

Chelmsford Amateur Radio Society

Affiliated to the RSGB.

President: Dick Brocks G3WHR

Secretary: Charles Shelton G0GJS

Club Call Sign: G0MWT

Chairman: John Bowen G8DET

Treasurer: Brian Thwaites G3CVI

Newsletter No.391

August 1998

THE AUGUST MEETING

Following our last meeting when we indulged ourselves with a spot of mid-summer madness we return to the serious stuff of amateur radio and to a subject which makes it both fascinating and frustrating! The subject of our deliberations will be "Solar Cycle 23". Our speaker for the evening will be none other than our own **Gwyn G4FKH** on one of his, all too rare, appearances at the Club. He will address us in English, his reluctantly adopted tongue, and describe the interpretation of phenomena affecting radio communication. He will be discussing the end of Solar Cycle 22, the Sun, Interplanetary Magnetic Fields, the Earth's Magnetosphere, the Ionosphere and the meaning of the RSGB broadcast parameters, Auroras and some predictions for the remainder of this Solar Cycle. Don't be put off by all that! He claims it is basically a low key talk and he will welcome questions! So come and join us on **Tuesday 4th. August, 7-30 pm at the MASC, Beehive Lane.** We guarantee you'll go home a little wiser!

DATES FOR YOUR DIARY

Aug 2 RSGB Mobile Rally - Woburn

Aug 15 RSGB HQ Open Day - Potters Bar

Aug 16 Gt. Eastern Radio & Comp. Rally - Wallington Hall nr Kings Lynn

Aug 31 Huntingdonshire AR Rally - nr Tesco's on A428 St. Neots

Committee Meeting : Wed. 12th. August.

The next meeting will be held at the QTH of Colin G0TRM at No.1 The Leeway, Danbury. You are welcome to join us.

Last Month's Meeting - John G8DET

Every so often CARS has a Celebrity Evening and "An Evening with Fred, G6FXM" was the first this year at which the ladies were especially invited - and it was nice to see so many present.

Fred's presentation - "The History Of Communication from the Beginning of Time - until - Late This Afternoon" was loosely based on the format used for the IEE Xmas Lectures with live and recorded speech, integrated video presentations and audience participation.

Communication was defined as "the act of imparting and receiving information. Communication can be immediate or it can be conveyed over a period of time even from one age to another".

This was illustrated with examples of cave drawings to modern computers which deal with 200 million bits/sec. Mathematics was highlighted with references to Pythagoras who was born about 570BC, the Appleton - Hartree equation for reflective index of an ionized medium in the presence of a magnetic field and Ohms Law, $R=E/I$. Was the Watt really named after James or was it left from a Committee's question "what"?

The inverse of the Ohm is the measure of conductance and is called mho (Ohm rearranged). This led Fred to postulate whether 1/Amp was a Pam and the inverse of a Henry could be a Henrietta. Gilbey's (Tony G4YTG) Observation of Aerials was examined with the conclusion that an aerial with negative gain must be measured in Yeblogs. This led to an involved story of a Russian Princess related to Count Getemov!

Visual signalling was explained with the tale of a maiden imprisoned in a tall tower - her only method of signalling to the outside world being with the light of a candle modulated with a newspaper - in this case the Daily Telegraph - which was construed by Eric G8ADX, as being the origination of Telegraphic Signalling.

Bees came into the picture with the example that a simple dance could convey sense, eg. where the best field of nectar was or the nearest roundabout - shown with a video clip of Geoff G3EDM, complete with bee veil doing a quiet jig.

Notices were examined with an example from the sign in the Multistory car park "Turn Off Your ENIGNE". Verbal notices in the form of "press buttons 103 for a window cleaner, 104 for Pizza" found an irritant agreement in the audience.

Road Rage was given as a very modern form of communication. Car to car communication with amateur radio being the better way.

A tenuous link was established in that both Fred and Tony G4YTG, besides being National Service Instructors at the Royal Signals Camp at Catterick (they actually were) may also have been involved in clandestine operations, leading on to a Video played after the Tea Break in which most of the Society took part, sometimes unwittingly!

A briefing by Major Shelton G0GJS explained that a foreign power had hidden a secret device at Picketts Lock which when activated would interrupt all forms of communication including the House of Commons. A weather forecast by Harry G5HF explained that the El Nino effect has produced icebergs in the Med, Hurricanes in Hull, Tornado in Taunton, Showers in Sheerness but good weather for Picketts Lock.

Corporals Andrew G4KQE & Peter were dispatched to hide in enemy territory and report back to Sergeant Cutting G3GNQ, Network Controller. Major Tony G4YTG told Tom G4INM that they would go to "see Q" (Quartermaster Colin G0TRM) to pick up the secret equipment. "CQ"? enquired Tom. "Yes, see Q" replied his superior. As an aside Tom looked at the audience and said "He must be off his kite".

After obtaining stores and examining the Super Robin transport equipped with roof mounted DF aerials, a trial was conducted with exploding mushrooms in which Ralph G3NAA was blown up. The DF party set up their hidden station (complete with generator) in the Beer Garden of the Beehive Inn at Great Waltham instead of getting dirty (as usual) but they were able to check-it-out prior to the CARS Christmas Dinner booked there on 10 th. December 1998.

The sortie to Picketts Lock was successful and the secret jamming device recovered. Thank goodness for that!

Our thanks to George G3GNQ for the nifty camera work to Tony G3YTG for just about everything else, from best boy to technical manager, and above all to Fred!

Flowers were presented to the XYLS involved in the filming by CARS as a mark of appreciation of the effort put into the excellent evening.

Member's News.

Carl G3PEM recently met Dick May G3KTF, a former Club Member, at the Ipswich rally who informed him he was moving to Switzerland soon. Look out for him on HF as HB9DNH

The 2nd. Chelmsford Scout Group. - Chris G0IPU.

Whilst running the J.O.T.A. station in 1996 the possibility of running a Novice class for interested Scouts was discussed. I sent for more information on becoming a registered instructor. As it didn't seem too difficult I applied and was accepted. Having got clearance to use the Scout Centre as a venue we then discussed a suitable time, which by mutual agreement was 10:30 to 12:30 on Sunday mornings.

With the invaluable help of a friend, Jeff Herbert G4JJH, we started in late July 1997. The students were Jeff's son Christopher, Gary Meek, my XYL Rhona and our two boys Daniel and Matthew. The course was structured by the RSGB using their students and instructors note books. There was about an hours homework set at each session. We soon found we had to go more slowly than originally planned but we felt reasonably confident to have a go at the March 1998 exam.

The course consisted of some practical work. They each built a simple radio using a ZN414 IC. We also gave many demonstrations of the practical aspects of the hobby. During the course, various HF and VHF stations were put on for them to listen to. On two occasions CARS loaned me the Club call sign and, as GX0MWT, they had a chance to go on air as well. The last three or four classes were devoted to mock exams and quiz type revision.

In the spring of 1998 we heard that we had achieved 100 % success with Rhona getting the highest marks. They all applied for licences and were given the following call signs Gary 2E1GQB, Christopher 2E1GPT, Daniel 2E1GQA and Rhona 2E1GQL. All are now active on 70CM's on hand held rigs in the Chelmsford area. Some are seeking 6M DX as well.

The next step is the CW Morse test at 5wpm. This has been started but may need a little gentle persuasion! Watch this space to see how they get on!

Jeff and I hope to run this course again at the same venue, but as yet this has not been possible because of the restriction of being in the Scout movement. We are hoping to overcome this as it is the only way I can use the venue.

Finally my thanks to Jeff G4JJH for all his help and encouragement.

Older amateurs often bemoan the fact that the balance of age in the hobby is very lopsided and pontificate on encouraging new blood! Chris obviously has strong opinions on this thorny subject! What's more he and Jeff G4JJH have shown how it can be done! I'm sure all Members will join in congratulating them both and the new 2E1's. We offer our apologies to all of them for not featuring their magnificent achievement earlier! Editor.

THE VALUE OF THE INTERNET - Carl G3PEM

Being half Danish, on my Mother's side, I have a special interest in Denmark and all things Danish, from Carlsberg beer to whatever! It was whilst surfing the internet at work during the early part of the year for information on mobile comms. that I came across a route to a page which listed amateur radio clubs. This then linked me to the home page of the Kobenhavn (Copenhagen) amateur radio club. I knew that there was a club in the city but in all my years of travelling to see my family I had not been able to trace it. This home page was a link to an activity page and a map on how to find them. Well, during the month of June Frances and I paid a visit to my family. There are just two cousins alive now and it was during this holiday that an opportunity arose to ring the club. After some enquiries as to meeting times I paid a visit to the club, what an eye opener!! On arrival I was given a very warm welcome and asked if Frances and I would like a tour of the establishment. Our guide was Verner OZ1EIG who lives close by.

The club is housed in a detached building with a large connecting outbuilding at the back. The club owns the property, having purchased the house and buildings before the second world war. It was explained that the radio club was formed around 1934/35 by 6 radio amateurs in the city and the current membership is about 180 members. The tour round the club followed a pattern but this description of the layout is in the order that I can recall the highlights. Starting with the outbuildings on the first floor, which has a large room 12 metres by 4 metres and is allocated as an lecture theatre, with facilities for teaching electronics to 24 students. The facilities include projectors, white boards video etc., and is used for amateur radio classes both theory and Morse. A notable item was that the long walls were decorated from end to end with three deep lines of operating awards. The ground floor was a large general store with enough space to hold all of the ancillary field day equipment, tents generators etc. Part was being used for construction of a large steerable array for satellite working. Other items stored included the transmitters out of the East Germany embassy, saved when the embassy was closed on the reunification of Germany. As far as I could tell the equipment was built partly in East Germany and partly in Russia, circa late 1970 /early 80's, with 4 x 250 watt transistor power amplifiers feeding a combiner. The part of the exciter I looked at either had SL600 series IC's or very good copies thereof! The link building first floor contained a room allocated to the 70, 144, 430 and 1296 MHz stations employing a console with Icom, Yaesu and some home-brew equipment. Another first floor room was allocated to computing for those who wish to generate software programs..In the centre of the

building layout is a horseshoe shape quadrangle laid out with bench seats and pot plants enabling relaxation from club affairs on warm summer nights! Within the area a 40 foot tower was installed with a 3 element beam, various dipoles and VHF/UHF antennas mounted thereon. The club had hand built a 5 element beam 14 to 28 MHz including the WARC bands, this will be placed on top of the tower later this year. The main house comprises three floors, first, ground and cellar. The first floor contained a small room fitted out as a workshop and allocated to junior members up to 16 years so that they can teach themselves soldering and wire circuits in a safe and instructive environment. Next door was a fully equipped electronic workshop with a full range of new and second-hand test equipment and electronic tools for the benefit of home-brew constructors. Across the corridor was a store room with shelves of components new and second-hand all neatly stacked and labelled, it included some new boxed prewar valves, the ones with the four pin bases, nothing appears to have been ditched. The last room on the first floor was a fully equipped HF station, a mixture of commercial equipment and some home-brew items.

The cellar was divided into a number of rooms which included a full mechanical workshop fitted out with drills, lathes, coil winders, guillotine and bending presses. A sheet metal store was next to a converted toilet being used as a PCB etching facility.

The ground floor was 'the piece-DE resistance' other than the entrance hall. The clubroom had several tables around which various discussions were taking place. It was explained that the main lecture night was Monday, Tuesday was education night, technical or Morse, Wednesday, the night of the visit, technical discussion, Thursday free night, closed Friday. Members could access the club most nights for project work etc. Attached to the clubroom was a kitchen with coffee, soft drinks or being Denmark a selection of beers with a honesty box. As most people in Copenhagen live in flats the club is regularly used. "Just popping out dear" has a new meaning!

The Museum was at the other side of the entrance hall. This contained equipment from around 1900 up to the present day, a lot of the equipment being home brew and of an extremely high standard. The highlights for me were the collection of Morse keys, the earliest from late 1890, a home-brew antenna tuning unit for mounting at the feedpoint of the antenna with L & C remotely adjustable and the coupling to the coil also remotely adjustable. The final highlight in the museum was a piece of equipment built during 1943, a 100 MHz transmitter and tape Morse reader. This equipment was used to transmit the Danish resistance messages to London. The communication difficulty was that due to the position of Denmark the HF circuits can be a problem due to skip zones and bands available at selected times etc. During the visit of 'unwelcome guests' who's HF/DF expertise was very good. They all had enough practice looking for 'illegal' transmitters and a method had to be found to communicate with London SOE headquarters. The method employed was to transmit across the sound to Sweden at 100 MHz, there was no equipment possessed by the unwelcome visitors to detect this. With the help of two sympathetic Swedish telecom engineers a free pair on the Malmo / Stockholm trunk was allocated to the circuit which was fed into the UK embassy transmitter and the high speed Morse mixed with diplomatic traffic to UK. Thus a secure transmission route was developed, the big risk then being in assembling and preparation of messages for transmission in Denmark. I had read about and researched this link a number of years ago and on this visit saw the actual transmitter for the first time, and the standard of construction on a copper chassis was extremely high. In case you are wondering I believe that the message replies were sent blind at certain times of day from the UK. From the day of switch on until May 1945 this link was not discovered by the 'unwelcome visitors'. The tour took just over the hour and there was so much to see and, for a home constructor like myself, it was of great interest and I was pleased that Home Brew was still very active. Their constructors competition is in April each year - first prize is free subs. for one year!

The reason for my choice of title for this article is that without the internet I would still be searching for the radio club, so it has proved its value. For work I normally treat the net as a reference tool. The amount of information that can be accessed is more than one person can absorb. Information overload will be the next work related disease! I have noticed that the pages from companies are beginning to be less informative and are being written with a marketing slant.

Less information and more bull, unfortunately!

Joint Editors

Colin G0TRM 01245 223835

Geoff G7KLV 01245 473822

64 Vicarage Lane, Gt. Baddow, Chelmsford CM2 8HY

Consulting Editor

Ela G6HKM

Deadline for the next News Letter is 22nd. August