



Itchen Valley Amateur Radio Club Annual Report 2009 / 2010

Colin Thomas, G3PSM, President of RSGB presents prizes at IVARC 2009 AGM



Liz, VP8YLB, operates from Falklands in VP8YL DXpedition



Contents:

2. Peter's Treasure Hunt at Stockbridge
3. Chairman's Report
5. Where am I, Where are you ?
6. Operating Mobile circa 1919 !
7. Minutes of 2009 AGM
9. IVARC Membership in 2009
10. ICE – IVARC Communication and Education Project
11. GB3FOX – Foxlease
11. GB3ABA becomes a Silent Key
12. RSGB President presents Prizes at 2009 AGM
13. Secretary's Report
14. Financial Statement
15. Treasurer's Report
16. VP8YL DXpedition to the Falklands
17. A Compact QRP 80mtr Station
22. HF Operating in 2009-10 and the HF Ladder Report

Peter's Treasure Hunt 2009 on Friday 26th June at Stockbridge

Having set the majority of the Treasure Hunts for the Club over the years, I decided the 2009 event should be held in Stockbridge, mainly because I had almost run out of new places. Stockbridge is not too far away for members and, as it only has one main street, it was an easy place to arrange a Treasure Hunt.

I contacted the White Hart public house who were only too pleased to supply 'a room' for the Club to get together after the Hunt. It was a good opportunity to enjoy some of the fine food on offer.



Paul, M1CNK, and family

The evening was sunny, which was a 'miracle' as it had been raining heavily for most of the day. Twenty Four souls set out on the 'Hunt', 14 Club members and 10 friends of Peter's, G4EOW.

The route was basically up one side of the High Street, a brief visit to the river, then return back down the opposite side of the street.

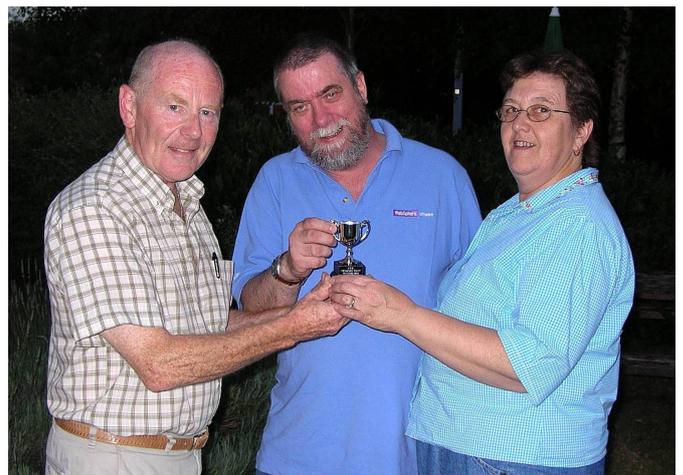


Peter, G3OFX, and family

The clues were worth 1 point each and, for a change, there were twelve 'photo clues', each worth 5 points. These were more difficult as they were taken out of order, whereas the main clues were all in order.

Amongst the highlights of the walk were seeing Stockbridge's 'Old Brothel' now deserted, large trout in the main street river, and the old Town Hall.

As everyone returned to the pub their meals were ready to be eaten together with a pint of local ale. The winners were (yet again) Brian, G0UKB, and Liz, M0ACL, with 96 points, closely followed by Paul, M1CNK, and family with 89 points. Next came Colin, G4GBP, and family with 85.75 points, Sheila, G0VNI, & Mike, G0WIL, with 80 points and, last but not least, Peter, G3OFX, and family.



Peter presents the 'Hunt Cup' to the jubilant winners

I think the 'Hunt' was enjoyed by all and the 'Hunt Cup' was presented to Brian & Liz who thanked Peter, G4EOW, for another excellent event.

If we are to continue with the annual Treasure Hunts I, personally, would like more Club members to attend, Even if they are unable to take part in the event they could come along and have a meal or drink at the end. If asked to organise another Treasure Hunt the venue will, most likely, be Bishops Waltham.

Peter Baxter G4EOW

Chairman's Report 2009 / 2010

It has been a busy year for the Club with a steady stream of welcome new members and new licences. The mainstays of the Club are the evening meetings and we are fortunate in having had a regular supply of interesting and entertaining talks, by both our own members and invited speakers. A wide range of topics has been covered from simple DIY aerial construction to more technically challenging digital subjects. In all, your committee has provided a programme to suit all interests, and has attempted to follow members desires and interests that were expressed in the questionnaire that was run a couple of years ago.

Membership and Education

A lot of "behind the scenes" activity goes on by the Training Team in running the various courses to enable new comers to the hobby to become licensed. We have been fortunate in welcoming a number of newly licensed members to the Club and hope they will find plenty to interest them.

As I said last year, the Club takes very seriously the need for education and training, all of which is regulated by the RSGB. We extend our thanks to the Training Team for their various successes throughout the year. The Training Team comprises Brian Jones G0UKB (Hon. Member), Liz Jones M0ACL (Hon. Member), Sheila Williams G0VNI, Mike Williams G0WIL and Graham King G3XSD, all of whom have been accredited by the RSGB for this service.

As a part of the training and education theme mention must be made of the significant work carried out by Liz M0ACL and Brian G0UKB with both the Guides and the Scouts. Liz has managed, and continues to manage, the Guides "Thinking Day On The Air" and has contributed on this subject to an article in RADCOM. Mention should be made of the considerable work that Brian has done for the Club in all departments over the years. Brian can always be relied on to provide an 'off the cuff' talk from his back pocket, should the speaker not turn up. We had great pleasure in appointing both Brian and Liz "Honorary Members" last year in recognition of their long-term contribution to the Club.

Club Events

It was not possible to have either the HF or the VHF Field Day this past year. In both cases problems arose in securing the site and alternative sites were just not possible within the available time scale.

The Club had a memorable Saturday morning last June at the IBM sports ground (courtesy of G0UKB) when Roger Stafford G4ROJ demonstrated some of his kite aerials. This followed his talk the previous night. It was unfortunate that there was a lack of early wind and a short passing shower did not help. Colin North G4GBP ran a portable station and showed how to do it. But an interesting time was enjoyed by the two dozen members who turned up, and they made it a social occasion.

The idea of a Saturday morning event, for example to demonstrate portable aerials, is a possibility that we might run this year, subject to sufficient support.

The regular Christmas Social was, as ever, a huge success, the highlight being one of Brian's famous quizzes. Liz provided the refreshments and a separate exhibition of amateur radio equipment provided a talking point with several of the G3s becoming quite nostalgic about some of the vintage kit on show. Special thanks go to Liz for her catering efforts, and thanks to everyone who contributed and participated.

On 26th June, Peter Baxter G4EOW ran one of his famous Treasure Hunts, this time around Stockbridge. The weather was good and the evening finished, unsurprisingly, in one of the local hostellers. Peter's treasure hunt has been going for many years and it is of concern that he may be running out of towns to visit !

About the middle of the year we ran a Club Sale. Although the object was to boost Club Funds, it turned out to be a very enjoyable social event. It brought a lot of people together, not only from other clubs, but others who listen to the club net on Thursday evening, SWLs and others who just have an interest. It was such a success that we plan to repeat it this year.

The Tea Bar

Members will recall that Jim Bull M0FKG had run the Tea Bar for many years. But last year Jim decided that enough was enough and retired from being the "Catering Manager". Since that time, the Tea Bar has been run by (pressed) volunteers, meeting by meeting. Liz M0ACL has provided the supplies. The arrangement works moderately well and I did suggest that we might have a rota, as do some other organisations, but there were no takers. The Tea Bar provides a small, but worthwhile, input to the Club funds. Our thanks go to all who participated.

The tea break at a meeting provides an opportunity for members to "Network", look at the latest gizmo, boast about the DX they worked or moan about the bad conditions.

On the Air.

The weekly Club 2mtr net has continued to be run by a loyal band of operators who take turns to act as Net Controller and Newsreaders. The numbers of members calling in tends to vary, but it must be remembered that several members and SWLs just listen in as well. When transmitting, you never know who is listening. It is believed the weekly net provides a valuable service for the community and helps those who cannot get about, or cannot get to the Club easily, to keep in touch. The news content is structured to be of relevance to our hobby and items are generally selected from the RSGB news, local and club events and items from other clubs' news.

The second "On Air" topic is the DX ladder, which has attracted a small but growing number of members who regularly display their scores and report good DX "Catches". The topic is popular and is again the subject of a prize for both QRP and QRO operators. As I have said many times, a good DX score is helped enormously by having a good aerial site. Our thanks go to Graham King G3XSD, Vice Chair, for managing this activity.

The final "On Air" topic is the planned introduction of a Club Tournament. The idea is that members will work each other, any band any mode and site (Home, /P, /M) for points. The final details have to be worked out, but it is intended that the contest will start at the beginning of March, and run through to the end of the following February, in time for results to be announced and the prize presented at the AGM. It is hoped this venture will encourage members to get on the air and experiment with new modes (PSK31, WSJT etc.) as well as brushing up on CW. Ted Stiles G0BHK our Treasurer has volunteered to manage this activity and has been instrumental in getting the arrangements put together.

The Club Web Site

The Club Web Site is one of the outstanding club facilities. Being interactive, registered members can put articles, comments, pictures and items of interest on the site. The web site is not just a "One Way" service and users are not limited to club members: anyone who has an interest in amateur radio may register to use it. It is interesting that the count of registered users has now reached 89 and continues to grow. Our thanks go to Brian Jones G0UKB for hosting and managing the site. It is to be noted that the server, which resides at the G0UKB QTH, is now getting a bit long in the tooth, and is due for an upgrade. We hope this will take place in the coming year.

The Lottery Application

An application has been made to the Lottery Fund for some equipment. This application is in the "Bureaucracy" stage, and is currently "being considered". More on this anon. Graham King G3XSD has been outstanding in the "Wordsmith" area and put the Application together, with the financial aspects dealt with by Ted Stiles G0BHK, our Treasurer. Our thanks go to both of them for the significant amount of work on the application. The object of the application is to acquire equipment to enhance the Club's capability when conducting outside events in support of Scouts, Guides, RAYNET, Club activities and public displays, as well as upgrading the web site server.

RAYNET

A number of Club members are also members of the SW Hants RAYNET group and include a

representative of the RAYNET Committee and the Group Controller. Although RAYNET is an organisation that is set up to provide communications in an emergency, the members of RAYNET exercise regularly throughout the year by attendance at various events such as the New Forest marathon, the Marwell 10k race, and so on. This year has been quite busy with events taking place over the whole of the county and, in one case, support was given to the SE Hants group, when the 100mile walk (this is not a misprint !) took place around Hampshire and a large part of Sussex.

The Committee

Last year the Committee lost half its members who had completed their stint of service to the Club and felt the need to move on. The retiring committee members were Jim Bull M0FKG who had run the tea bar for many years, Malcolm Butler G0LMD who looked after the membership and also the HMS Hood Association GB2HA (this has now been wound up), Quintin Gee M1ENU Secretary, and Brian Harrison M0WSR who had become deeply embroiled in running the RAYNET business as SW Hants Group Controller. We thank them and appreciate their service to the Club.

We were fortunate in being able to recruit sufficient replacement members to the Committee to keep the Club work going. We also welcome Andrew Stevenson M6UGH to the Committee who will keep us in touch with the new licencees and the newcomers views.

End Piece

I believe that the Club is in a pretty healthy position. However, (now comes the homily) we live in a constantly changing world, which inevitably affects us. Members move on for various reasons. We appreciate the work and support these departing members have done for the Club and we welcome the newcomers and hope they will find plenty to interest them. We also need to generate some publicity to make sure that there is awareness in the community of what the Club does and encourages further newcomers to our hobby.

One topic that has hit me this last year on this subject is that occasionally members come and say, "Why doesn't the Club do this ?" The answer is that, "You, the members, are the Club, and activity has to come from the members". The right approach is to say: "Why doesn't the club do this and I will start doing something to get it going.."

I hope you all have a good year with plenty of DX or whatever catches your interest.

73 to all

Vic Bryant G3NVB

Where Am I, Where Are You ?

During the Second World War the designers of the Wireless Sets No. 19 (WS19) and 22 (WS22) realised it would be a good idea if users could get on frequency without each radio transmitting full power whilst trying to net with each other. In 1941 there were no digital counters or radios with LCD readouts, so how to do it?

The solution devised was the Class D Wavemeter No.1 which allowed the operators to set the frequencies of their transmitters and receivers relatively accurately (the Class D was considered to be the poor cousin of the more famous BC221 wavemeter). So as long as the 'net' frequency was known then each 19 Set could be set up on the same frequency. Well, more or less, as the accuracy of the wavemeter was specified as 'within 2Kc/s' (2KHz in new money). 'Rubbish' you might say, but it meant that all members of a net would be at worst within 4KHz of each other, so tuning for a signal when the receiver bandwidth is around 6KHz would not present a problem.

How was this achieved? Basically, accuracy and stability depended on a 1MHz and 100KHz crystal in a very carefully designed oscillator and on the operator being able to determine the correct beat frequency. (Beat frequency is the product of two frequencies mixed together and as they approach the same frequency the product will be in the audio range. When the product reaches zero Hz the two frequencies are the same and this is known as 'zero beat'.)

(Picture 1 shows the wavemeter front panel, the controls are straightforward, the 'Check' button is for ensuring correct zero beat by changing the value of a capacitor in the variable oscillator tuned circuit. If the wavemeter is tuned correctly then pressing the button will cause a small frequency shift.)

The 1MHz and 100KHz frequencies are used to calibrate the wavemeter and the 1MHz can also be switched to the output. Calibration is achieved by listening with headphones for zero beat between the wavemeter and the crystal oscillator. A facility allows the operator to

check for false beats which might be generated in the wavemeter or from external signals.



Picture 1. Wavemeter front panel

I have had one these on the bench recently and have to say I was pretty impressed with the quality of manufacture. As usual with old equipment I used the poor man's Variac - a 100w lamp in series with the mains supply - which limits the start-up current and is kind to old capacitors! Originally the wavemeter was powered by six volts DC running a vibrator that turned the DC into AC (kind of) which was then stepped up and rectified to provide HT for the triode-hexode valve, the valve heaters were supplied by the in-coming 6 volts DC. In later years a standard mod was to replace the vibrator with a 6.3 VAC valve heater transformer so that the wavemeter would run from the mains. A quick check revealed that the selenium bridge rectifier and the associated two 8uf capacitors were in fine fettle and producing 140v HT with just a few millivolts of ripple, impressive!

(Picture 2 shows the inside of the wavemeter looking from the top. The black box on the left is the 100/1000KHz dual crystal, and the larger box, bottom right, screen the tuned circuits for the variable oscillator. Top centre is the ARTH2 (Army Triode Hexode) valve, just below it is the main tuning capacitor for the variable oscillator with the dial lamp above it and to the

left bottom is the fine tuning to zero the variable oscillator with the crystal.)



Picture 2. Inside of Wavemeter

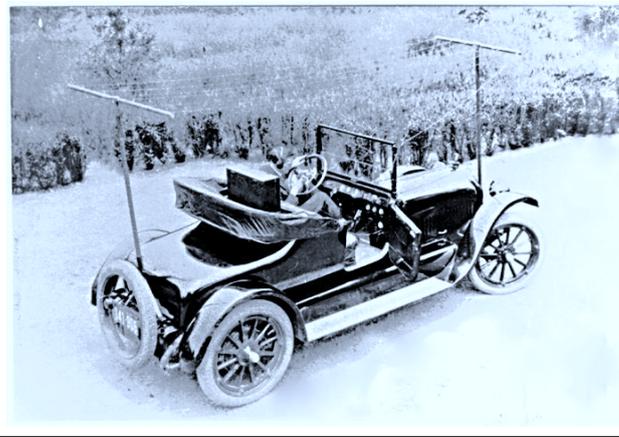
A quick functional check revealed that beat notes could be heard, and looking at the 1MHz oscillator on the scope the waveform looked clean and around 1 microsecond. After the unit had been on for ten minutes I hooked up my counter, the frequency was 999.993KHz! Twenty minutes later it was 999.994 and an hour later it was 999.996 and after eight hours the frequency was 999.997KHz . The variation was a very slow upward drift of some **4Hz in eight hours** - not too bad for something around seventy years old!

Mechanical vibration can be a problem with oscillators, and in this case a thump down on the bench will shift the frequency by 5Hz or so, but then it just stays there. Another problem is heat, and I would say that running the circuit with an HT of only 140 volts helps reduce heat effects, but so does the substantial metalwork and the large surface area of the case. The ambient temperature during the test was 19 degrees C and the outer case was slightly warmer after eight hours. On top of that careful selection of the capacitors in the crystal oscillator made this an impressively stable oscillator.

Would I use one on my bench? I doubt it as I have an accurate Racal-Dana counter and a reasonably accurate Kenwood TS480, but it is a good example of British wartime technology and if I had a restored WS 19 or 22 Set I would certainly want this along side it. Next on the bench: one of those famous BC221s.

Charlie Ivermee M0WYM

Operating Mobile circa 1919 !



Minutes of the Itchen Valley Amateur Radio Club's AGM held at the Scout Hut, Chandler's Ford on Friday 13th March 2009

Preliminary Meeting

The Chairman, Vic Bryant G3NVB formally welcomed the distinguished guests Colin Thomas G3PSM President of the RSGB, and Elaine Richards G4LFM Editor of RadCom and RSGB official photographer, as well as our Honorary Member Derick Hitchens G0BXI.

While the President declined to give an address, he presented prizes for the Construction Competition and DX Ladder, as follows.

Construction Competition

Expert Class

Winner: Richard Harris G3OTK
for DDS Frequency Generator

Runner Up: Charlie Ivermee M0WYM
for 20m Transceiver

Intermediate Class

Winner: John Noden G8IOK
for V/UHF Aerial Analyser

Runner up: Eric Bettles G3KXE
for Frequency Counter Kit

Novice Class

Winner: Liz Jones M0ACL
for Receiver

Runner up: Bert Roberts G4XBZ
for Portable Vertical Aerial

DX Ladder

QRP Class Charlie Ivermee M0WYM

QRO Class Colin North G4GBP

Honorary Membership

Honorary Membership of the Club was also awarded to

Brian Jones G0UKB

Liz Jones M0ACL

for their endeavours over many years on behalf of the Club, including talks, the website, and mounting field events.

The Annual General Meeting opened at 20:05

1. Apologies

Attendance recorded in Register with 29 members present, and 3 guests: Colin Thomas G3PSM President of the RSGB, Elaine Richards G4LFM Editor of RadCom, and Phil Booker.

Apologies for absence were received from Andrew Stevenson M6UGH, Brian Harrison M0WSR.

Our Chairman, Vic Bryant G3NVB took the chair.

2. Minutes of AGM held on 14 March 2008

Time was allowed for reading the previous year's minutes in the Annual Report, which were then agreed by the attending members.

Proposed Eric G3KXE, **Seconded** Peter G4EOW

3. Matters Arising

13.1 Appointment of Property Manager
Brian Harrison M0WSR had been appointed following the last AGM.

6.1 Marketing has been put on the Committee Agenda, and will be covered in the Secretary's Report below.

4. Chairman's Report

The report by Vic G3NVB was submitted as part of the Annual Report. Vic talked to this, thanking Jim for his excellent job catering during the whole year, Liz and Brian for their development of the new website, which has 69 registered users.

In addition, Vic wished to thank Larry G2DSY for his support; to thank the Committee for their support and work during the year; to thank all Club members for their support and participation; and to thank Ted for his 160 mile round trips to committees and meetings.

Graham King G3XSD was co-opted to the Committee during the year.

Proposed Liz M0ACL, **Seconded** John G8IOK

5. Treasurer's Report

The report by Ted G0BHK was submitted as part of the Annual Report. He gave a summary of each item of note, and reminded members that these figures were as at 31 December 2008. We had a surplus of £273.30. RSGB insurance remains the same this year and has been paid. Raffles have produced a good income thus far. We have also received money from auctions, donations, and other support.

Ted G0BHK thanked auditors Peter G3OFX and Paul M1CNK.

Proposed Brian G0UKB, **Seconded** Colin G4GBP

5.1 Ted G0BHK proposed, seconded by Paul M1CNK, that membership subscriptions for 2009 remain as they are. Agreed unanimously.

5.2 Sponsorships in 2008
Members agreed by a show of hands to continue to support for the coming year the hosting of the Girl Guides' Website, and for CDXC.

6. Membership and Marketing Report

The report by Malcolm G0LMD was submitted as part of the Annual Report. He announced that membership has grown again from 48 last year, to 58 in the current year, mainly from new licensees. Malcolm has followed up everyone on our mailing lists, and said that growth will continue to come from new blood.

We have 45 Members on e-mail, and it saves the Club money when sending information to them if they have an e-mail address.

We have introduced leaflets, posters, and advertising of both the Club and as handouts for the RSGB. The Programme Card is in the process of being re-designed to cover an A4-

folded sheet with the programme, Field Events and Rally information.

Proposed Quintin M1ENU, **Seconded** Jim M0FKG

7. Field Events

The report by Brian G0UKB was submitted as part of the Annual Report. He highlighted the events:

- There was no VHF or HF Field Day participation, with the perennial difficulty of arranging venues.
- JOTA from Ferny Cross, TDOTA from Foxlease, the RVCP Hobbies Fair, and the Eastleigh Show.

A number of events are planned by the Committee for the coming year including Centenary of 1st Chandlers Ford Scouts at our current venue, Centenary of Eastleigh Scouts. Eastleigh Scout Association, and the Biennial Chandler's Ford Merry Feast.

Proposed Malcolm G0LMD, **Seconded** Ted G0BHK

8. Secretary's Report

The report by Quintin M1ENU was submitted as part of the Annual Report. He reported that Jim Stone M0AIF has gone Silent Key, and had written to his family expressing the Club's condolences.

He stated his intention to stand down from the Committee following this AGM.

The latest Constitution available, with the changes accepted at the 2008 AGM, is Version No 11. Copies were present at the meeting and on the Club's website.

With the agreement of members present, the detailed membership list was circulated so that amendments could be made by those attending. This was retrieved after the AGM.

Proposed Graham G3XSD, **Seconded** Eric G3KXE

9. Appointment of Auditors for 2009/10

Auditors should not be from the Committee, and one retires each year.

Auditors were proposed as Paul M1CNK and Geoff G4UEL. Agreed unanimously.

10. Election of President

Vic G3NVB thanked Larry G2DSY for the past year's Presidency, and announced that Larry was prepared to continue as Club President.

Proposed Vic G3NVB, **Seconded** Peter G3OFX. Elected unanimously.

11. Election of Committee for 2009/10

Larry G2DSY continued in the chair. He listed those existing committee members who were prepared to stand again, namely:

Vic Bryant G3NVB
 Brian Jones G0UKB
 Ted Stiles G0BHK
 John Noden G8IOK

The Secretary had received the nomination of Graham King G3XSD before the AGM. Charlie Ivermee M0WYM was nominated from the floor.

Proposed Peter G4EOW, **Seconded** Liz M0ACL. The members accepted this Committee *en bloc*.

Vic G3NVB as Chairman was proposed by John G8IOK and seconded by Brian G0UKB. Unanimously accepted.

12. Any Other Business

12.1 Vic G3NVB thanked Jim for his hard work, which included special events.

12.2 Vic G3NVB discussed RAYNET, the amateur field that supports civil defence emergencies. At least 8 members of the Club are also in RAYNET, which takes up a considerable amount of their time. In particular, he spoke of Brian M0WSR who has taken on the role of Group Controller for the district, for which he thanked him.

IVARC Membership 2009 / 2010

Callsign	Name	Surname
2E0FMG	Phil	Booker
2E0VUW	Ali	Ahmed
G0BHK	Ted	Stiles
G0BXI	Derick	Hitchins
G0EBK	Rod	Bickley
G0LMD	Malcolm	Butler
G0UJP	John	Fleetwood
G0UKB	Brian	Jones
G0VNI	Sheila	Williams
G0WIL	Mike	Williams
G0XRN	John	Barrett
G2BFC	Tim	Forbes
G2DSY	Lawrence	Dale
G3HRH	Ray	Hills
G3KXE	Eric	Bettles
G3LGA	Mike	Hayward
G3NKR	Mike	Rowlands
G3NVB	Vic	Bryant
G3OFX	Peter	Welch
G3OTK	Richard	Harris
G3REN	Vic	Webb
G3ROG	Geoff	Morgan
G3RQF	Duncan	Keith
G3XSD	Graham	King
G3ZQC	Jim	Smith
G4EOW	Peter	Baxter
G4GBP	Colin	North
G4UEL	Geoffrey	Hollebon
G4XBZ	Bert	Roberts
G4YEP	Ted	Herwig
G4YUP	Peter	Thurlow
G6AAZ	Keith	Woodward
G6TRW	Andy	Toas
G7RAB	David	Evans
G8IOK	John	Noden
G8TEC	Geoff	Cook
G8XIX	Cheryl	Turner
M0ACL	Liz	Jones
M0BKW	Alan	McColl
M0BZT	Dennis	Tasker
M0FKG	Jim	Bull
M0GSP	Steve	Palmer
M0NXP	Martin	Whitaker
M0UGH	Andrew	Stevenson
M0WSR	Brian	Harrison
M0WYM	Charlie	Ivermee
M1AFM	Anthony	Mori
M1CNK	Paul	Wilton
M1ENU	Quintin	Gee
M6PDR	Peter	Roberts
M6RGV	Andy	Wedge
M6ZOO	Nigel	Weale
	David	Henley
	Adrian	Mori

The meeting closed at 20.45.

ICE

IVARC Communication and Education Project

LOTTERY GRANT AWARDED

IVARC has won support from the National Lottery for its 'ICE' project. A grant of just under £5000 has been awarded so that the Club can create a resource that will be useful to at least three areas of interest.

The project wanted to underpin the club's efforts to popularise the hobby and to make it easier to provide a better service for RAYNET. In addition, it hopes to improve the range of the Thursday evening Club net. How is this to be achieved? The project proposed to acquire a trailer mounted crank up 25ft mast. On this mast can be mounted an HF beam and/or VHF/UHF antennas. The trailer will be tow-able by family car. The HF beam will be a 2 ele SteppIR, chosen because of the simple assembly and the fact that it can be tuned accurately across the covered bands, obviating the need for any ATU thus avoiding significant losses.

The whole set up will be powered by a petrol generator/battery system so that it could be set up anywhere. Of course, if mains are available they would be used, but this arrangement will allow the Club to quickly and easily take part in open days, village days, hobbies shows, and importantly HF and VHF field days. We could also stage Girl Guide and Scouts radio activities. So this means we can meet the aims of creating awareness, providing the experience, and educating all those who wish to develop the hobby through competitions and operating skill enhancement.

One of the prime purposes though is to support those members of the Club who are also members of RAYNET. They will be able to create extra very effective provision at all those public events they attend as well as have greater value to the emergency services and local authorities that are served as part of the RAYNET mission.

The Club put together a comprehensive plan and proposal illustrating how all this could be achieved and identifying the value this project could have for the community as a whole as well as the Club in particular. The lottery fund was quick to recognise a good cause and recently made the award.

Your committee are acting as the implementation working party and are presently engaged on procurement and the detailed design and practical issues that will need to be completed in order to bring the equipment into service.

So, it won't be long before we have extra dimensions to the Club's activities. A big thank you to the Big Lottery Fund – we couldn't have done it without you!

GB2FOX – Foxlease, Hampshire

There were only 25 brownies staying in the main house at Foxlease this year, but they all had a fun-filled weekend and the chance to speak to Guides in Canada using the station arranged by Itchen Valley Amateur Radio Club. The Brownies and their leaders were able to learn the phonetic alphabet and use the knowledge to compose a message to pass onto others, and to complete a clue of their Communicator Badge.



Foxlease talking to Canada

Paula Williams

With their messages written they were then delighted to be able to pass them onto VA1YL, Helen, and her Guides in Nova Scotia, Canada. During another session during the weekend, one Brownie had informed the instructor that they knew there were Brownies in other countries because 'she had spoken to Guides in Canada on the radio'.

Brownies also produced their own QSL cards to send to the stations with whom they spoke, and have received some in return.

A Guide Unit staying in Princess Margaret Lodge overnight visited the station on Saturday evening. They also made QSL cards and learnt the phonetic alphabet. Radio conditions were not very good and it was difficult to find stations prepared to talk to the girls. Eventually those Guides who wanted to pass a greetings message were thrilled with the contact they made and all girls were pleased with their 'Guides on the Air' participation badge.

Liz M0ACL

Les G3ABA becomes a Silent Key



Les Kennard, G3ABA, who had been President of Itchen Valley Radio Club for a number of years, passed away peacefully at home on 18th November 2009.

Les first became interested in short wave listening as a youngster in the 1930s and managed to get himself a holiday job at a local radio shop. He left school at the age of 16 and started work as a 'Youth in Training' at the Post Office Hillmorton Radio Station at Rugby. His Post Office training served him well, and in July 1946 he applied for a licence and was issued with the callsign G3ABA.

At first he specialised in VHF, initially on 60MHz, but later he was active on the new 2mtr band. He was winner of the RSGB VHF Field Day twice.

He had a period of inactivity after moving to a sales job which involved a lot of travelling and it was the early 1980s which saw his interest re-kindled. He was now based in Chandlers Ford, so he took the opportunity to join the IVARC, which was then based at Eastleigh. In due course he was elected as chairman, replacing Derek Hitchins (the first chairman) who wished to resign. A few years later he became the Club secretary, then finally president.

In about 2003 Les had an accident when he was knocked down by a car. He spent several months in 'intensive care', but was eventually able to return home with the help of a 'live-in' carer. Les's interest in radio waned and the last time he was heard on air was Christmas 2008.

Peter, G4EOW, visited him each week, getting the occasional shopping and helping out where he could.

Les's funeral took place at the Southampton Crematorium on 8th December 2009 and was attended by Peter, G4EOW, and Ted, G0BHK.

Peter Baxter G4EOW



Secretary's Report 2009 / 10

Once again the Club has had a very successful year with a full programme of lectures, demonstrations and events. We started the year with our AGM on March 13th at which the guest of honour was the then RSGB president Colin Thomas. Colin presented prizes for the construction competition and the HF ladder.

There were notable meetings over the year and just to pick out a couple: Liz, M0ACL gave us a fascinating talk about the YL Expedition to the Falkland Islands. On June 19th Roger Stafford, G4ROJ, gave an exciting presentation on kite aerials in which he described and showed aerials and kites for various wind conditions. The following day Roger and a number of members flew kites at the IBM Hursley sports ground.

As well as guest speakers many members gave interesting talks and presentations throughout the year. Our thanks go to Brian G0UKB, Paul Wilton M1CNK, Colin North G4GBP, Liz M0ACL, Mike G3NKR, Richard G3OTK, John G8IOK, Ray G3HRH, Ted G0BHK, Vic G3NVB, Duncan G3RQF, Graham G3XSD and to anyone I may have missed! It is great to see that amongst our members we have such a wide range of expertise and knowledge.

The annual Treasure Hunt was once again expertly devised by Peter Baxter on June 26th and this year the location was Stockbridge.

In October we had an excellent junk sale with bargains for all tastes!

We held our Christmas Social on December 11th. This was a great success with a multi-lingual quiz, great food and a raffle. The first prize was an MKARS80 transceiver which was won by newcomer Andy who had the kit up and running within days and he has since become M6RGV! There was also an exhibition of amateur radio equipment which was of great interest.

Unfortunately we were not able to take part in many field events during the past year as the Hobbies Exhibition did not take place and we

have had problems finding a suitable site for Field Day operations. With our new National Lottery financed equipment we plan to take part in such events during 2010 and will be looking for operators and participants.

All in all, the Club has had an excellent year and with our current membership plus our new equipment we can look forward to a great future.

Charlie Ivermee M0WYM.

UK Amateur Radio Licences as at 31st December 2009

Change since last year

Grade	31 st Dec 09	31 st Dec 08	Change
Foundation	12746	11162	+1584
Intermediate	5418	4757	+661
Full/Advanced	51496	50742	+754
Club Stations	1360	1318	+42
Reciprocal Full	538	483	+55

VP8YL DXpedition January 2009

Despite being 2 operators less than the original plan, we were still able to pretty much maintain a 3 hours-on, 3 hours-off schedule. Conditions and less than average antennas for 80m meant that many days we found it impractical to be on air from after midnight until about 3am.



The goal was to ensure the whole world got the opportunity to work us. The schedules Bob, VP8LP, had arranged for us also included recommended beam settings and frequencies to help ensure worldwide coverage. In reality we made very few contacts into Indonesia, China and India and surrounding countries and far less than was expected into Australia and New Zealand. Even allowing for the poor propagation this was not easy to understand – we certainly tried.

However propagation into Europe, the USA and Japan was much better than expected given the paucity of sunspots. We were staggered at the pile-ups, especially in the second week when we had expected them to abate a little. Even working by numbers to split the calls by 10 we still had huge pile-ups. We noted some comment on the DX Cluster re working by numbers but this was a deliberate choice. We decided that the Falklands was not sufficiently rare enough to warrant large splits. Also band conditions often meant that 20m

was often the only practical DX band, so we frequently operated two stations there and taking up large chunks of the bandwidth would be unfair to other users. Another deliberate choice was to only work 2 or 3 stations for each number and get back round the sequence quickly. Personally as a 'zero' I know how frustrating it is to hear a DXpedition start calling for number ones and realise it will be at least 30 minutes, probably with propagation faded before the zeros get a shout.

It is interesting being a 'wanted' DX. Different continents behave so differently. The Americans were almost always immaculate in their on-air behaviour and it was rare to hear a wrong number calling or different prefix letters when only part of a callsign was heard. Japan and Australia too were easy to work – but Europe, what a zoo! Our QSO rate to Europe was at least half what it should have been because of the unruly behaviour making it so difficult to pull in calls. The differences were a constant source of amusement, with several of us fantasizing about getting our own back by calling 'I shall say ziz only onze' or 'I am looking for stations with 7and a half in the call'. I don't believe any of the team actually closed down when the pile-up was so rude, but on times it was very tempting.

The group made just over 25,000 contacts, far more than anticipated. My own personal 3520 QSOs almost doubled what I had considered an optimistic target of 2,000. We worked 152 different countries and, with a little assistance from some very helpful operators and the DX cluster Victoria, SV2KBS, had achieved Worked All US States by Thursday of the first week.

All-in-all the trip was deemed a great success, apart from the sad plight of Mio and Jeannie missing the flight. One goal of the DXpedition was to encourage YLs onto the air - we certainly contacted at least 222 and that is just the few we had time to note in the log, in reality there will be many more. Also 4 YLs from the Falklands: Bernadette, Miriam, Nancy and Celia got back on the air for the first time in a long-while and thoroughly enjoyed themselves. Janet, VP8AIB, is a regular on the bands and was the fifth operator of the VP8YLC YL club call.

Liz M0ACL / VP8YLB

A Compact QRP 80m Station

Introduction

This article describes a compact QRP 80m station based on the MKARS80 transceiver. (Milton Keynes ARS). The 5-Watt transceiver, which is the heart of the station, is the MKARS 80 transceiver that was described in one of the IVARC web articles about the middle of last year. Since that time further experimental work has taken the programme through to a complete station, which comprises an 80m loop aerial, an SWR meter to aid the tuning of the loop aerial and a tone oscillator to enable the transmitter to be activated also for tuning. The radio part was demonstrated at the Club's Christmas Exhibition. Experiments with the loop aerial provided a step educational experience when the high voltages and currents that can exist in a tuned loop aerial were found (physically) during the operation of the loop at high (100 Watts) power. Figure 1 shows a block diagram of the station arrangement and Photo 1 shows the rather ugly equipment assembly.



Photo 1. Equipment Assembly

The Object of the Exercise

The intention was that ultimately the station can be taken portable and operation from a better radio site than at my home QTH. Thus far this has not been achieved due to various interruptions such as travelling and helping with the B & B. Many club members will know that I am something of a "Construction Addict" and if someone shows me a good and interesting circuit the chances are that I will have to build it just to see what it does. This has resulted over the years for a number of half finished projects collected in a large box ready for further work when I can get round to it. Such projects include a Third Method detector, a computer controlled DDS SMD unit a DDS I/Q generator for crystal filter measurement and a modularised 80m receiver. Aerials are also a good topic and I now have a collection of portable aerials ready for when the better weather comes.

The MKARS 80 Transceiver

The MKARS80 is a very nicely designed and laid out piece of kit contained on a well made and high quality single PCB with plated through holes. This latter feature aids soldering and it is very satisfying to see the solder flow round component wires when soldering. This gives the assurance of a good joint and no problems were encountered in this area when assembling. The design is a single superhet with an IF of 10MHz, the Intermediate Frequency Filter being a crystal assembly. The filter performance leaves

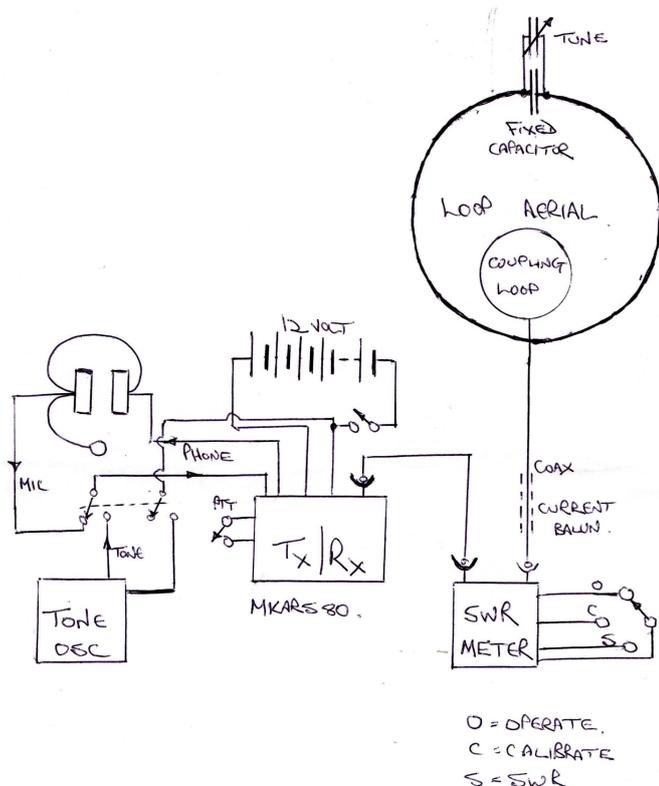


Fig 1. Block diagram of station

The MKARS80 is the centre block, the left hand box contains the tone oscillator and the right hand box contains the SWR meter. Photo 2 shows the loop aerial.

something to be desired which is discussed below. Much is made of "dual use" circuits for receive and transmit directions of signal flow.

Two features take the design from the realm of the simplest possible design to a useful piece of operational equipment. These are an LCD read out of frequency and a "Huff and Puff" frequency stabiliser which controls the VFO. The VFO runs at $10-3.5/3.8 \text{ MHz} = 6.5-6.2 \text{ MHz}$. The pre-programmed PIC supplied has the correct off-set built in so the LCD display shows the signal frequency and also battery voltage which also helps in keeping track of what is going on. Previous designs I have used have employed a Varactor tuning with voltage readout on the varactor. This arrangement leaves the problem of calibration: the MKARS80 overcomes this limitation and is a worthwhile addition.

The second feature is the "Huff and Puff" stabiliser. This circuit measures the VFO frequency over a 40ms clock period and compares it with that of the previous period. Any difference will result in a correcting DC voltage being applied to the tuning varactor through suitable low pass filtering.

Findings during build

The instructions were very detailed and easy to follow. They included a checklist, which was handy as it meant that one could keep track of where you were, particularly after an interruption. The most boring part was the tinning of the wire ends of the coils. The method eventually used was to lay the wire on a piece of thick card and place the soldering iron, tinned with plenty of solder, on top. By slowly drawing the wire through the solder the enamel is melted and the wire tinned all in one go. The molten enamel is discarded as the wire is pulled through and the result is most satisfactory and much better than the traditional method of scraping the enamel off with a Stanley knife.

I made the major mistake of inserting a shake proof washer on one of the variable pots, the wrong way up. The shake proof tongues of the washer were lying against the PCB and on tightening, these "Graunched" into some of the PCB tracks, shorting the HT to Earth. The

resulting detective and corrective work was protracted and painful.

The crystal filter response has been found to be very narrow and is the subject of ongoing investigation courtesy of G3OTK.

Finally the tuning rate is determined by the use of a large knob on the "Varicon" tuning capacitor. The Tuning rate is half a turn for 300kHz. The H & P stabiliser tends to hold lock when making small tuning adjustments, the solution being to move the tuning capacitor a "long way off" to break lock and then come back to the original tuning point, using the "Fine Tune" facility. This calls for a steady hand and lots of patience. Invariably by the time you have returned to the original tuning frequency the QSO will have finished and the operator gone somewhere else. This leads to the well known "Frustrators" outbreak.

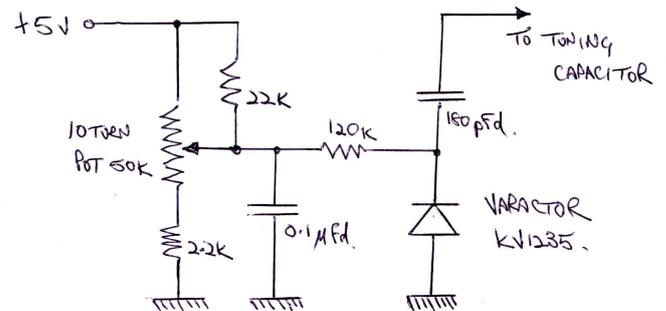


Fig 2. MKARS80 modified tuning arrangement

My immediate solution was to dispense with the "Varicon" tuning capacitor and the "Fine Tune" and fit a ten-turn potentiometer (From Junk box project no 34) and a varactor as in Figure 2. In time a disabling switch will be fitted so that fine-tuning can take place without the effects of the Huff & Puff stabiliser. A steady hand is still required.

The transmitter produces a genuine 5-Watts and a front panel LED is a useful level indicator and shows when over modulation is taking place. The receiver does not have AGC and the volume is controlled by means of a potentiometer across the aerial connection. It is interesting to hear the signal fading unlike a normal set with AGC.

System Requirements

In order to use the transceiver in a complete "System", we need an aerial, headset and a means of tuning the aerial. The headset used

is my standard Heil with a built in microphone. The aerial choice is trickier; bearing in mind that 3.5MHz represents a quarter wavelength of 60 feet approximately. For the receiver, what is needed is an aerial, which will pick up sufficient external noise to overcome the receiver's internal noise. Indeed it is actually undesirable to have more noise pick up than necessary to ensure that strong adjacent signals do not overload the receiver and cause distortion. Whilst any old bit of wire will probably provide enough noise pick up in the receive direction, the transmitter needs a properly matched aerial to ensure maximum efficiency. Any loss of power particularly at these QRP levels is bad news.

The options for a portable aerial are a vertical, a random length of wire, a dipole of some sort or a loop. The vertical, the random wire and the dipole all require a mast, and the alternative, a convenient tree, cannot always be guaranteed. The vertical and wire require radials or a counterpoise of some sort and a 132ft dipole when portable, cannot always be erected, and otherwise requires an ATU. ATUs always involve the use of inductors, which means power loss, (more bad news) and it is something else to carry about. So attention turned to the use of a loop aerial.

The Loop Aerial: Introduction.

In its simplest form a loop aerial comprises one turn of wire about 3 feet diameter, tuned to resonance by a capacitor and coupled to the outside world by any one of a number of means, a small coupling loop, a capacitor connection or a wire tapping on to the main loop.

The classical calculations of Radiation Resistance show that the loop has a very low efficiency at the lower HF frequencies and only becomes really effective from about 10MHz upwards. Work carried out by Prof. Mike Underhill G3LHZ et al suggests that this is not necessarily the case. This assertion has led to conflict of opinion in the upper academic reaches of our hobby. Mike's assertion is that the power goes somewhere and the loop with e.g. 100 Watts does not get hot, as one would expect if the loop had a very low efficiency. His demonstration of a fluorescent tube being lit from a 100 Watt transmitter via a loop aerial is

very impressive. I am bound to say that my views tend to support Mike's claims.



The Loop Aerial: Design and Construction.

The loop itself has a small inductance of about 3 micro henries and needs to have as low a copper loss as possible. Performance is characterised by high currents in the loop and high voltages across the tuning capacitor. A large diameter (1/2") piece of coaxial cable is used: Westflex, which has a copper sheath under the coaxial braid. This all helps to keep the copper loss down. The coupling loop is about 1/5 the diameter of the main loop and is made of standard RG58 Coaxial cable.

The next problem was the choice of tuning capacitor. To tune the loop to 3.5MHz, the capacitor needs to be about 600 pFd. It was intended that the loop would be suitable for use with my Yaesu 857 or the ICOM 7000 at 100 Watts. As will be explained below, very high voltages appear across the tuning capacitor and ordinary receiving type capacitors are not suitable being unable to withstand the voltages. A 100 pFd variable capacitor with a wide spacing (picked up at a junk sale and found in the "Come in handy" box) was pressed into service, which left the problem of a 500 pFd fixed capacitor capable of handling several kV. Various construction

methods were tried: a roll of kitchen foil (too variable) and a couple of sheets of copper laminate (too clumsy). The final solution was to use a number of short lengths of RG58 coax in parallel. Works like a dream. The RG58 has a capacity of about 2.5 pFd per inch, enables exact calculation of the length required and allows trimming of the ends to get the required capacitance spot on.

The Loop Aerial: Performance

A simple measurement with the MFJ aerial analyser enables a lot of information to be derived. The measurement of frequency where the SWR=2.6 is where the 3dB bandwidth point occurs and the total bandwidth divided by the centre frequency gives the Q. Knowing both the Q and the centre frequency we can derive the total resistance of the loop.

For this loop, the bandwidth was measured as 20 kHz, giving a Q of 182 at band centre. Now $Q = \omega L / r$, so $r = 0.44 \text{ ohm}$. This includes all the various losses as well as the Radiation Resistance. Also the equivalent parallel resistance is: $R^*(p) = \omega L Q$, which gives $R(p) = 14.6 \text{ kOhms}$. Moving the aerial outside from my workshop gives a 0.1 ohm reduction in total loss resistance. What I don't know at this stage is the Radiation Resistance, which would enable efficiency to be derived.

We can now see the magnitude of the current and voltage in the loop. The current is given by $\sqrt{P/r}$, $(100/0.44)$ which comes to 15 amps rms or 21 amps peak. While experimenting I found that a piece of 22 swg wire was busy melting its plastic covering! Similarly the voltage across the capacitor is given by $\sqrt{P \cdot R} = 1.2 \text{ kV}$, rms or 1.7kV peak. I received a burn on the hand from the tuning capacitor end plate when I accidentally brushed against it while making adjustments. So high power loops are serious business and safety is also serious business which cannot be ignored.

So how does it work on the air? The only comparison aerial is the 80m dipole and early measurements suggest that the performance is roughly equal to the dipole. Considering the radiation patterns of the two aerials, the dipole near to ground will have most of its energy going upwards due to ground reflection with some limited low angle horizontally polarised

energy. The overall pattern will look very much like an orange. The loop will have horizontally polarised radiation from the top of the loop, going upwards, with vertically polarised radiation coming off the sides of the loop. The radiation pattern too looks very much like an orange.

The Tone Oscillator

Although one would have thought that the circuit for a simple tone oscillator would be readily available in the various textbooks, this was found not to be the case. After a number of false starts due to the desire to save time, effort or components, a proper design schedule had to be followed, and the circuit in figure 3 was the result.

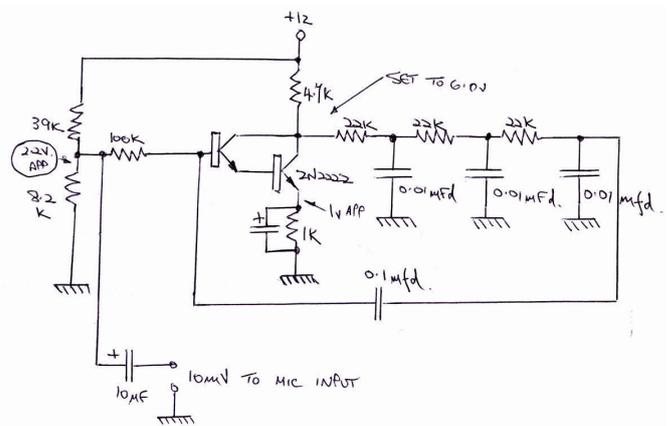


Fig 3. Tone Oscillator Circuit Diagram

The output is about 10mV at a level suitable for the microphone input to the transceiver, at about 1200Hz. When tuning up, the transmitter is switched on, the tone oscillator switched on and the SWR selector switch set to "Set". This allows the loop tuning capacitor to be adjusted for a minimum on the SWR meter. It has not been found necessary to set the "Cal" to meter full scale unless a measurement of SWR is wanted.

When thinking about the system, it was apparent that the tone oscillator and the SWR meter could be built into one box, with common switching. However it was decided to build the tone oscillator into a separate box to avoid the possibility of feedback between the two parts- the microphone level is at 10mV and the transmitter output of 5 Watts is 22V peak.

Tuning the Loop.

In order to tune the loop an SWR meter is needed. It was found my standard SWR meter was not sensitive enough at these low powers, and the bridge design of G3ROO was pressed into service. The simple circuit is shown in Fig. 4.

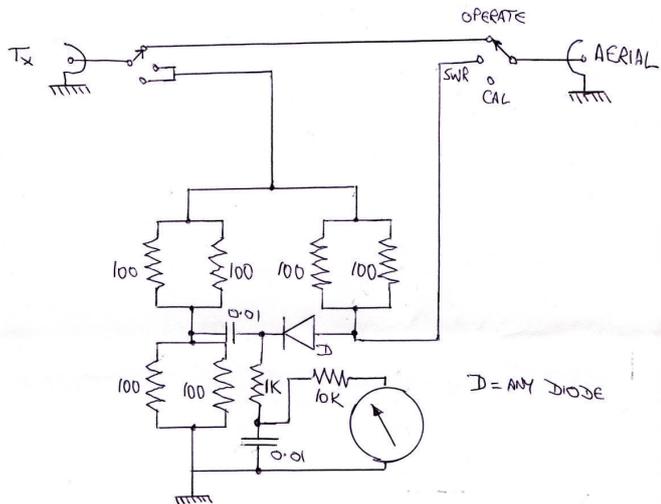


Fig 4. SWR meter circuit diagram
courtesy of G3ROO and G4WIF

End Piece

The MKARS80 transceiver with the tone oscillator and the loop aerial is an ideal "Starter Station" although the loop aerial described above is a bit over the top for a 5 Watt QRP station. The QRP transmitter would only produce a few hundred volts across the tuning capacitor. A simpler assembly comprising a loop of heavy-duty wire or the outer braid of a length of coaxial cable would suffice for the loop and the tuning capacitor could be a standard receiving type with closer spaced vanes. The G4TPH would be a good example, which uses aluminium strips bolted together, so the whole thing can be dismantled.

Construction was an interesting and enjoyable exercise and I now look forward to getting it on the air properly when the fine weather comes.

Reference

1. International Antenna Collection. ISBN 1-872309-93-3 p. 235.

Vic Bryant G3NVB

HF Operating in 2009-10 and the HF Ladder Report

How's it been, really?

We've all mumbled and grumbled throughout the bottom of the sunspot cycle and we've continued to do it whilst the start of the next cycle has been very slow, some say up to two years late. However, the reality is that it could be worse.

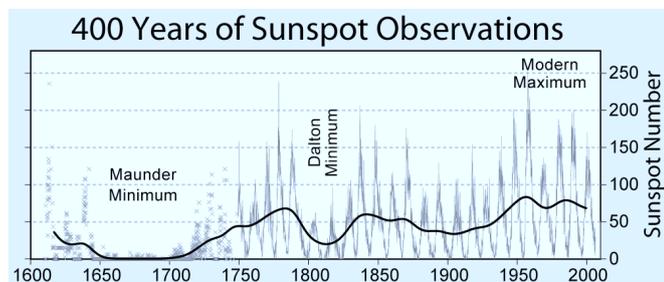


Fig 1.

I came across a graph of the sunspot numbers recorded over the last 400 years (see Fig 1.), and it struck me that a recurrence of the Maunder minimum (1645-1715 – years not minutes!) would be a disaster for HF radio.

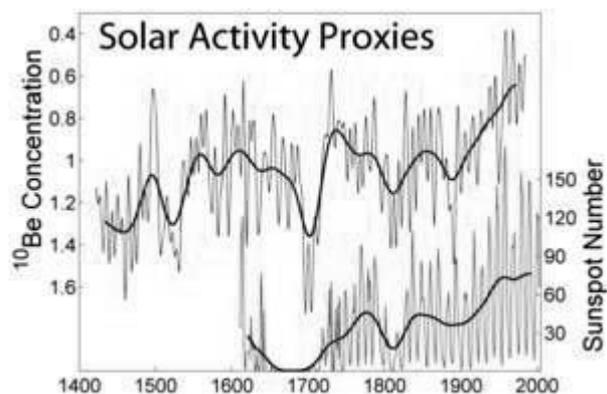


Fig 2.

Look at the lower trace in Fig2. During the Maunder minimum the sunspots reached near zero for decades! The lower black line on Fig.2 is the mean sunspot value and as you can see we live in reasonable times! There have been other bad periods at intervals, in fact there have been 18 periods in the last 8000 years that would have spelled doom for HF radio. After the Maunder minimum there was the Dalton minimum (about 1795-1830), although not as serious as the Maunder event such a period would be HF fatal. We are actually living in a period of relatively high solar activity. Solar flux figures have rarely dipped lower than the mid-60's in the past few years so we should be grateful for small mercies.

Of course there are two sides to whether DX is possible. Solar flux and the noise generated by the state of the earth's geomagnetic field. The

geomagnetic field state is indicated by two variables in the propagation reports, A and K. A can be anywhere between 0 and 400, whilst K can be between 0 and 9. But what do these numbers mean?

The higher the K-index, the more unstable propagation becomes, the effect is stronger at high latitudes, but weaker near low latitudes. When storm level is reached, propagation strongly degrades, or possibly fades out at high latitudes.

- K0=Inactive
- K1=Very quiet
- K2=Quiet
- K3=Unsettled
- K4=Active
- K5=Minor storm
- K6=Major storm
- K7=Severe storm
- K8=Very severe storm
- K9=Extremely severe storm

As with the K-index, the higher the A-index, the more unstable propagation becomes. This because A and K are related. K is the instantaneous value whilst A is the modified average of daily K values. A new K index is determined every 3 hours based on magnetometer measurements made at the Table Mountain Observatory, north of Boulder, Colorado, or an alternate middle latitude observatory. The A index is a daily value on a scale from 0 to 400 to express the range of disturbance of the geomagnetic field. It is obtained by converting and averaging the eight, 3-hour K index values.

Classification of A-indices are as follows:

- A0 - A7 = quiet
- A8 - A15 = unsettled
- A16 - A29 = active
- A30 - A49 = minor storm
- A50 - A99 = major storm
- A100 - A400 = severe storm

So, what's been happening to the A and K indices? Well, in recent times A and K have been very low and this means propagation has been relatively stable. Mostly K has been 2 or less with the occasional 3. You can check out these numbers on the IVARC website (bottom left of home page)

HF Propagation

Jan 09 1201 UTC

Solar flux:	77
A Index:	1
K Index:	0
SSN:	14
Forecast:	Stable
Expected conditions	
LF:	Excellent
MF:	Normal
HF:	Fair

Solar data from [WV](http://www.wv.vv).
 WebProp © [G4ILO's Shack](http://www.g4ilo.com).
[Put this on your website.](#)

This today's (early January 2010) table. HF propagation is 'Fair' because the solar flux is over 75 and geomagnetic activity is low A=1, K=0.

So, all in all it hasn't been great but it hasn't been awful either, on average.

Matters revolving around the HF Ladder

The ladder has now been operating for nearly 2 years and the rules and mechanisms have worked well. There have been a number of adjustments caused mostly by people and politics. In the Balkans there has been a 'shaking down' of political arrangements and the result have been an increase in the number of different callsign prefixes emanating from the region. Many of the old callsigns in the range YU have been discontinued with the old regions emphasising their individualism with new calls, e.g. Bosnia-Herzegovina now T9, Makedonia (down near Greece) now Z3, and Montenegro now 4O0 to 4O4. Serbia still uses YT1/6/7/8. So, there is a need to produce table updates at least on an annual basis.

During the last year it has been noticed that former USSR callsigns, although allocated out to the CIS states in past re-organisations, have now fully discarded their old nomenclature and been allocated new prefixes. The only certainties are that R will always be Russia and R1 is the

European end whilst R9 is the Asiatic end. The old U prefixes are now a bit of a shambles. Some U's are still Russia with the high numbers indicating the Asiatic end of the country but here are the main changes (see table1)

Country	was	Is now
Ukraine	UB	UR
Belarus	UC	EU
Georgia	UF	4L
Armenia	UG	EK
Uzbekistan	UI	UJ
Turkmenistan	UH	EZ
Lithuania	UP	LY
Latvia	UQ	YL
Estonia	UR	ES
Tadjikistan	UJ	EY
Moldova	UO	ER
Kirghizia	UM	EX

Table 1 – CIS prefix changes

Does anyone want a job editing the tables? Despite all this the HF ladder score table is pretty well up to date. Other little issues have been the appearance over the last year of numerical suffixes in the Russian and CIS calls. For example R3IGH/2 or R1PKL/1. After researching this it is concluded that the /number means an alternative address. Consequently it is possible that the licence holder may be operating well out of position, so it is as well to ask for a QTH if it is not offered. For example R1XXX/3, normally a European call may be operating from east of the Urals or from Siberia and consequently worth a lot more points!

During the year it has been realised that some scores in the table did not reflect the merit of some QSO's. Examples were the range of very rare islands listed in the top ten most wanted callsigns. Some of these places were uninhabited and only burst into life when a DX-pedition arrives. The resultant pile-ups usually involving very poor operating practice from certain areas of the world,

means that to achieve a QSO is a truly meritorious achievement.

Here are the top ten:

Prefix	Place
P5	North Korea
7O	Yemen
KP1	Nevassa Island
FR-G	Glorioso Island
ZS8	Marion Island
KP5	Desechio Island
3Y-B	Bouvet Island
VK0-H	Heard Island
FT5W	Crozet Island
FT5Z	Amsterdam Island

Table 2 The rarest calls in the world

All these now have special merit scores attached to them. Speaking of merit scores, the question of what to score for a transatlantic QSO on topband (160m) has recently cropped up. As usual, a democratic process to consider this particular case concluded that an SSB QSO was immensely harder to achieve than a CW one. Consequently, instead of the 8 points normally attached to an east coast or midwest (east of the rockies) contact, a CW topband contact was valued at 100 points and an SSB contact was valued at 150 points. These scores being before the usual weighting multipliers are applied.

In concluding I would like to thank all those who take part in the HF ladder and to encourage newcomers to give it a try. The new ladder year starts in April, so why not use the remaining months of this year to find out how it works and trial run it. The website has all the details, though to access them you need to log in. Otherwise, send me a private message and I'll respond. Don't forget that the competition is year long so there's plenty of opportunity to compete and also to accommodate holidays etc with no detriment. Go on, you know you want to!

Graham King G3XSD