



Chelmsford Amateur Radio Society

Established 1936

Affiliated to the RSGB
President: Harry Heap G5HF
Secretary: Martyn Medcalf G1EFL

Club Call Sign: G0MWT
Chairman: John Bowen G8DET
Treasurer: Brian Thwaites G3CVI

Newsletter No 499

Web Address: www.g0mwt.org.uk

September 2007

This Month's Meeting – Tuesday, 4th September. 7.30pm at the MASC.

The History of Radar by Andrew Tyler, G1GKN

Radar changed the direction of WWII. Chelmsfordians are reminded of Radar every time they look up to the Marconi Mast at Great Baddow as that is one of the few remaining Chain Home masts in the UK.

Andrew will trace the development of Radar and lead to how we rely on it in our everyday lives.

He will (hopefully) demonstrate how everyone with a home computer can now "see the aircraft in the skies above your house" using ADS-B.

You do not know what ADS-B is?

Come on the 4th September & hear & see it in action.

Once you have signed-in you can purchase a drink from the Bar and meet old & make new friends. See you there. There will be our usual good Raffle.

Dates for Your Diary

Net Controller Sept	Ron, M3CAM
Wed 12 th September	CARS Committee Meeting - Danbury Village Hall at 7.30pm - All welcome
Sunday 23 rd September	Sandford Mill – Science & Discovery Day. 10am to 5pm. CARS will be transmitting. Please join us as an Operator, Logger, Host or with your Partner & Family. Special Event Call-Sign GB5HF will be used.
Tuesday 2 nd October	CARS Meeting – AGM & then an Echo-link Talk & Demo

Book Now For Advanced Course

The 4th CARS Advanced Radiocommunications Course starts on Thursday 30th August with the exam on Monday 10th December 2007.

To book a place contact Clive, G1EUC on Tel: 01245-224577
Mob: 07860-418835 E-mail: training2007@g0mwt.org.uk
Training pages: <http://www.g0mwt.org.uk/training/>

Thanks to Denis, M0FHA & Joy for arranging the Postal Members Newsletter – could it go by E-Mail?

Please keep our Membership Secretary, informed of any changes to your callsign or E-Mail addresses, etc.
Further details contact our Programme Secretary: Martyn G1EFL on 01245-469008 or look on the CARS Web Site.

Club Nets: Tuesdays 8-30pm: (2nd) 145.375: (3rd) 28.375/1,947 (4th) 1.947: (5th) 145.375. All +/- QRM.

Last Month's Meeting: - Constructors Competition by Carl, G3PEM

The Constructors' Competition is not everyone's cup of tea but it is put on by CARS Committee to encourage the Constructional aspect of Amateur Radio. Past years have seen a variation in the number of entries such that had this year had been poor, the Committee would have considered replacing it next year. However a surprising number of entries were displayed on the front desks to be examined briefly by those present before the Competition really began.

Carl, G3PEM introduced the evening and stated that the Club Members were each given a Voting Form & it was them alone which determined who got the money. He said he was pleased to see so many entries.

Carl, G3PEM starting the Competition with his 250mWatt TX

Carl then described the entry by M3YLB, Richard Beck, a beautiful Morse Key on a black Granite Base.

Tony, G4YTG was soon on the stand describing Fred, G2HNF's 80 Metre Vertical Aerial which he had just erected in the rain. A schedule had been requested with Doreen, G8ONM, one of the Scouts running GB100J at 8 pm BST on 3.716MHz. Brian, G3CVI had brought the Club's new IC756 into the Meeting and had tried to find the contact but to no avail. We now know they were without power in Hylands Park! Fred had constructed everything to a very high standard and the Aerial had been used for years when Fred went camping.

Brian, 2E1RMD, described his Regenerative Receiver which received GB100J on its first try out.

Colin next described a Wien Bridge Oscillator he started to make in the mid 1970s using a "then modern chip". It also uses a Thermistor R53 to stabilise the output. This was demonstrated on an oscilloscope and the audio fed to a loudspeaker (which provided a "hearing test").

Gwyn, G4FKH next took the mike to describe his WinKey CW Keyer. This was made from a kit from America and enabled one to put a message into the unit which it memorised and then played back under your command. Very useful for contest working.

Geoff, G7KLV next told the audience (in the middle of a rain storm) that he liked a slice of toast from time to time in his shack. The problem was that he did not like it crusty on the outside and pappy inside - he liked it crunchy all through. He decided to find out if he could modify a Toaster to do this so he took one to pieces and was surprised to find it worked on a simple timer - no function of temperature. Using a Designers approach he quartered the heater power with a diode and then modified the timer to run 4 times longer

Tony, G4YTG next described how he had designed and built the 5/8th over 5/8 Dipole used at Sandford Mill during Sunday Open Afternoons for the 2 metre Station. He felt his approach of having a non-radiating matching stub was unique.

Break-time was called for the Members to have a look at the exhibits & mark their papers accordingly. Carl collated the marks to produce the winners.

After the refreshment break the room reassembled and many Raffle Prizes won.

CARS President, Harry, G5HF gave out the prizes.

First Gwyn, G4FKH was called to collect the "First Time Winners Prize" for his WinKey.

CARS President, Harry, G5HF presented Geoff, G7KLV 3rd Prize for his Toaster.

CARS President, Harry, G5HF presented Brian, 2E1RMD, 2nd Prize for his Regenerative Receiver.

CARS President, Harry, G5HF presented Richard Beck, M3YLB, First Prize for his Morse Key. Brian said he nearly did not enter it but was persuaded to get it from his car at the last moment!

Trevor, M5AKA next told the audience about the Scouts using GB4FUN to contact the ISS on 4th August at 22.10 BST. A live video link was shown of the ISS Contact. Carlos in the GB4FUN bus was seen nearest the camera. Thanks to Murray for projecting the images from his laptop.

Once again, the evening, both constructively & socially was deemed a success. Thanks to all who contributed to the evening.

We will run the Constructors Competition again next year - look out for it in our 2008 Programme.

Report from details supplied by Carl, G3PEM

Did you Hear – Did you See?

1. GB100J Hylands Park

Special Event Call-Sign GB100J operated from the 21st World Scout Jamboree 2007 camp at Hylands Park, Chelmsford, Essex from 27th July until 7th August 2007.

It was on the air 24-7 during that period.

They operated on all frequencies and used EchoLink: MB7IDA node 265297 on 144.8375 MHz CTCSS 110.9 Hz or PA5UL node 259814

Full details of the GB100J station can be found at this website

<http://gb100j.radio-scouting.org.uk/>

Note, NOT a WWW.

2. Scouts Space Station Schedule

An International Space Station Expedition 14/15 ARISS contact was successful with Scouts at the 21st. World Scout Jamboree, Chelmsford, England on Saturday, August 4, 2007.

GB100J called NA1SS at approximately 21:10 UTC on 145.800 MHz FM. This was using the GB4FUN Bus and has been organised with assistance of Chris, G0IPU.

The Scouts prepared a number of questions for the Astronauts.

Related URL's
AMSAT-UK

<http://www.amsat.org/amsat/ariss/news/arissnews.txt>

Getting Started on Amateur Radio Satellites

<http://www.uk.amsat.org/content/view/408/168/>

A number of CARS Members heard the Downlink on 145.8 MHz FM. CARS Member, Doreen, G8NMO was present at the GB100J Operating Tent and walked outside and looked up and saw it as she listened on a handheld.

3. Scout Radio

SAMJAM FM (Special Event Restricted Service Licence Station) was on air from Hylands Park on 87.7FM beginning Saturday, 27th July until 7th August, broadcasting the event, music, requests and information. They played music requested by the Scouts (some of it was pretty heavy rock and punk!).

4. Meteorite Shower

John, G8DET watched for a couple of nights & saw nothing however at 11.35pm BST on Monday, 14th August he saw one travelling NE to SW and another E to W. They were gone in a second or two. Did anyone else see them?

5. Sandford Mill – GB5HF

Every Sunday Afternoon in August Sandford Mill was open to the public.

The 5th of August turned out to be at that time the hottest day of the year with temperatures running about 30 degrees C. The previous day there were a number of Contests held with all bands "wide open" so the airwaves were electric. This, coupled with the high temperatures which forced people to visit the sea-side, meant that attendance levels were down and the 2 metre band absolutely dead! Having said that, those that did attend were interested and enjoyed themselves.

CARS operated the 2 metre station manned by James, 2E1GUA using GB5HF with Colin, G0TRM, Malcolm, G4KGL, Geoff, G7KLV & John, G8DET in attendance.

Tony, G4YTG designed and erected a Twin 5/8th over a 5/8th Dipole above the support pole for the HF Aerial. It is driven from the bottom via a Non-radiating stub - a technical first according to Tony. This worked well with Norwich being heard and GB5HF working from Colchester to Kent.

David Bolwell, ex G3JCM made his first Amateur Contact for some 40 years and Trish talked to Bev (G0KOY) in Colchester who was in an air-conditioned shack, which made us all sweat even more.

12th August at Sandford Mill.

The weather forecast for the afternoon was rain, rain & more rain. In the event 10 spots fell & it was quite hot. Whether the poor forecast meant that people did not go to the coast we may not know - but they did come to Sandford Mill.

Brian brought along the Club's new IC756 Pro III.

First in the door was Adrian, M0ABY & Mavis, G0XBC from Wheathampstead, they were there last week as well. The return trip is 48 miles so we were very pleased to see them again.

Similar to this time last year, the band conditions were diabolical, with a general noise on all bands

of 9+20 or worse. Most of it had a manmade component that compounded the problem but careful listening proved it was coming from the De-Humidifier at the end of the 2MT Hut - switched it off - gone.

Jim, 2E0RMI & Bob G4MDB operated the 2 Metre Station from off the landing as per the previous week but had to contend with the noise from the nearby activity of sawing a telephone pole with a large cross-cut saw!. The Tree Cutting saw noise even drowned the Transmit audio! To solve this, the VHF Station would operate on the 19th August from the 2MT, Marconi Hut.

Unfortunately the HF Station also interfered with the 2 Metre Station so they used an internal aerial and accessed the Danbury Repeater. They were heard by Rod Wilkinson of Ofcom who had issued the Special Event Call-Sign GB5HF for the month.

Sandford Mill has just been presented by Mr Ellis of Margaretting (near Chelmsford) with a Marconi Marine AM Transmitter coded V5 and made between 1938 & 1946. Don Manning appeared and said he used to test these in 1946, 10 at a time on the bench.

Also on Sunday 12th August Murray Niman, G6JYB presented two Smith Chart calculators to Trish Robinson of the Sandford Mill Museum.

The calculators were made by Scanners Limited of Bill Quay, Gateshead. They made the gimballed platforms for the radar division of the Marconi Wireless Telegraph Company. Eventually Scanners Limited was bought by Marconi and became a manufacturing and assembly plant for Marconi Radar.

They were owned by Mr H M Chandler (known as Vic to his friends) who worked at the Gateshead plant from the late 1940s to late 50s. Vic died some years ago and they were found by his son Nick Chandler following the recent death of his mother and consequent house clearance. Nick, a Chief Scientist at BAE Systems, Great Baddow, Chelmsford, gave them to Murray, G6JYB.

Smith charts enable plotting of impedance, Z and its' inverse (i.e. admittance, Y) for design of matching circuits - a process that is usually performed by computers nowadays rather than by hand. The central circular chart can be rotated and the picture shows them in the rarer Admittance position - as used in the Marconi and CARS roundel logos. Normally they are used 180 deg around in the Impedance position. The chart was developed by and named after Philip H

Smith in 1938. His original book is a collector's item.

In addition to the calculators the Marconi Company printed a wide range of graph papers and pads including Smith Charts under the MG (Marconi Graph) series.

19th August at Sandford Mill

The weather forecast for the afternoon was showers. It did rain at 2pm for 1/2 hour but then cleared up to a dry but steamy and cloudy afternoon - this was ideal as a number of people said the forecast was so poor they thought they would not venture too far - and came to Sandford Mill.

Jim, 2E1RMI turned up with his Wife Ann & set up the 2 metre station in the Marconi Hut using the extended aerial lead from G4YTG's Aerial on the roof. This transmitted well using GB5HF.

Bob, G4MDB appeared carrying his own FT747, PSU & Tuning Unit and connected it to the long aerial wire as a test to see if just 10 Watts on 160 Metres also interfered with 2 Metres. It did!

Tony, G4YTG next came through the door to hear about the interference & soon produced a High Pass Filter for the 2 Metre Aerial Lead - this solved the problem by blocking the strong HF signal which was simply overloading the 2 Metre Receiver.

Members of the public were then appearing - guess what - Adrian, M0ABY and Mavis, G0XBC had come for the 3rd Sunday from Wheathampstead - nice to see them again.

Richard Meadows & his Father came into the Marconi Hut and appeared interested. It transpired that Richard was at school at King Edwards Grammar School & had attended the CARS Training Session & had passed the Foundation Licence exam. He had never actually transmitted on his own so Jim gave him a microphone and encouraged him to "have a go", which he did.

Bob produced a Handheld TX/RX and tuned it in to Jim's frequency. Richard then took the Handheld and walked outside using his own Call-Sign M3SBU for the first time.

A very good afternoon with lots of interest including a couple of people who would like to join the Foundation Course in January. A number of people had interest in the many exhibits as they had previously worked for or with the Company, Marconi.

Next week, the 26th is the last Sunday Afternoon Opening at Sandford Mill.

Next event after that it is the Science & Discovery Day on Sunday, 23rd September, 10am to 5pm when CARS will be running the HF Station only as Colin, G0TRM & Geoff, G7KLV will be occupying the space on the Landing for their Morse Demonstration.

Like to Operate, Log or Host?
See Brian at the September Meeting, please.
See you there?

Thanks to Dr Geoff Bowles for inviting CARS & to all CARS Members who made the events in August such a success.

The New Rig

The Society has recently acquired a new Transceiver, especially to give the Contest Operators an up-to-date rig with the performance required by present day standards. The IC 756 Pro III was used during the Sandford Mill Open Day on Sunday 12th August and tested thoroughly on all HF bands using the usual 80m half-wave doublet aerial.

Since the rig has SWR metering the set-up is slightly different from that for the FT 847. The 756 can auto tune from a SWR of about 3:1 so the best system is to auto tune into a 50 ohm dummy load and memorise the settings. Then apply some RF (FM with mike at zero) and tune the aerial tuner for 1:1 keeping an eye on the rig meter as well. I found there was no appreciable change and the energy went up the spout with the usual 5/9+ reports.

I checked the performance on CW receive and the onlookers were very impressed by the wonderful filtering capability and the squeeze down till it hertz!!!!!! together with the LCD screen to show exactly what one had achieved.

The audio filtering via the IF bandwidth adjustments was excellent and the DSP system second to none. I specially liked the auto notch function which worked immediately the button was pushed.

Complaints?....There must be some because nothing is perfect.....There is a row of tiny twist buttons down bottom left hand side of the front panel. The controls are frequently needed when changing band and tuning up so I would like to see the RF drive knob on a larger one higher up

where it can be seen for it has been placed so low and buried –in, that it helps if the rig is up on a shelf. Ones arms would ache during a prolonged session in such an attitude. Likewise the vertical column of multi-purpose buttons on the left side of the LCD panel refer to their functions some way deeper in the panel and parallax causes the operator to push the next up button by mistake...Nit-picking? Yes I admit it!!!

Altogether the 756 is a superb “bit of kit” and I am green eyed with the “I wannits”

Come and try the rig on Sunday Sept. 23rd. at Sandford Mill when we shall be running the station from 10 am till 5pm.

See you there.

Brian, G3CVI.

Contest Success

CARS Operated its Special Contest Call-Sign M2T in the RSGB IOTA Contest on 25/26 July.

This was a single operator entry by Terrence, G3GLL.

Our grateful thanks to him for “airing” the Call-Sign.

Steve, G4ZUL

September Contests from Steve G4ZUL

IARU Region 1 SSB Field Day

01/02 September,
Start:13:00 Finish:13:00 UTC, 24Hrs
Bands: 3.5, 7, 14, 21, 28Mhz.
Exchange: RS + Serial number
Sections: Open – 400 watts, Restricted – 100 watts.
Full rules & info from www.rsgbhfcc.org

JARL All Asian DX / SSB

01/02 September, 24Hrs
Bands: 3.5, 7, 14, 21, 28Mhz.
Exchange: RS + Age.
Full details from www.jarl.or.jp

144 Mhz Trophy Contest

01/02 September.
Starts:14:00 Finishes:14:00 UTC. 24Hrs.
Sections: SF, SO, M, 6S, 6O. (Special rules IARU Co-ordinated S7)
Full rules from www.vhfcc.org
or full information on scoring & rules please see:
www.rsgbhfcc.org

CQ WW DX - RTTY

29/30 September, 48Hrs
Bands: 3.5, 7, 14, 21, 28Mhz.

Exchange: RST + CQ Zone.
Categories: Single operator (single band & all band)
Multi operator (single TX, Two TX, multi TX)
QSO Points: own country 1 point, own continent 2 points, different continent 3 points.
Multipliers: US States & VE areas 1 point, CQ Zones 1 Point
Final score: QSO points x Multipliers.
full details from www.cq-amateur-radio.com

For any further information on contests or NFD, please email Steve G4ZUL
contests2007@g0mwt.org.uk

Amateur of the Year Award

Nominations are required at the September Meeting. Please put a name & a Call-sign of the person you wish to Nominate on a piece of paper (envelope, fag packet etc) and hand to Carl, G3PEM at the meetings.

Don't forget to quote your own Call-Sign!

Morse Classes are Starting

Starting in September in the Hawkins Room, Danbury Village Hall. A nominal charge will be made – see Carl, G3PEM at a CARS Meeting & put your name forward.

Carl now says that he is fully booked which is very good news and he is running a Waiting List.

Virus Checker

I had a complete hang on my computer which was associated with Norton so I contacted the Which? Magazine, PC Help centre.

The problem appears to be that many of the latest up-dates for Norton Security Centre are designed for Vista and in some cases are no longer compatible with XP. Norton is also very “heavy” on processor power. My system lost virtually all of my text containing files irretrievably. so I sought other providers.

Kaspersky came up so well in the technical press that I decided to try it for its advertised trial period. Its Security Centre is easy to download (with Broadband) and has a very high success rate according to the published findings. It updates Virus Signatures every hour, if you so desire. To convert to the full version requires about twenty minutes (on Broadband) and does not tax the intellect over much. So far it appears to catch almost everything a bit “iffy” and gives an un-opened view of each e-mail title to reject or accept as you wish.

Brian, G3CVI

John, G8DET edited this copy.
Material supplied by Colin, G0TRM;
Murray, G6JYB, Trevor, M5AKA, Steve G4ZUL, Brian, G3CVI & Carl, G3PEM.

Do you like the slightly larger font?
Nobody has commented – do you read this?

Would you like to edit an issue of the newsletter ?
If so let us know.

Items for the next newsletter should be sent to the editor@g0mwt.org.uk by 21 September 2007.