



**RAGCHEW**

**FEBRUARY 2017**

## FROM THE EDITOR

If recent meetings at the school are anything to go by, GARES is thriving. As well as enjoying the more formal meetings, members have informally set up special interest groups each with their dedicated followers. The shack continues to provide an operating facility on both HF and VHF bands. All members can be proud of the amount of time put in by the Committee furthering our hobby. But the Committee can only point the membership in the right direction. It's up to you, the members to make all this behind-the-scenes work worthwhile by participating in as many of the club activities as your free time allows. We have just finished another Club Challenge and I have heard mumblings that some won't take part because it's always the same call signs in the top rankings. That's not the point. We all have different time pressures which dictate how much time we can devote to our hobby. In the spirit of self training I believe the challenge is to yourself. How can I improve my station? Is there another mode I can try that will give me more contacts? For my own part you will probably notice that I came bottom in the 100W section but for me the challenge was to see how many countries I could work during the Challenge period on just

6m, 2m and 70cm. It pointed out to me the limitations on my antennas - HF doublet for 6 metres and loft antennas for 2m and 70cm, but I still had great satisfaction in working those 7 countries.

So I ask you all to support the next Operating Challenge whatever it may be. Perhaps it would be a good idea to give an award to the highest place new entrant?

I have passed on more old club Newsletters to our Webmaster, Cliff G8CQZ for scanning and archiving on the G4AYM web site. Do spend some time in the Library section of the web site and read about the clubs activities years ago. Of the current batch which should soon be on the web site, may I recommend you read the September 1983 issue. This Newsletter contains a report of one of the most memorable DF Hunts ever held in the Society's history. Some of the participants on that day, who are still members, chuckle over the various scrapes - not all amateur radio related - which befell them. Graeme G0EEA would be a good starting point for reminiscences!

## Special Interest Clubs

### No 1 - The GQRP Club

The wonderful hobby of Amateur Radio encompasses many facets and of course this has resulted in many clubs catering for these enthusiasts. In upcoming issues of "Ragchew" I will be featuring some of these clubs which I hope you will find of interest and the first one in this series is the **GQRP Club**.

Formed in 1974, the GQRP Club is a non profit organisation run entirely by volunteers to promote Low Power Radio. For a modest subscription of £6 members receive a quarterly magazine SPRAT which contains articles of varying complexity, from simple test equipment, to fully functioning radio transmitters and receivers. Also available from the Club Sales is a CD containing all the Back Numbers of SPRAT - currently featuring issues 1 - 160 for the princely sum of £5, as well as an extensive range of components suitable for low power receivers and transmitters.

The leading light in the GQRP Club is Rev George Dobbs G3RJV who many years ago gave us a talk on QRP operating when we used to meet at the Drill Hall in Painswick Road.

Several GARES members (including myself) have been members of the GQRP Club for many years and have enjoyed the many challenges of low power operating.

For more information visit their web site <http://www.gqrp.com/index.htm>

## CONTEST GOSSIP

Congratulations to the operators of G2HX/P in the "Practical Wireless" 4 metre contest - 7<sup>th</sup> position out of 32 and a picture of the station on the front cover of the February issue.

The new season on the UKAC contests kicked off with 2 metres on Tuesday 3<sup>rd</sup> January. To encourage newcomers to contesting each UKAC contest is now preceded by an hour long FM contest. To avoid clashes with the UHF/SHF UKAC, the 6 and 4 metre contests have moved to the second and third Thursdays in the month respectively. These too are preceded by hour long FM contests.

The Affiliated Societies Superleague results for 2016 have been published. This table combines the scores attained by club members in the 50MHz AFS, 144MHz AFS, 160m AFS, CW AFS and SSB AFS contests. GARES came 49<sup>th</sup> out of 101 participating clubs. This is an improvement on 2015 when we came 78<sup>th</sup> out of 102 participating clubs.

In the UKAC contests we have made a slow start, at the moment lying 24<sup>th</sup> in the table of Local Clubs. The new date schedule for these contests has probably caused some problems - in the Editor's case Thursday evenings is posing a problem as the contest dates very often clash with our bi-weekly bell ringing practice.

### IN THE EDITOR'S SHACK

Further work on the BBC Microbit has been put on hold since Gary MOXAC's talk on JT65. Your editor has got side tracked into investigating and experimenting with various digital modes. Gary did warn me it would be addictive and so it is! Using my laptop I downloaded both WSJT-X and JT65-HF and have had QSOs using JT65 and PSK31, and on a mini laptop running Android, several PSK31 QSOs using DroidPSK. All these QSOs were configured using an audio cable from the rig audio output to the computer mic input, generating the audio tones on transmit and holding the rig microphone to the computer speaker, ensuring that the ALC did not rise above zero. Crude but effective as I have received eqsls for these qsos! I've also discovered PI-RX, a beacon monitor program and regularly monitor GB3MCB on 50.043MHz.

I am gathering the various bits and pieces to build a small digital interface and will report progress in future editions of "Ragchew".

Other activity has revolved around the various VHF contests with entries in the January 2m and 6m UKAC, 70cm AFS and 80m/40 ssb AFS contests.

Just before the 70cm AFS contest, I installed by Moxon loop on the loft mounted rotator. For a very compact antenna I have been pleasantly surprised by the results. Not as good, of course, as a multi-element beam, but useful nevertheless.

Re-reading some of the old club newsletters before passing them on to Cliff G8CQZ for scanning and archiving on the club website has brought back many memories, but the main thing that has struck home is however did we find the time to do all these things whilst still holding down a full-time job!!

Do let me know what you have been up to in your shack for future issues of Ragchew

## "You're S0 here OM"

At the recent "Bring and Show" evening a long-time club member mentioned that he recently overheard the above in a QSO. We both had a chuckle as in our book S0 means no signal. It transpired that the receiving station's rig showed no reading on the "S" meter - so an S0 report was given. A lot of older amateurs had receivers years ago which did not have an "S" meter so the following was a useful guide. Apologies for the poor quality of the scan - I came across it during one of my many tidy-ups! If my memory serves me correct this chart was printed in the old RSGB Log Books. Perhaps we should go by this chart rather than slavishly looking at our "S" meters!

<b>Readability</b>	
R1	Unreadable
R2	Barely readable, occasional words distinguishable.
R3	Readable with considerable difficulty.
R4	Readable with practically no difficulty.
R5	Perfectly readable.
<b>Strength</b>	
S1	Faint signals, barely perceptible.
S2	Very weak signals.
S3	Weak signals
S4	Fair signals.
S5	Fairly good signals.
S6	Good signals
S7	Moderately strong signals
S8	Strong signals
S9	Extremely strong signals
<b>Tone</b>	
T1	Extremely rough hissing note.
T2	Very rough a.c. note, no trace of musicality.
T3	Rough, low-pitched a.c. note, slightly musical.
T4	Rather rough a.c. note, moderately musical.
T5	Musically modulated note.
T6	Modulated note, slight trace of whistle.
T7	Near d.c. note, smooth ripple.
T8	Good d.c. note, just a trace of ripple.
T9	Purest d.c. note.
An 'X' is added after the appropriate T number if the transmission appears to be crystal controlled. The letter 'C' after the T number indicates the presence of chirp. The letter 'K' indicates key clicks.	

### WANTED!

### RAGCHEW ARTICLES!

News of your current Amateur Radio activities and projects also any items which you may think will be of interest to GARES members - please email to me at [g4cib@outlook.com](mailto:g4cib@outlook.com). Alternatively hand your script (handwritten or typed) to either myself or Leta G4RHK at any club meeting.

If you are a member of a special interest group feel free to share your activities with other GARES members by way of an article.

FROM THE G8CIB & G4CIB QSL ARCHIVE

COMMEMORATING THE FORTIETH ANNIVERSARY OF V E DAY  
8TH MAY 1985

GLOUCESTER AMATEUR RADIO SOCIETY

*respectfully remember those who gave their time,  
their expertise, their health, even their lives  
that this might be a better world.*

**GV4AYM**

To Radio **G4CIB** this card confirms our  
two-way **SSB** QSO of **5** May 1985 at **1005** GMT  
when your signals were **59** on **1.8** MHz

PSE QSL via RSGB or G4AYM



**G  
B  
3  
STR**

SIR THOMAS RICH'S  
OAKLEAZE  
GLOUCESTER  
&  
GLOUCESTER A.R.C.

To **G8CIB** 17 May 1969 at **11.16** GMT  
your **144** mc/s phone sigs.  
RS **5-9**

73 & pse QSL via RSGB

**(G3YJN/A)**

## **HOW I GOT INTO AMATEUR RADIO (PART TWO) – THE SCANNING YEARS (1989-2001)**

**BY MALCOLM BELL – G6UGW**

In 1989 I bought my first scanner from Tandy's – do you remember them? – it was a realistic PRO38 which had 10 programmable channels. This radio was the same as the Uniden Bearcat 50XL.

With the purchase of the PRO38, I was now able to receive 4m, 2m, 70cm, Marine Band and the then Low Band VHF (but this was ALL in FM). Airband was not covered by the PRO38. Remember Airband Radio is AM. The PRO38 had a 12V input for external power but had a battery pack for 5xAA cells (with a switch for NiCad or Alkaline). The reason for this is 5xNiCad cell batteries = 6V; 5xAlkaline batteries = 7.5V. This is because a NiCad cell is 1.2 volts compared to an Alkaline cell which is 1.5 volts (P.S. the NiMH is also a 1.2V cell) – I fitted a 6V power I/P across the battery holder connections. If you used the 12V external power input the radio then converted the 12V back down to 6V so as to save carrying 4AA cells unnecessarily, I did this modification.

In 1991 I bought a Regency RX2000 Scanner 20 channel with switchable AM/FM from SRP Trading. This had Airband and also could be used to monitor the 934MHz CB Band which had only 20 channels so if monitoring that band you used all your channels up. I must confess I never heard a transmission on 934MHz CB with the scanner before the band was taken away by OFCOM.

SRP Trading had shops at various times not far from the Austin Car Works at Longbridge. I once went there on a Midland Red Bus Day Rider Ticket from Gloucester Bus Station (372 Service to Worcester, then got the 144 Service which passed the shop).

I learnt the lesson about NiCads and the 1.2V cell compared to 1.5V cell with RX2000. I went Aeroplane spotting at Halfpenny Green Aerodrome which is located 5 NM Bridgnorth, Stourbridge and Wolverhampton. When I arrived on my moped the radio would not function – it has a 4.8V power requirement and whilst in the time it took me to get to Halfpenny Green the batteries had discharged below the 4.8V threshold. To get around this problem I fitted an external AA battery cell holder. Using a piece of double sided PCB Board (see Diagram) - This saves having to strip the radio down and solder connections! I used to use Swinborne Airband frequency guides.

In 1992 I bought a WIN108 Airband Scanner from Lowe Electronics when they had a shop at Bristol near Temple Meads Railway Station. They later had one near Filton on the A38 (now no longer trading). This radio is AM only but polarity for external power is reversed to my other 6V radio. This also has only 20 programmable frequencies. This set up continued to about 2001 when I had all the scanners in a haversack on a 'DXpedition' to Portsmouth and Southsea. I thought this haversack was getting heavy. I counted up all the AA batteries I was carrying to power the scanners and it came to 29. I decided something had to be done so I bought a new PSR225 Scanner. This scanner had no airband but had 6M band and there was at Portsmouth area a 6M Repeater. Whilst at Portsmouth I visited "Nevada" Emporium.

A word of warning about the PSR range of scanners - the external power supply plug sockets are not the same size. The PSR225 is a '50 Channel Scanner'. This scanner also has 10m and CB band frequencies. This scanner is still in everyday use monitoring CEPT Band, CB and 10m FM calling channels.

Part 3 will follow where I will cover Aerials and PSUs used.

## The Club DF Scene By Tony G4HBV

For quite some years now we have run DF (Direction Finding) contests in the school grounds. It has become increasingly difficult to factor in anything different into these events. I remember well one of the first ones we tried: it was a pitch black night and I ran around the field carrying the transmitter in a wooden box – complete with a large ferrite rod transmitting antenna. Unfortunately this was to no avail as at least one of the competitors had excellent night vision and could see me anywhere I went in the field, resulting in being chased around the field.

Then Cliff, G8CQZ, built the superb little transmitter we now use. Richard, M0HMK, and others are interested in switching to an outside event, probably at the weekend, somewhere out in the countryside. Richard and I have done some preliminary testing with Cliff's transmitter feeding into a more comprehensive antenna/earth system and it looks as if a much longer range hunt will be possible. Also Richard has organised the R3500D DF receiver build project in which quite a few members are involved. The other way of getting a DF receiver for 1.8-2MHz (the band we use) is to modify an oldish medium wave portable receiver - and if anyone wants to do this I can offer help if necessary. Finally for those who know little about DFing, I am going to describe what happens.

In a DF event, the organiser positions a hidden transmitter, which the contestants have to find, in a location within walking distance from where the contestants have assembled (this follows the procedure we have adopted at the club for many years). The organiser can elect to stay with the transmitter or return to the start (in which case a signing-in sheet is left at the transmitter) – in both cases it is a good idea for the organiser to check with the contestants on 2-metre FM that they are all receiving signals on the DF frequency in the 1.8-2MHz band.

Most DF receivers will be using a ferrite rod antenna and the best way to take a bearing on the DF transmitter is to rotate the receiver until the minimum signal (the null) is received, when the ferrite rod is in line with the bearing. This is a more exact way of finding the bearing than rotating for maximum signal. Unless you are something of an expert and have incorporated extra circuiting in your DF receiver, this procedure will only give you a bearing line and NOT the direction. It may be that the site layout will indicate in which direction the transmitter is, i.e. pointing into a wooded area. As you get close to the transmitter, if it is working into a good antenna, you may find that you cannot get a precise bearing or that it has changed (possibly up to 90 degrees from the true direction) – this is because you are so close to the transmitter that you are in the “near zone” of its antenna where the induction field is stronger than the radiation field. For 1.8-2MHz, this distance is about 70ft. This is where you now need to use your eyes.



Dave Miller, G4HJV (donor of the GARES DF Trophy) presenting it to Graeme G0EEA at our 1986 Christmas meeting held at the St John Ambulance Brigade HQ in Heathville Road.