we should remember our close association with R.E.M.E.

Elsewhere in the Report, reference is made to Finance and the Bulk Purchase Scheme. I would suggest that both these things could be improved and extended if we were more inclined to open our doors to non-R Signals members. Our role should surely be to lead and encourage. I think that the whole matter should be most carefully considered by the Officers and Council.

Yours sincerely,

(Major D.W.J.Haylock, R.A.R.O.) G3ADZ

(Item 22 read:- "The amendment sought to allow serving members of non-signals army units to become members of the Society. After much discussion it was proposed by Major Garlick and seconded by L.Cpl Scottorn that serving members of non-signals Army units should NOT be allowed to become members of the Society. This proposal was carried by a majority vote.")

THE CYPRUS STORY

(Compiled from notes supplied by ZC4CZ and ZC4TX)

Last October the Cyprus Republic Government proscribed amateur radio and confiscated the equipment of stations over whom they had jurisdiction. However it was soon realised that under the agreements setting up the Republic the Sovereign Base Areas had their own administration and had control of their own communications. As a result an entirely new amateur licence was issued using the old prefix of ZC4. Briefly it is necessary to hold a UK licence and this resulted in several of the old 5B4's failing to re-emerge. However there has been little loss of activity as a result although the power limit on Top Band has been reduced from 150 to 10 watts, the wording of the new licence being identical to that in force in UK.

At the time of going to press the following callsigns have been issued to military personnel:-

ZC4CZ, TX, PR, BG, KF, GY, TJ, SS, LX, DX, CI.

The RAF are represented by:-

ZC4KW, PF, GB, GT, AK, HK, RA, MO.

An unfortunate outcome of the action of the Cyprus Government has been the closing down of 5B4WR's beacon transmitter whose transmissions on the 28 Mc/s band were part of the amateur radio propagation studies during the International Quiet Sun Year.

Despite all these upheavals Cyprus stations have been active during recent contests, ZC4CZ was known to be active during the RSGB 7 Mc/s CW contest, ZC4TX amassed 7588 points on the 3.5 Mc/s band during the CQ CW World Wide DX contest whilst ZC4CJ claimed over 13,000 points for a multi-band entry in the same contest.

A photo of ZC4TX recently appeared in the RSGB Bulletin, a nice neat looking station with plenty of QSL cards on the wall many of them the result of the work of Dave Bullard who has recently left for colder climes.

Even at this stage of the sunspot cycle the ZC4's are easy to work on 21 Mc/s and UK members are asked to look out for the callsigns listed above.

AMATEUR RADIO GOES "JOINT"

Amateur licences in Aden are shortly to be put on the same footing as those in U.K.

Arrangements are in hand whereby the RAF will be responsible for checking an applicant's qualifications. Whenever possible any necessary training will be given to enable would-be amateurs to pass the RAE and the Morse Test. It is hoped that this will enable holders of VS9 licences to obtain a G ticket on their return to U.K. As is well known, only overseas licences issued under similar conditions to those in U.K. are acceptable to the G.P.O.

CONTEST RESULTS

The results of the Royal Signals Amateur Radio Society contests show an extremely close finish in both sections, the scores are as follows:-

<u>CW Section</u>	<u>Phone Section</u>
Points	Points
1. G3LUN 194	1. G3EKL 145
2. G3LHJ 192	GW3TMH 145@
3. G3DSS 167	2. G3RCJ 144
4. G3ARM 165	3. G3DSS 143
5. G3SJZ 156	4. G3RF/A 135
6. (G3RCJ/A 155	5. G3SJZ 132
(G3RWF/A 155	6. (G3OAZ 123
8. G3EKL 143	(G3LHJ 123
9. GI2DZG 133	8. G3LUN 102
10. G3LWQ 125	9. (G5YN 60
11. G2IO 122	(G3PMZ 60
12. G3PMZ 110	11. G4JT 52
13. G8VG 103	
14. G3IDG 102	
15. G3DWW 20	
GM3TMH 10@	

(@) Disqualified under Rule 5, log received too late for inclusion.

GW3SVY)		(G3SJB
G3NVK)	Known to be active but no logs received.	(G2HNL
G3OLE)		(G3OMT
G3IV)		(G3IV
G3TNU)		(G3IJVK
G3RSL)		(G3AES
G3OMT)		(G3TNU
GI5DX)		(GW3SVY
DL2BL)		(G3GLQ
G3KLX)		(G3OMH
G3DOJ)		(G3TBP
	(G3OLE	
	(G3CVY	
	(G3GVV	
	(G3DMK	
	(GM3GFO	
	(DL2BL	

As a matter of interest the scores at G3CIO were 167 on CW and 196 on Phone.

Last year 19 stations were active on CW and 21 on Phone and the winning scores were 132 points on CW and 154 points on Phone.

This Year's Winners

G3LUN is the callsign of our affiliated club at 65th Signal Regiment (TA) and the operator throughout the contests was Paul Scottorn G3RFI, now on the permanent staff of the Regiment but well known to many members as one of the operators of G3CIO prior to last summer. The transmitter in use was a Heathkit DX35 and VF-I running 40 watts, the receiver an AR88D, and the antenna a 100 foot end-fed some 50 feet high on the roof of the TA Centre but overshadowed by adjacent buildings.

G3EKL is the callsign of Ray Webb of C.O.D. Donnington and the QTH is near the village of Wem. A home-brew transmitter consisting of a 6V6 VFO and 6V6 PA modulated by a 6V6 drove an 813 linear amplifier to 150 watts. The antenna was a North/South dipole and the receiver a hotted-up HRO.

Scrutineers' Report

Once again there were a surprising number of logging errors and this resulted, particularly in the Phone Contest, in changes in the order of the leading stations. It may interest contestants to know the system used in checking their entries. Firstly the logs are sorted in order of claimed scores, one scrutiner takes the log claiming the most points and the other goes through the other logs checking the numbers exchanged and counties of the contacts made by the leading scorer. Once this has been done the next highest log is passed to the first scrutiner and the whole process repeated. Where any discrepancy is found the contact is ruled out of both logs. Having checked all the logs, the membership numbers and counties of contacts with stations who have not submitted a log are checked. Finally the points per contact are checked and amended where necessary due to contacts being ruled out.

A certain amount of confusion was caused unwittingly by two stations. In the early stages of the Phone Contest G3SJZ sent his county as Bristol, true that it is "the City and County of Bristol" but it counts as Glos. G3OLE sent his county as London/Middlesex, a check in the Call Book and the membership list shows his QTH to be London N22. Both RSGB and the SWM's WBC Rules say "London Postal Districts count as London" so we counted it as London.

One or two outsiders tried to muscle in but 001 is General Cole and 002 General Whistler so it was fairly easy to spot them in the logs. Although the accuracy of some of the logs left a lot to be desired the neatness and legibility of all of them made the task of checking easy.

Your Comments

So long since I did any CW that my fist was 'orrid - G3DSS. I'd forgotten what a morse key looked like - G3EKL. Standard of operating was high as always - GI2DZG. Some good ops around - G3DWW. Found afterwards I'd worked one Major, two Captains, one Lieutenant, one Sergeant, one Corporal and (presumably) six civvies. They had the privilege of contacting one ex-signalman, 1943 vintage - G3IDG. Investigation revealed that the antenna lead-in had been sabotaged, it may be coincidence but the linemen were on weapon training near the o/c - G3PMZ. I had to cook my own lunch - G3RCJ/A. Funny how PA's and DJ's think they are "R Sigs" - G3LUN. Either I've a helluva signal and a poor receiver, or something is screwy with these reports - G3EKL. We certainly stirred up 80, all the locals were complaining even more than usual - G3DSS. Where have all the members gone - GI2DZG. Sad to hear the same old voices crying their not very hopeful CQ's - G3DSS, Poorly supported particularly the Phone section - G3LUN.

Catterick Comments

While all those who have submitted logs seem to have enjoyed themselves, the number taking part has not increased in proportion to the increase in membership of the Society since last year. Why this is so is a mystery, do so few members enjoy contest operating? Did some miss the contests because they forgot the dates? Is eighty an unpopular band? We wonder what the answer is!!

Some of you have made suggestions as to how we should organise future contests, it is intended to publish some of these in the form of Letters to the Editor in our next issue. If you have any ideas please write, we'll be delighted to hear from you.

It was interesting to read of the huge range of equipment used. Power ranged from 150 watts down to the 12 watts with which G3LHT came second in the CW section. For your information G3CIO used an LG300 for CW and A3, a Viceroy for SSB, Racal RA 17 and Eddystone 888A receivers and a dipole antenna 45 feet high. The operators were Derek G3TBP, Bob GW3RZQ and Johnny G3EJF.

There was activity from G, GI, GM, GW and DL2BL was the sole representative of BAOR. He showed great determination in sticking with it during the Phone section when although he could hear UK members he couldn't raise them.

So congratulations to the winners and many thanks for some enjoyable operating.

THE RAFFLE WINNERS

First prize (£30. Heathkit Credit Voucher)
Ticket No. 7034 (Major A.D. Taylor GW8PG)

Second prize (Jason Everest portable receiver)
Ticket No. 1542 (F.E. Wylie, c/o G3MEF)

Third prize (Stentorian 10" Speaker)
Ticket No. 8566 (J.A. Shelton GM3TDS)

MODIFICATIONS TO THE WS 36

G3JXL and G3SQB

Editorial Note:- The Society has several WS 36, which it can loan to Affiliated Clubs. Several Clubs are already using this set and this article gives one club's approach to the necessary modifications.

The WS 36 in its original form covered 10 - 60 Mc/s using two 807's in a push - push doubler circuit as its PA. Whilst the modulator/power supply unit requires little modification fairly comprehensive changes in the R.F. unit are needed if it is to be a five band transmitter with the stability required by modern amateur standards.

Modulator/PSU

In order to enable a crystal microphone to be used further amplification is needed. The Line Transformer T6A and the gain control were removed and a small platform fitted under the chassis to house the additional microphone amplifier which consisted of a triode connected EF91. Resistance-capacity coupling to the grid of V4A incorporated a 500K potentiometer as gain control.

The jack socket on the PSU is rewired in parallel with the Send/Receive switch for control of the transmitter. A jack plug is inserted and the pair of wires connected to the TRANSMIT terminals on the rear of the AR88D. A short circuit on the jack will put the TX to send. The existing Send/Receive switch on the PSU can be used as a local control and is also used for "netting" with the "facilities" switch set to CW. The MCW facility is still retained.

R.F. Unit

Apart from the voltage stabilisers, modulation transformer and "Magic eye" tuning indicators this unit was considerably modified.

The rebuilt transmitter consists of a Clapp oscillator with a tuned anode, a buffer-multiplier and parallel PA, the original valves being used. Switched coils were used throughout.

The resonant frequencies of the various circuits for each band are as follows:-

VFO Grid	VFO Anode	Buffer Anode	PA Output
160m	80m	80m	80m
80m	40m	40m	40m
40m	20m	20m	20m
80m	40m	15m(tripler)	15m
40m	20m	10m(doubler)	10m

Although the modifications to the RF unit seem fairly extensive at first sight very little hard work is necessary.

To begin with, remove the coils from PA, Buffer and MO. Then remove the MO section wiring so far as the tuned circuit is concerned. Remove the MO tuning capacitor and fit in its place the existing PA tuning capacitor. The discarded MO capacitor becomes the new PA capacitor, fortunately both are wide spaced. Leave the Buffer tuning capacitor and use half only (200pF capacity). Use the same tuning dials. Remove the MO/Xtal switch and fit in its place a Yaxley type 2 pole 3 position switch for VFO switching (see circuit).

Remove the Xtal cover plate and Xtal socket and fit a new plate over the hole in the front panel and fit a single pole two position switch in the centre of this plate for Buffer switching. Next wind the VFO grid and anode coils, a good job must be made of the grid coils or stability will suffer. Note that the grid coils are tuned but the anode coils are made self-resonant with circuit capacity and the iron dust cores of the coils set to the H.F. end of the band in question. This is because the output falls with increase in frequency with Clapp oscillators and so with the anode coil set to the H.F. end a reasonably flat output is obtained.

Coil Winding Data (VFO)

Range 1, 80m output (used on 80m only)

VFO Grid - 120 turns close wound with 20 SWG enamel on 1" diameter former.

VFO Anode- 70 " " " " 28 " " on $\frac{3}{8}$ " Aladdin former (iron dust core).

Range 2, 40m output (used on 40m and 15m)

VFO Grid - 64 turns close wound with 20 SWG enamel on 1" diameter former.

VFO Anode- 50 " " " " 20 " " on $\frac{3}{8}$ " Aladdin former (iron dust core).

Range 3, 20m output (used on 20m and 10m)

VFO Grid - 30 turns one turn spacing 20 SWG enamel on 1" diameter former.

VFO Anode-20 " close wound with 28 SWG enamel on $\frac{3}{8}$ " Aladdin former (iron dust core).

All the above coils to be "doped" with Denco Coil Dope or any similar polystyrene dope and allowed to dry.

When coils are ready fix in place and wire up, check resonant frequency with a Grid Dip Oscillator, and complete VFO wiring as per circuit diagram.

Coil Winding Data (Buffer)

Range 1, used on 80m and 40m

18 turns close wound with 16 SWG enamel on 1" diameter former and tuned by the 200pF capacitor to 80m or 40m as required.

Range 2, used on 20m, 15m and 10m

8 turns one turn spacing with 16 SWG enamel on 1" diameter former and tuned by the 200pF capacitor to 20m, 15m or 10m as required.

Do not dope these coils, wire in as per circuit. The tuning capacitor is the existing split stator but only one section is used.

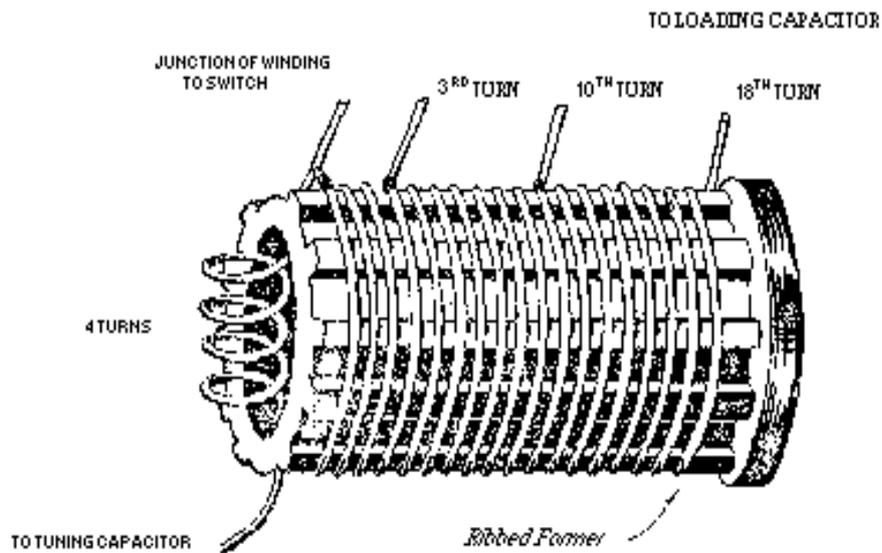
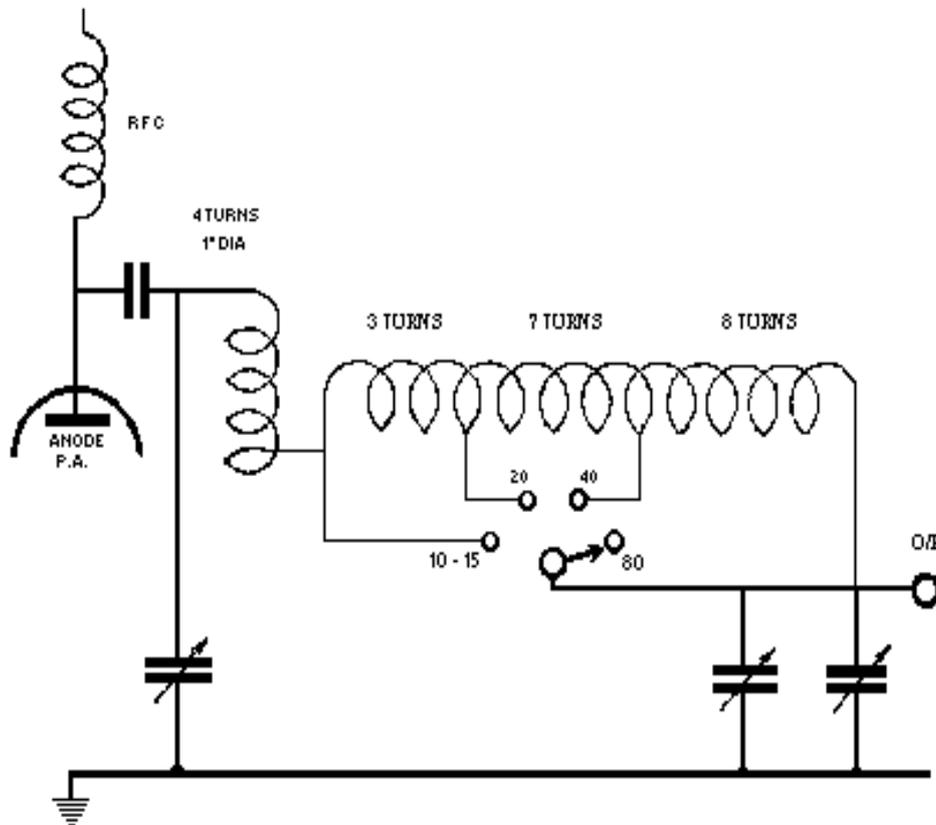


FIGURE 1



LARGE COIL 18 TURNS - 1 TURN SPACING - $2\frac{1}{8}$ " : DIA
 OTHER COIL 4 TURNS - 2 TURN SPACING - 1" : DIA

Pi-Tank Coil for P.A. Circuit

Use one of the large formers obtained by dismantling one of the plug in coil units. This is approximately 2 1/8" diameter and ribbed for one turn spacing.

Wind a 4 turn coil on a one inch diameter former with 16 SWG enamel wire and slide off the former, this becomes the 10m and 15m P.A coil. It is located at the end of the 2 1/8" diameter former at right angles to the main coil winding. The main coil is wound before the 4-turn coil is actually fitted and consists of 18 turns of 16 SWG tinned copper wire tapped at 3 turns and 10 turns. The construction of the P.A. coil is shown in Figure 1, as is the wiring of the P.A. band switch.

The P.A. coil on 10m and 15m is the 4-turn coil only. When wired in circuit set the tuning capacitor to minimum capacitance, the loading capacitor to maximum capacitance and adjust the spacing of the 4-turn coil to obtain resonance at 30 Mc/s using the G.D.O. (the P.A. Range Switch must of course be set to 15 & 10m).

NOTE - all coils should be set to resonance in circuit with the aid of a G.D.O. The number of turns given may vary slightly due to differences in wiring and coil layout. However no great difficulty should be experienced if the above figures are adhered to.

The large coaxial socket on the front panel was removed and a small broadcast receiver type 2 gang 500pF fitted on the front panel as the Loading Capacitor. A smaller, TV type, coaxial socket was fitted for the R.F. output and a similar one for the aerial feed to the receiver.

The P.A. coil is fitted on the chassis and the P.A. range switch on the front panel above the P.A. tuning dial which can be changed for a small tuning knob fitted directly onto the capacitor shaft. There is no need for a slow motion dial, thus giving more front panel space. The pi-Tank circuit R.F. Choke is the Labgear type specially made for this application and is obtainable from Labgear at a cost of 10/6d.

The Aerial Change Over Relay is a single pole two-position type with 1000 ohm coil and it is fitted near the P.A. tank circuit on the metal support running from the top of the front panel to the top rear of the chassis. It is operated in series with the Send/Receive relay (which is located on the Modulator/PSU chassis) by the bias supply. It is wired in circuit by breaking the Drawer safety circuit at a convenient point.

Grid stoppers in the P.A. grid circuits consist of 220 ohm 1/4 watt resistors. Anode stoppers are 1 watt 33 ohm resistors with 6 turns of 20 SWG enamelled wire wound round them. All stoppers are wired in as close as possible to the anode cans and grid pins.

All resistors except in the VFO grid circuit are exactly as in the original circuit.

After checking the circuit power can be applied with the "Facilities" switch to CW.

Set the Range Switch to Range 1 (80m) on the VFO. Check by using the receiver or a BC221 that the grid circuit of the VFO is on 160m and check the coverage which should be 1.75 to 1.9 Mc/s, add small capacitance fixed capacitors if the frequency is too high. If the range is too great remove vanes, one at a time, from the VFO capacitor until the correct range is covered.

The anode coil is next adjusted for resonance and checked, by using an absorption wavemeter that it is on the correct frequency (80m). Adjust the iron dust core for resonance at 3.7 Mc/s by using the magic eye indicator V3A.

Repeat the above procedure for the other ranges.

Connect a Dummy Load or a 40 watt lamp to the output socket and switch to RT making sure that the modulation gain control is at minimum. Tune up on 80m. Adjust the drive by rotating the Buffer Tuning capacitor using the tuning indicator V3B. Check with the absorption wavemeter that the Buffer is tuned to 80m and that the P.A. is also tuned to 80m. Note that with the large capacitor in the buffer stage it is easy to tune to an incorrect harmonic so the dial of the Buffer tuning must be calibrated.

Repeat the above procedure for the other bands.

The transmitter when correctly adjusted will have sufficient drive as indicated on the tuning indicator V3B, to drive the P.A. correctly for anode modulation on all bands. The drive will actually vary between about 8mA on 80m to about 4mA on 10m. This is a little low on the latter band but the P.A. will still be in Class C due to the fixed bias, the P.A. does not rely on drive to bias back to Class C.

Results

A WS 36 modified as described has been in use for some time at G3TIA, the club station of 58th Signal Regiment TA at Wolverhampton. Operation has so far been confined to 80 and 40m and there has been no TVI. The transmitter has proved extremely stable and received reports have rarely been poorer than those given.

The values of some of the components vary from one WS 36 to another but this has not proved a problem.

Final word on the modified set comes from the chief operator of G3TIA - it's a big ugly brute but I love it.

QUOTE

"Younger members of the Amateur Societies who join the Royal Corps of Signals (Territorial Army) will find there opportunities for a great deal of wireless work which should be of use to them in maintaining their own sets; and in other directions they will gain technical experience which is beyond the reach of the ordinary Amateur.

I cannot help feeling that a close liaison between the Amateur Wireless Societies and the Divisional Signal Unit of the District would result in much mutual benefit".

From an article by Lt Col J. Waley-Cohen in Wireless World

March 17th, 1923.

AROUND THE CLUBS - G3PYZ

The following article by G30AZ is reprinted from "Junior Mercury", the Journal of the Junior Leaders Regiment, Royal Signals with the kind permission of the Editor.

Many issues of the "Junior Mercury" have been published since news of the Amateur Radio Club last appeared in print and a great many things have happened since then. During the three years of its existence the club has had many homes around the camp, none of which has been ideal. The club has also suffered a great deal through lack of equipment. With the arrival of the new Commanding Officer our luck changed. The Club now has three rooms in block 21, which is situated well away from the power and telephone cables within the camp. With the help of the Quartermaster's Department and RE's, work is well in hand to prepare these rooms for radio equipment. One room is already fitted out as a listening room with four receivers and it is hoped that by the time these notes appear in print, another room will be fitted out as the main transmitter room, complete with all the necessary equipment.

At long last amateur radio from Denbury has come to the front of hobbies and the past term has meant a great deal of hard work, especially by the club members.

At the start of term unused telegraph poles were discovered around the camp. These were dug out on hobbies nights; next, the co-operation of the QM and RE's made possible the fixing of 25ft. steel extensions to the poles. The complete assemblies were then erected adjacent to the club after the digging of 6ft. deep pits for the base. We now have a really fine multi-frequency antenna arrangement suspended between these poles.

A third pole is shortly to be erected and this will make possible the erection of two further antennas to give the club coverage for transmitting and receiving to and from all corners of the globe. Thanks must be given to Sgt "Chalky" White for his valuable advice and help with the erection of the telegraph poles. It is understood that he is looking for a more sedate trade now.

Within the club the term has been spent in becoming familiar with the receiver. Members have been logging stations heard on the various amateur frequencies and grasping the fundamentals of radio communication. Next term it is hoped to continue this and also to establish G3PYZ as a station to be heard throughout the world. Other activities will be the logging of short-wave broadcast stations and sending reports of reception to the stations in order to obtain QSL (verification) cards. Radio and antenna theory instruction as well as morse instruction is also proposed.

To help achieve all the above, we are fortunate to have with us Sgt J. Smith who is licensed by the G.P.O. as G3TNU and also Sgt M. Murphy who operates a British Receiving Station, as a member of the Radio Society of Great Britain, and we hope that he is successful in the December City and Guilds examination for the Radio Amateur's Licence.

We also wish the various troop officers success in the same examination.

Finally, in response to the many times I have been asked, the requirements for an amateur transmitting licence from the G.P.O. are as follows:-

A pass in subject No. 55 C. and G. (Radio Theory).

A twelve-word per minute sending and receiving test at a Post Office Radio Station.

With successful completion of the above an application is made to G.P.O. HQ in London.

You are now on the threshold of the world's greatest hobby along with at least 10,000 UK stations and thousands throughout the world. From the comfort of your own home you operate a transmitter and receiver and talk to fellow Amateurs who may be just down the road, up country or across the world. Amateur radio does not observe the barriers of race, creed, politics or rank, and is truly international in all aspects.

POINTS FROM YOUR LETTERS

"..... thank you particularly for the June issue which described that electronic key which has given me immense pleasure. Mounted in an earthed biscuit box it gives everything necessary for decent keying and is TVI proof, which my OZ7BO was not."

G3ARM

"Angus HZ2AMS is in hospital in Dammam with a slipped disc, if anyone wants to drop him a line his QTH is c/o D.E.S. Co, PO Box 74, Dammam, Saudi Arabia."

ZC4CX

"Our Top Band transmitter is coming on slowly so if anyone wants to try working us on this band let us know."

ZC4TX

"Speaking of Germany, DL hides a multitude of foreign nationals, I have heard some people in Cyprus with a very blasé attitude to "those Europeans". The story is told, and it's true, of a well-known 5B4 being called by DL2AH and complaining how this chap had pestered him all night. It was pointed out who DL2AH could be, one of the most popular ex-members of the Cyprus Amateur Radio Society and a bastion of 5B4TJ".

Barrie Clark ex 5B4CL

"I have come to the conclusion that if I spend much more time on 7Mc/s CW I'll go grey. I never knew there were so many stations all with the same call, prefix and suffix. I don't think I have completed one QSO in the past month, the only people who understand "QSX 7005" are the lids that are in the blacklist anyway."

ZC4CZ

WHO'S AFRAID OF THE R.A.E. ?

by G3MTU

Once, in the dim and distant past, the author having boundless self-confidence and a slight acquaintance with the theories of radio and electronics decided to sit the RAE. When the results were announced he was only slightly surprised to find that he had passed! It must be here recorded that many of his friends claimed that this was only because the examiner could not bear the thought of being faced with a similar load of rubbish the following year.

Now that several years have passed he feels it incumbent upon himself to give to the young a full understanding of his method of getting on the air without knowing anything about it. The newcomer must first realise that it is illegal as well as almost impossible to:-

1. Bribe the examiners.
2. Get someone else to sit for you.
3. Get the information into the room by means of a miniature RX.

These restrictions leave only one course open to our would-be amateur. This is to sit the exam. To sit the examination one does need a minimum knowledge. It is the author's earnest desire to impart this knowledge by means of specimen answers thus:

Q1.

State what practical precautions should be taken when erecting an aerial system. Describe how an aerial system of your own choice could be matched to the output stage of your transmitter.

Answer

The erection of aerials is fraught with hazards. One of these is falling off the ladder not to mention

- a. Hitting your thumb with a hammer
- b. Appearing before the magistrate for using obscene language
- c. Getting the wire round your neck
- d. Sitting on the beam rotator.

From this we deduce that the precautions to be taken are:-

1. Take out an Insurance Policy
2. Get someone else to do it.

It is also advisable to ensure that the aerial is erected by night and is as inconspicuous and as well camouflaged as possible. This will reduce TVI complaints from the neighbours enormously as they will not realise that it is you (never give your callsign either).

The matching of the transmitter is of greatest importance. The thing to consider is IMPEDANCE. This is not what the kids do when they get in the way but something TECHNICAL. It can be simply explained by saying that

$$Z = \frac{E}{I}$$

Knowing that $E = mc^2$ the rest is easy.

Let us now suppose that we have an aerial system with an impedance at the feed point of 600 ohms, feeder at 98% ohms and a transmitter with an output impedance of 75 ohms.

The process of matching is quite simple and is as follows:-

1. Go to the nearest shop and purchase a sufficient length of 75 ohm feeder.
2. Write to all the manufacturers of aerials to see what they sell with a 75 ohm impedance.

In the meantime just plug that which you have together and press on regardless.

QUOTES

Two astronauts on the moon fixing up their radio equipment:- "Hey George, what do we do with this wire marked EARTH".

(acknowledgements to RADIAL)

The radio amateur who works in No 1 Factory and regularly sends messages to his mates with an air-operated tool should remember that there are others in the factory who can read Morse!

(from NUSLECA, the house magazine of Lec Refrigeration Ltd)

This SSB stuff isn't so wonderful, it's only giving the phone men the efficiency that CW has always had.

(heard on 160 recently)

MEMBERSHIP LIST - AMENDMENTS TO 1 MAR 65

LICENCED MEMBERS

DELETE: GW3ONU, 5B4NO, 9M4LL, 9M4LS.

CHANGES OF ADDRESS ETC.

G3HN Lt Col W.W. Cock, Live Oak, SHAPE, BFPO 6.
G5YN address is Greystones, Teffont etc.
G3CRP J. Piegou, c/o National & Grindleys Bank, 13 St James Square, London, SW 1.
G3HCM D. Dumbleton, 11 Woodburn Close, Allesley Park, Coventry.
G3JFW membership number is 38.
G3JXL Mr H.L. Jones, c/o G3CIO.
G3NZY R. Shelley, 124 East Parade, Heworth, York.
G3ROY Club Station 50(N) Sig Regt TA, Low Gosforth House, Newcastle on Tyne 3.
G3RPVT.J. Venn, Ascension Island.
G3TAN Sgt D.T. Llewellyn, WO's & Sgt's Mess, 20 Armd Bde Sig Sqn, BFPO 41.
5B4CZ amend callsign to read ZC4CZ.
5B4TJ amend callsign to read ZC4TJ.
5B4TX amend callsign to read ZC4TX.

NEW MEMBERS

G2IO J. Lees, 17 Trevoze Gardens, Sherwood, Nottingham. 339
G3CJF J.E. Whittaker, 237 Coal Clough Lane, Burnley, Lancs. 362
G3FTV F.A. Grant, 49 Kirkby Road, Ripon, Yorks. 367
G3GBS M. Sandoz, 41 Elizabeth Road, Moseley, Birmingham 13. 360
G3LHJ D. Webber, 14A Keyberry Road, Newton Abbot, Devon. 359
G3NBM Major M. Creighton, c/o Midland Bank, Tudor Square, Tenby, Pembroke. 334
G3NMQ P.J. Crosbie, 124 Mitcham Road, West, Croydon, Surrey. 341
G3OKM WOII J. Mitchell, 8 DLI(TA), TA Centre, High Street, Stanley, Co. Durham. 363
G3OLE C.E.J. Parker, 65, Granville Road, Woodgreen, London, N.22. 335
G3ONU Major D.A. Barry, 1a Ortona Point, Kingston, Ontario, Canada. 76
G3RRZ CoH J.E. Kingston, WO's & CoH Mess, Royal Horse Guards, BFPO 15 357
G3SKL J.A.K. Leger, 9 Parkfield, Topsham, Exeter. 365
G3SWO G.S. Thomas, 65 Queslett Road, Great Bar, Birmingham, 22A. 338
G6VQ T. Wilson, Helm View, Stainton, Nr Kendal, Westmorland. 364
G8VG W.H. Windle, 121 Laburnum Avenue, Dartford, Kent. 340
GM3TDS J. Shelton, 22 Cardowan Drive, Stepps, Glasgow, E.3. 337
VE3CLV Major D.A. Barry, 1a Ortona Point, Kingston, Ontario, Canada. 76
VS9ALB Major L. Beaumont, 222 Signal Squadron, BFPO 69. 122
ZC4GY Club Station, Royal Engineers Cyprus ARS, 33 Ed Sqn RE, BFPO 53. AFF32
ZD8TV T.J. Venn, MPBW, Ascension Island. 254

|

NON LICENCED MEMBERS

DELETE: H.Tallis, A.C. McGrady, Capt M.F.G. Haywood, C.H. Barlow, Sgt Nixon

CHANGES OF ADDRESS ETC.

S/Sgt R. Briggs BEM, 2nd Signal Regiment, BFPO 22.
A. Butler amend initials to read H.H. Butler.
Major A.D. Hall amend rank.
WOII W.R. Hughes amend rank.
P.H. Jackson "address unknown".
Sig Morrison R.T. 225 Signal Squadron (Radio) BFPO 33.
Lt D. Paling, Magnolia House, Ashill, Ilminster, Somerset.
W. Robinson, 15 Infirmary Road, Chesterfield, Derbyshire.
K. Fawcner Simpson, 9 Red House Walk, Levington, Ipswich, Suffolk.
M. Woodcock, 28 Wardrop Crescent, Catterick Camp.
Capt. L.A. Woods amend rank.

NEW MEMBERS

<u>Sig I.A.H. Anderson, 5 Whitall Drive, Birchen Coppice, Kidderminster, Worcs.</u>	353
<u>A.C. Blake, 11 Netherlands Road, Burnet, Herts.</u>	358
<u>E. Byrne, 6 Getty Street, Belfast, 12.</u>	344
<u>J. Calvert, 12C Knockwood Park, Belfast, 5.</u>	348
<u>J. Clarke, 68 Downshire Park East, Belfast, 6.</u>	341
<u>Major D. Elmore, Sigs 1A, Army Department, MOD London, SW 1.</u>	361
<u>Sig R.C.A. French, 2 Squadron, 8th Signal Regiment, Catterick Camp.</u>	343
<u>Sig B.G. Gillott, 29 Hamilton Street, Heaton Norris, Stockport, Ches.</u>	354
<u>D.E. Jowett, 70 Spring Road, Bedford.</u>	65
<u>S/Sgt C.W. Kitchen, 165 Pepper Lane, Standish, Nr. Wigan, Lancs.</u>	356
<u>Sgt R.E. Kyle, 1 Sqn, 50(N) Sig Regt(TA), Low Gosforth House, Newcastle on Tyne, 3</u>	333
<u>S.S. McMurray, 13 Oakley Avenue, Holywood, Co Down.</u>	350
<u>Sgt M. Morphey, Glenavon, South Knighton, Bickington, Devon.</u>	336
<u>Lt D.T. Neale, 8th Signal Regiment, Catterick Camp.</u>	368
<u>W.H. Nesbitt, 18 Moatview Crescent, Dundonald, Belfast.</u>	346
<u>Major M.H. Priestley, Comms Systems, School of Signals, Catterick Camp.</u>	355
<u>Sig P. Rogers, 55 Hertford Road, New Barnet, Herts.</u>	342
<u>2nd Signal Regiment Amateur Radio Club, BFPO 22.</u>	AFF 33
<u>Sig A. Simpson, 54 Shakespeare Way, Corby New Town, Northants.</u>	352
<u>J.A. Smylie, 14 Lansdowne Park North, Antrim Road, Belfast 15.</u>	351
<u>J.M.M. Tosh, 63 Alexandria Park Avenue, Belfast, 15.</u>	345
<u>W. Winter, 40 Longroyd Crescent, Slaithwaite, Huddersfield, Yorks.</u>	369

PLEASE NOTIFY FIELD SECRETARY OF ANY ERRORS

RULES OF THE ROYAL SIGNALS AMATEUR RADIO SOCIETY

1. NAME The Society shall be known as The Royal Signals Amateur Radio Society.

2. PURPOSE AND OBJECTS

The purpose and objects of the Society shall be:-

- a) To promote and foster the spirit of Amateur Radio as a hobby in all respects, but with special reference to Royal Signals.
- b) To assist and advise upon the formation and running of Royal Signals Amateur Radio Clubs.
- c) To circulate to such Clubs, and individual members, information on amateur radio matters. This is to be done by publication of a monthly/quarterly newsletter/magazine, and such other correspondence as may be necessary.
- d) To provide a central secretariat for Royal Signals Amateur Radio Clubs, and to maintain up to date records of their membership, activities, and postal addresses.
- e) To provide the means, during individual postings, sickness, or other absence from unit, for continuity of membership. This to be done by the issue of membership card accepted by all unit clubs, and where necessary putting the individual in touch with the nearest Royal Signals Club to his place of posting.
- f) To deal with publicity and exhibitions, and to be represented at such other amateur radio meetings as may be considered necessary from time to time.
- g) To effect such negotiations as may be necessary with the GPO and overseas licensing authorities, concerning the issue of Club call signs, and all other matters related to international radio regulations as applied to the amateur radio service.
- h) To give clubs and individual members all possible information, advice and assistance, towards passing the necessary examinations to qualify for an amateur radio transmitting licence.
- i) To encourage the recruiting of radio trades for the Regular and Reserve Army.
- j) To encourage clubs to take part in amateur radio activities, and all forms of experimental radio work, particularly where they effect the work of Royal Signals.
- k) To establish and maintain, if desired, a headquarters amateur radio station.
- l) To promote, by example and advice, technical and operating skill in accordance with the Amateur Radio Service Regulations in force for the time being.

- n) To raise, maintain and account for, such funds as may be necessary to ensure the proper working of the Society and, according to the availability of such funds, make financial grants to Clubs in case of need. The Treasurer is empowered to make grants up to £10. to any club, such grants to be limited to a total of £40. in any one year. Grants over and above these sums must be approved by the AGM or if this is inconvenient by the President with the assistance of a small committee of selected members of the Society.
- o) To amend its own Rules and Constitution as may be found necessary in the light of experience.

3. AFFILIATION

The Society shall apply for affiliation to the Radio Society of Great Britain, as the official amateur radio organisation in UK.

4. EXECUTIVE OFFICERS

The SO in C has appointed the Director of Telecommunications as President and the G3 of Signals 2 to be Headquarters Secretary.

The division of duties between the two Secretaries will be:-

(i) HQ Secretary

The HQ Secretary will be appointed by the President and will be located in the Ministry of Defence.

He will on behalf of the President, maintain a working liaison with all UK and overseas commands and units, as well as with those Commonwealth units on such occasions as directed by the President. He should, in consequence, maintain a current list of representatives for such units and conduct the Society's affairs through these members.

He will be responsible for publicity for the Society, particularly in relation to BBC broadcasts, "The Wire", R.Signals Journal etc.

On matters of equipment from WD sources for the Society he will be the negotiating body between the Society and Signals 1(c). Liaison with the Field Secretary as to suitability of equipments will assist in this respect.

He will liase with R. Sigs. Records in matters concerning personnel for the Society, particularly in respect of relief Council members.

He will administer the Annual General Meeting as regards dates, notification to Command representatives and provision of accommodation.

(ii) Field Secretary

The Field Secretary will be appointed by the President and must essentially be an active amateur.

He will be responsible for the day to day running and conduct of the HQ Station G3CIO.

He will be responsible for organising the Station practically in such operations as National Field Days, Princess Royal Day, and other such occasions as the President may direct.

He will, when possible, similarly organise operating events on behalf of Society members, as and when Council members and regional members request

He will be responsible, through QM 8th Signal Regiment for the disposition and accounting for such equipment as may be made available to the Society.

He will edit the quarterly news-sheet "MERCURY" and will arrange for this publication by the following dates:-

Spring	Edition	1st	April
Summer	Edition	1st	July
Autumn	Edition	1st	October
Winter	Edition	1st	January

He will deal with technical correspondence and queries arising from articles published in "MERCURY".

5. MEMBERSHIP

The Society shall provide for the following classes of membership:-

- a) Ordinary Membership shall be granted to individuals who are past or present members of Royal Signals, who are not for the time being members of an Affiliated Club or who are interested in amateur radio as a hobby.
- b) Associate Membership shall be granted to Amateur Radio Clubs of Commonwealth Armies.
- c) Affiliated Membership Provision shall be made for Royal Signals Clubs or any Amateur Radio Clubs and Societies having a loose allegiance to the Army to become affiliated to the Society at a cost of 10/- per annum or £5. for life of the club or society.
- d) Honorary or Life Honorary Membership free of all subscription or dues, but having all privileges of full membership, may be granted to such persons, who in the opinion of the Council of the Society, have rendered outstanding service to the Society.

6. OFFICERS AND COUNCIL

The Council of the Society shall comprise:

- a) The Headquarters and Field Secretaries, as declared in para. 4 above, who shall be the Executive Officers of the Society.
- b) A President.
- c) The Chairman (who must be available to attend meetings).
- d) An assistant Secretary, who shall also, if required, be Publicity Secretary.
- e) An Honorary Treasurer.
- f) An Honorary Editor.
- g) An agreed number of Council members.

The above shall be elected at the Annual General Meeting.

The Society is also empowered to appoint, by invitation, Life Honorary Vice-Presidents who may, or may not, already hold some other office or class of membership in the Society. This honour may be accorded to persons who have rendered exceptional service to the Society, or those to whom the Society wishes to give recognition for some special reason.

7. COUNCIL REPRESENTATION

The Council shall be represented by:

- a) All Home Commands and the Officers so appointed may, at the discretion of the CSOs, be Regular or Reserve Army. The Officers appointed will represent the interests of Clubs and Members of their Commands.
- b) Training Brigade Royal Signals, School of Signals.
- c) Representatives from each Overseas Command and BAOR, where this is possible.

The Council shall meet in LONDON.

8. ANNUAL GENERAL MEETING AND OTHER MEETINGS

The AGM shall be held within periods of not less than eleven or more than fourteen months, at a time and place decided by the Council. The Headquarters Secretary shall issue notice of the meeting and its Agenda, to be in the hands of all members 28 days before the date of the meeting. The Agenda shall include reports of the Field Secretary, and the Honorary Treasurer (who will also be required to produce the accounts), and will allow for the election of all Officers and the Council. Other meetings will be held as and when necessary.

9. FINANCIAL OR ACCOUNTING YEAR

This shall be for a period of twelve months, from a date agreed by the Society. Proper records shall be maintained by the Honorary Treasurer, and a copy of the audited accounts shall be made available. These accounts shall be audited by the two auditors appointed at the AGM

10. NOMINATION AND VOTE

Each individual member of the Society shall have ONE vote. Nominations and resolutions will be accepted in writing by the Field Secretary for consideration by the Council or all members as appropriate. Nominations for any particular office must be supported by a certificate from the member concerned, saying he is willing to serve, if elected. A vote may be taken by:-

- a) Show of hands
- b) Proxy (in writing)
- c) Ballot
- d) Postal Ballot
- e) Postal vote

Always provided that members have been given the proper opportunity of casting their vote, by one of the above methods outlined above, the Chairman of the Meeting, (who shall have one casting vote), shall declare results of elections and resolutions before him, upon the strength of votes for and against the matter, in his hands, at the time of the meeting. Votes received after a declared date shall be considered null and void.

11. SPECIAL RESPONSIBILITIES OF COUNCIL

All officers of the Society shall be ex-officio members of the Council. The Council shall be responsible for the Society and its activities, and from its number shall be found:-

- a) An RSGB Affiliated Societies representative.
- b) A transmitting member, to be HQ Station Manager.

The Council shall be empowered to form sub-committees as necessary, and co-opt members.

The Council shall be empowered to raise funds for the Society by agreeing (in consultation with the Honorary Treasurer), the rate(s) of annual subscriptions, and such other methods as may from time to time be necessary. The Honorary Treasurer shall be responsible for paying all just accounts.

12. TERMINATION OF MEMBERSHIP

Any class of member may resign from the Society by giving one month's notice of his/their intention, in writing, to the Field Secretary.

The Treasurer shall strike off the rolls any member or affiliated club who despite three reminders has allowed his/her subscription to fall 12 months in arrears, without cause or agreed hardship.

The Council shall strike off the rolls any member or affiliated club who, in the opinion of the Council, has brought discredit upon the Society.

LATE NEWS

G3PYZ, the club station of Junior Leaders Regiment at Denbury, welcomes skeds with other members at the following times:-

Tuesdays and Thursdays 1630 - 1900 hrs.

Wednesday afternoons and daily between 1230 and 1400 hrs

CLANG - The date of the Torbay Mobile Rally to be held at Junior Leaders Regiment is July 11th, not the twelfth as stated elsewhere in this issue. Full details of this event may be obtained from G3OAZ

Two of our members are planning a Dxpedition to GD in September. Whilst no details are available at present any member who would be interested in participating should contact the Field Secretary who will pass the letter on to the chief plotter

The pages of MERCURY are now being collated by machine. Unfortunately the machine cannot spot the odd blank sheet that comes out of the press so if you find that there is a blank page in your copy let us know and we will send you another one.

MEMBERS NOTEPAPER

This is now available at 8/4d. per 100 sheets from the Field Secretary. Cheques or Postal Orders should be crossed and made payable to Royal Signals Amateur Radio Society.