



A necessary and important function in any Society is the Annual General Meeting which provides the opportunity for members to receive up-to-date reports on the status of the club's management and finances as well as air their opinions on past and future activities.

Following the reports prepared by the present committee, they will retire and the President will propose actions:-

- 1) Nominations for committee vacancies.
- 2) Voting for the election of the 1995/96 committee.
- 3) The setting of the subscription rate.
- 4) Suggestions for future meetings.

After the election of the new committee, the meeting will be invited to discuss the proposed G4CUT Memorial Trophy with the view of deciding on how it should be awarded and what form it should take. Then follows the nominations and voting for our Annual Award of Merit. To add interest to the evening, we will draw the Jackpot Raffle which this time is a Years free

subscription to CARS, in addition to our regular raffle draw. Finally but not least, Andrew G4KQE and Dick G3WHR have devised a "Happy Hour" which relates to the Question Mark on the black-board! We look forward to seeing you in the Marconi College at 7.30pm on Tuesday 3<sup>rd</sup> October.

## DATES FOR YOUR DIARY

- 3 Oct. CLUB MEETING - Annual General Meeting.
- 20/21 Oct. LEICESTER AR EXHIBITION - Granby Halls.
- 7 Nov. CLUB MEETING - Recycling of used equipment.
- Saturday 16th December - CHRISTMAS DINNER.

## RSGB INTERNATIONAL HF CONVENTION Report by Ela G6HKM

Roy and I spent a very interesting weekend (9-10<sup>th</sup> Sept) attending the convention held at the Beaumont Conference Centre, Old Windsor. The location is superb and the facilities ideal for the event.

The bait to attend was the chance to get my QSL cards checked for the ARRL DXCC on 50MHz, as I would never trust them in the post to the States. This was the first time that the facility has been available in the U.K. and Chuck Hutchinson, K8CH, Manager, ARRL Membership Services and colleagues had a very busy weekend checking a huge number of applications, mainly for HF. I left my application at 10.00am, went back and checked about midday and was told "come back after lunch". I returned 2.00pm and decided to stay and was glad I did, it was interesting to watch, Chuck had a very keen eye for checking all the details!

I had listed 110 cards which I thought should be accepted, leaving out any doubtful countries, however I did take 3 spares just in case anything went wrong, Chuck asked "what are the spares for?" and kindly added them to my application. Now its a case of watching the post in 3-4 weeks time!

The first lecture we attended was "Amateur Radio on Internet" Mike Richards, G4WNC, all very interesting but my opinion is that its best not to try it because if you do, you get hooked on it!

Whilst I was sitting it out in the DXCC room Roy attended the "HF Data Modes" presented by Mike Kerry, G4BMK, Roys comments afterwards was most of it was history and just as it was getting interesting the time was up!

During the afternoon we opted for "The DXCC Programme" presented by Chuck Hutchinson (mentioned above).

He started with a slide show tour of ARRL Head Quarters and then went on to explain how decisions are made as to whether a dxpedition, etc, can be accepted for DXCC. If they have any doubt about the authenticity of the location they go to great lengths to prove that the operators were actually where they said they were! even checking down to airline flights etc.

The controversial dxpedition to FR/G Glorieuses Is. was not acceptable, the group had failed to get landing permission on the Nature Reserve Is. They operated HF and 50MHz, but unfortunately the very attractive QSL card is not valid.

During the evening 180 people attended the DX Dinner, I had an American couple on my left and on Roys right was a couple from Denmark, both the ladies were licensed.

Sunday morning we attended "Equipment Reviews" by Chris Lorek G4HCL (of Ham Radio Today).

"Top band Antennas" was next on our list, unfortunately they had not anticipated the popularity of the talk and the room was not large enough to accommodate everybody, when we arrived it was standing room only, so that was out for us.

We decided to wait for the raffle, first prize was a Yaesu FT900 HF transceiver, donated by Yaesu UK Ltd. (don't get any big ideas for our raffle, I doubt if Yaesu would oblige), Roy won a World prefix map!

We met a lot of people, it is always nice to put faces to Call signs and it was great to see Don G3OZF and his wife Christine, (18 years since we last saw them) I am sure some of our long standing members will remember Don for his sterling work when a Public Inquiry was held regarding antenna planning permission in Chelmsford. A nice weekend you should try it some time.

## CHRISTMAS DINNER

To reserve an early booking we have nominated, Saturday 16<sup>th</sup> December, Venue Marconi College, more details next month.

## COMMITTEE MEETING

The next Committee meeting will be held at 7.30pm on Wednesday 11<sup>th</sup> October, in Telford Lodge, you are welcome to join us.

## LAST MONTH'S MEETING - Geoff, G7KLV

When I get RadCom each month I skim through the early pages and head straight for the construction projects and Technical Topics. Without fail, however, I always look at the VHF/UHF News to see how G6HKM is doing. She is always near the top of the league table and usually contributes a snippet of news as well, it's the same in HRT.

I had always taken Ela's pre-eminent position for granted but after her talk on "Aspects of VHF" I realised that to become one of this country's top VHF operators requires nothing less than dedicated dedication! Like most achievements this probably requires ten percent inspiration and ninety percent perspiration!

It all started in a small way by not being able to answer calls on Roy's rig or talk to friends, charging up and down the garden to alert Roy that someone was calling him, always listening but not allowed to talk! If you can't beat 'em join 'em! Having burnt the midnight oil ("Have you noticed anything odd about Mother these days?") and got her RAE pass slip in 1982 and no G callsign she ups and off to ZL, steps off the 'plane, has a quick cuppa, trots round to the licensing office and in no time at all she is ZLOTAC. No red tape out there! RA please note.

Starting with 2.5W SSB on 144 she soon became hooked on DX and quickly graduated to a TRIO 9130 with 25W.

From these modest beginnings Ela now works regularly on 6M, 2M, 70CMS and 23CMS making good use of every subtle freak of propagation. Two sets of equipment are in use, the main equipment is in the shack whilst another set is used for monitoring the main bands indoors. The monitoring equipment using loft aerials consists of :-

6M - Icom 735 - Cirkit 6M to 10M convertor - Dee Comm Halo.

2M - Trio 9130 - RN Electronics Pre-amp - PMX Halo.

70CMS - Kenwood TW4000 - 2 ele. Vert. Yagi.

The shack houses the following :-

6M - Icom 575H, 100W - 5 ele. PMX Yagi.

2M - Icom 275E - BNOS 160W - Mast-pre-amp - 15 ele. Cue Dee Yagi.

70CMS - Icom 490E - BNOS 100W - 23 ele. Cue Dee Yagi.

23CMS - Icom 1271E - Icom Mast-pre-amp - 43 ele. SHF Yagi.

The Yagi's are rotatable and mounted two per mast.

As you might expect this formidable array of equipment has produced some equally formidable results which are briefly summarised :-

6M 118 countries worked 518 locator squares

2M 41 - - 263 - -

70CMS 22 - - 122 - -

23CMS 17 - - 66 - -

We shall expect to be updated from time to time!

Operating on these bands and making use of propagation conditions as they arise requires extreme flexibility in domestic arrangements. These bands are not for those with an odd hour to spend in the shack. Aided and abetted by Roy (and frequent weather predictions) she monitors the bands constantly and when openings occur she stays with it when ever possible. Slick operating techniques are essential in the transient propagation conditions often prevailing.

Commercially, VHF and UHF are ideal for line of sight communication systems. Unfortunately allocated frequencies are subject to interference from other users under certain abnormal atmospheric conditions often making them unusable. Ironically, it is these self same conditions which appeal to the amateur to produce the good DX and provide the absorbing fascination for the dedicated fanatics of which she readily admits she is one!

Ela has made contacts under the following conditions :-

TROPO 6M, 2M, 70CMS, 23CMS

AURORA 6M, 2M, 70CMS

MS (Meteor Scatter) 6M, 2M

SATELLITES 2M, 70CMS

SPORADIC E and BACK SCATTER 6M, 2M

F2 LAYER and TEP (Transequatorial) 6M

As you might expect Ela's interest was aroused by the opening of 6M to Class B licensees and she has been active since May 1988 when she started with an FT690 and a homebrew dipole which was soon replaced by the rig listed above.

This band has been gradually opened up to all-comers since the demise of Band 1 TV in the UK, Europe still has some Band 1 TV hence restrictions apply in a few areas.

Things had started to move in 1983 when 100 permits were issued for operation outside TV hours and Ela recalled that Silent Key Les G4CUT held one. From 1986 Class A licensees were allowed to operate in the UK with power restricted to 20dbW and horizontally polarised aerials of 20M max: height. Further relaxations in 1987 were extended to Class B holders.

With the exception of Monaco and Albania all European countries are active. From 1994 power has been increased to 400W and restrictions regarding aerial height, polarisation, /P and /M operations have been lifted.

To give Ela a rest, Roy played us some recordings of various interesting contacts she had made. He also demonstrated the effects of meteor scatter on some unknown carriers thought to be emanating from eastern Europe on 49.749MHz. Listening to some of the contacts one can only be amazed at Ela's aural decoding abilities!

With one ear on the bands, Ela also designs her own QSL cards and her contacts have filled fourteen log books. A selection of interesting cards and awards were on view.

Thank you Ela for an interesting and entertaining evening, prepared at such short notice. Thanks to Andrew G4KQE for chairing the evening in the unavoidable absence of John who had suggested the subject! Also to Pat G0SBQ for completing the raffle so expertly.

A parting thought. Chelmsford has long basked in the notable achievements of Marconi. Should not members of CARS do likewise with those of Ela G6HKM?

## ALTERING CRYSTAL FREQUENCIES REVISITED Technical Article by Geoff, G7KLV

Those of our readers who believe every word printed in this august publication will, I'm afraid, be sadly disillusioned. Our esteemed Editor may even feel it necessary to print a disclaimer - "The Editor cannot vouch for the accuracy....." or similar weasel words! Remember what happened recently to his opposite number on the Evening Standard!

I have to admit that my notes on crystals last month were not strictly true. In fact they contained one downright porky! I can only plead that I was anxious to meet demanding deadlines set by the Gt. Waltham editorial office.

Attentive readers will recall that I claimed that I had managed to re-grind the crystal to 2133kHz. In fact, I had only got it to 2129kHz. Just another minor adjustment, or so I thought, and I would be there. Disaster struck - as it so often does when one get's a bit too cocky! I overdid it and went to 2135kHz. No amount of circuit re-adjustment would lower it. Horrible sinking feeling - like when you have just said to the boss "No problem Sir", I refer to those far off days when bosses still commanded a little respect.

"Aequam memento rebus in arduis mentem servare" which, as you probably remember from school days, roughly translated means "don't lose your head when you're up against it". Unlike Whitehall mandarins in the Treasury and the Foreign Office, our Editor still allows us to show off with a bit of culture occasionally.

As Hon. Librarian, as well as having acquired a permanent list to starboard, I also have a vast collection of highly erudite, but mostly useless, technical literature readily available. After a little searching in the dusty archives, the 1952 ARRL Handbook came up trumps.

There is some quite interesting practical information about regrinding crystals. It says that the quartz plate must be ground so that it is about 1 thou: thicker in the centre as compared with the edges. Whether this would apply to the quartz plates I have, which are supported in the four corners by two dished metal plates, I don't know. I doubt if I could work to such accurate limits anyway.

The really useful tip was on how to lower the crystal frequency. This can be done by "loading" the plate by carefully rubbing on soft solder on each side of the plate. I was able to reduce frequency from 2135kHz to within 250Hz of the desired 2133kHz. So, there you have it.

The real difficulty is to find the older crystals with clamping plates for mounting and connections. They are not so readily available as they were, though I did find some FT-243 crystals at a rally recently.

The only other reference I have found is in the 1968 RadCom Handbook. This states that after the relatively coarse grinding process using diamond, Carborundum, emery or jewellers rouge it is best to finish with an etching process using hydrofluoric acid for best stability. Beware this corrosive substance! I expect the literature of the '50s and '60s contained numerous references to re-grinding the older type of crystals which were probably readily available at the time.

Having got the crystal to the desired frequency, I had in the meantime had second thoughts, did a quick re-design which needs a different frequency! Nil desperandum.

73 from Roy & Ela Martyr,  
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