



## 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 496

Web Address: [www.g0mwt.org.uk](http://www.g0mwt.org.uk)

June 2007

**This Month's Meeting – Tuesday, 5<sup>th</sup> June. 7.30pm at the MASC.**

### **TABLE TOP SALE – Colin G0TRM**

It is June and this means it is time to find out if someone has brought a nice, cheap rig to CARS Table Top Sale which is just what you have been looking for! If not a rig, then maybe a Rotator to replace the one which the winter gales destroyed. Whatever you are looking for - CARS will have it (hopefully). It is not really a "tut sale". We are hoping for more quality than Junk!

**One word of Warning.** Buyers are NOT allowed into the Sale Room until 7.30pm to stop anyone buying the star bargain ahead of time. Queue in the Bar area like the Harrods Sale until 7.30pm. - Thanks.

Colin will allocate a Table FREE to Club Members but charge a whacking £3.00 to Traders and Non-Club Members. Contact Colin by E-Mail "[g0trm@g0mwt.org.uk](mailto:g0trm@g0mwt.org.uk)" Phone him on 01245 223835.

**See you there**

**There will be our usual good Raffle.**

### **Dates for Your Diary**

Net Controller June	TBC
Sat/Sun 2/3 June	National Field Day (CW) from Sandford Mill Car Park.
Wed 13 <sup>th</sup> June	CARS Committee Meeting - Danbury Village Hall at 7.30pm - All welcome
Tuesday 3 <sup>rd</sup> July	CARS Meeting. Livery Companies. Ladies are invited.

**National Field Day (CW) on Sat & Sunday 2/3<sup>rd</sup> June. 4pm local – 4 pm local.**

**This year CARS is operating in NFD from the grass Car Park by the side of Sandford Mill.**

**Steve, CARS Contest Manager has organised this, the first Contest for some years.**

**Please support the event. He now has a schedule of Operators – what he now wants is support. Somebody to watch the generator, ply it with petrol from time to time & make tea & breakfast for everyone.**

**All CARS Members are invited to get involved – we need your assistance.**

**Contact Steve on [g4zul@g0mwt.org.uk](mailto:g4zul@g0mwt.org.uk)**

**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 M3VAM 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: - Microwaves Demystified by John Wood, G4EAT.**

John was fitted with the clubs Radio Mic. and became the first user of the club's new PC projector, recently acquired by John Bowen after many trials and tribulations ! This produced a very bright large and sharp image to display John Woods excellent Powerpoint Presentation – Over 80 slides in all and delivered in a very professional and timely manner. This writeup can't do it justice and we are fortunate that John made a CD available

John took us on a tour through the microwave bands and gave a brief on the activity likely to be found on each, and their possible use as a DX provider. It became quite clear that the QSO distances on the mid-microwave bands were in the range of 100s of km and far beyond the usual line of sight expectations that many of us have. The distances result from low noise figures, high antenna gains and propagation mechanisms such as ducting or rainscatter. A recent UK 10GHz record was 1400km on just 2W transmit power from the middle of Surrey to Sweden! Johns own square collection all around Europe was most impressive.

Above 23cms, John said the most activity and use at present is the 10GHz band where dishes or horns are mainly used for antennas - Yagi elements getting a bit tiny by this time.

A look at your licence schedule shows that the bandwidths available are vast compared with any of the HF bands. So what can you do ?

- Talk down the road – and far farther afield
- Operate in contests
- Construct your own gear using available surplus or commercial units (you do have to be able to solder!!)

Back in the 1980s wideband Doppler Radar units were in use. Using these as a local oscillator as well as the transmit source a duplex station could be put together employing a two meter receiver as the IF with the other station spaced by 145 MHz.

Developments by Charlie Sucking G3WDG and Sam G4DDK led to practical microstrip-based narrowband systems. Using narrow band (eg 3kHz bandwidth) can give as much as 20dB improvement to Signal to Noise over wideband. With dish gains at 10GHz around 30dB the ERP from a modest source with a horn or dish can be very effective. (and of course 30dB at the Rx as well which helps link budgets enormously. Nowadays kits or ready-built modules are available up to 24GHz at about 500 Euros working and ready to go. Kuhne Electronics <http://www.db6nt.com/> being a major source

Johns Powerpoint slides were then used to show various set ups used by active stations around Europe and the US including his own at Danbury (on a hill of course) as well as portable setups Propagation is mainly Tropo and the various ducts that can occur were illustrated (18 to 20km high)

The microwave bands have plenty of beacons installed and these will give easy checks on what ranges are available at any time, by tuning around the bands and directions

In the UK there are regular 'roundtable' events for talks, test equipment sessions to assist your own gear and surplus kit sales. There are also a series of beginners workshops organised by the UK Microwave Group

John says Microwavers are a friendly bunch ready to welcome you His Email address is [G4eat@yahoo.co.uk](mailto:G4eat@yahoo.co.uk)

The CARS audience (numbering around 50 or more) was most appreciative of a great talk

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### **MICROWAVE KITS AND MODULES**

Kuhne Electronics DB6NT:  
<http://wwwv.db6nt.com/>  
Charles Suckling G3WDG:  
<http://www.g3wdg.free-online.co.uk/>  
Down East Microwave:  
<http://www.downeastmicrowave.com/>

### **ANTENNA DESIGN**

Online Microwave Antennas, Paul Wade W1GHZ:  
<http://www.wlghz.org/>

### **DX PROPAGATION**

William Hepburn Tropo Forecasts:  
[http://www.dxinfocentre.com/tropo\\_nwe.html](http://www.dxinfocentre.com/tropo_nwe.html)  
UK Met Office Rain Radar  
<http://www.metoffice.gov.uk/weather/uk/radar/>  
UK BBC Rain Forecasts:  
<http://www.bbc.co.uk/weather/ukweather/rain.shtml>  
Aircraft Virtual Radar:  
<http://www.kinetic-avionics.co.uk/sbs-l.php>

### **OPERATING**

Newsletters, Roundtables, Beacons and Advice  
UK Microwave Group <http://www.microwavers.org>  
VHF and Microwave Chatrooms, ON4KST:  
[www.on4kst.info/chat/login.php?band=3](http://www.on4kst.info/chat/login.php?band=3)  
Real Time Rain Scatter and Lightning location tools,  
PA5DD: <http://home.hccnet.nl/uffe.noucha/>

**Tony, G4YTG & Murray, G6JYB**

## CARS Receives the Kenwood Trophy

Following John Woods talk a short presentation was given on a recent CARS success. CARS were honoured to receive from the RSGB, the Kenwood Trophy for Training. This trophy is awarded to those making a significant contribution to Training and Development in Amateur Radio within the United Kingdom.

The presentation was made at the 80<sup>th</sup> AGM of the Radio Society of Great Britain (RSGB) in the picturesque city of Edinburgh. The CARS Training team members able to attend were Trevor M5AKA, Clive G1EUC, Martyn G1EFL, Chris G0IPU, Murray G6JYB, Anthony M1FDE. Unfortunately, Carl, G3PEM had another engagement which could not be broken. The RSGB President, Angus Annan, MM1CCR presented them with the Trophy.

Many other Club Members have played a vital part in the success of the courses among them Carl G3PEM, a course tutor, Brian G3CVI, James 2E1GUA and Bob M0DTA who has provided on-air QSO's for the candidates and David M0BQC who invigilates the exams.

CARS began running courses in Jan-2002 and as a result more than 200 people have passed their Radio Communication exams. The Training Team developed PowerPoint slides for the Foundation, Intermediate and Advanced courses. The slides have been used as the basis for courses around the UK and in countries as far away as Australia.

### Trevor, M5AKA

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### Sandford Mill - IMD, Saturday 28<sup>th</sup> April.

International Marconi Day is a 24 hour Amateur Radio event held annually on the nearest Saturday to the birth of Guglielmo Marconi on the 25<sup>th</sup> April 1874. IMD is the opportunity for Radio Amateurs around the world to make point-point contact with Marconi sites using HF Communications techniques similar to those used some 80 years previous.

If one works a requisite number of Marconi "Award" stations – one can claim an "Award" issued by the Cornish Radio Amateur Club, GB4IMD. GX0MWT is an "Award" station. Internet assisted contacts do not count towards an "Award"

CARS had three stations operating from time to time at Sandford Mill. Brian, G3CVI & Tony, G4YTG started off in the wee early hours. Teams took over & ran the HF Station from the 2MT Hut. It was nice to see newly licensed Andy, M3TIU there as well as a number of CARS Members.

Charles, G0GJS spent 4 hours on the key from the upstairs station and reports: -

My first impression on pushing open the door of the Museum's 'upstairs' CW radio shack was of the "Marie Celeste". All light were glowing on the excellent Tony Gilbey Yaesu FT101Z installation with its 400w amplifier straining at the leash, signals were pounding out of the speaker on 14085 kc/s., The log book was open with pen at the ready but there was not a soul in sight..... A rustle of paper from the adjoining office revealed that Dr Geoff Bowles was taking the opportunity to catch up on his Saturday morning paperwork and I quickly established that the usual 'upstairs' contingent were busy in the Museum grounds setting up the trial NFD station.

The band was quiet but with interesting interludes - I worked about two pages of contacts during my watch and they included: -

- a) A Hungarian station operating from God. I do have Jesus from Havana in my home QTH log from another occasion.
- b) A station operating from landlocked Switzerland from a World War 1 German submarine. I discovered that it was manned by some highly amused amateurs operating from the conning tower of the infamous U-20 (reputed to have sunk the Lusitania), berthed in a Zurich Museum. I expressed the hope that it didn't leak and moved on.
- c) An old friend, VK4BUI who quite by second chance - we worked on IMD unscheduled two years ago - came up to find me (G0GJS) again on the end of GX0MWT. As ROA members we had regular UK skeds before he emigrated to Oz.
- d) The Guglielmo Marconi station at Milan nearest to the family seat. (from home QTH).
- e) A Japanese station with its usual high standard of operating procedures and manners to match.
- f) A QSO with the States.

A nice enjoyable day, I had some good ragchews and it was great to be among CARS people.

### Thank you Charles for your Report & contribution to IMD.

Meanwhile Contest Manager Steve, G4ZUL co-ordinated the setting up of a trial NFD station from the grass car-park at the side of the Engine House.

### Report follows from Gwyn, G4FKH.

"The NFD shakedown went well with the weather being absolutely perfect for this type of event. Putting the tent and aerial up took very little time

and as soon as John, G8DET arrived with the generator we got on the air, using the IMD event callsign – GX0MWT. Between us; G4FKH, G0IBN and G4ZUL worked 61 stations on 40M, CW of course. We were on the air between 12:01 and 15:04. In between QSO's we had chats about the actual NFD event and drank lots of tea that was excellently brewed by Harry, G5HF and his helper Ethel. As would be expected on 40M during the PM we worked a lot of German stations, our furthest QSO was probably Corsica. The station did not receive one report below 579, which bodes extremely well for the actual NFD event. All in all we can call this a very successful day.

Now is a good time to remind CARS Members that NFD is scheduled for June 2nd and 3rd, starting and finishing at 1600 clock time. Help is required to establish the station and to dismantle it, also during the event to provide moral support, etc.

**Thanks Gwyn for the write-up & your contribution to IMD & NFD.**

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### Did you See? (1)

Looking through the April 2007 RadCom I spotted in the "Old Timers' Roll of Honour" for being a continuous Member of the RSGB, the following CARS Members: -

51 years	John Greenwood	G3KRZ
56 years	Ken Dews	G3PMW
59 years	Geoff Mills	G3EDM
60 years	Brian Thwaites	G3CVI

### As Brian said: -

Yippee!!! 60 years in the RSGB and now it is all free...Yippee again....My intro to ham radio was in the "shack" or dining room of my friend G2HAJ now in his 95<sup>th</sup> year. He had an ex-RN B28 (CR100) receiver in blue livery and a home brew transmitter with a pair of PT15s as the final AM amplifier. The 1000v power pack contained two mercury vapour rectifiers which took a few minutes to warm up and vaporise all the drops of mercury on their inner surfaces. Once running they illuminated the room with an eerie purple flickering light which fluttered with the modulation and emitted a sizzling sound in time with it. C&G Rad.Tel final gained my license so I was legal.

A knock on his door revealed a police car and a pair of "bobbies" who said "we heard you on our radio, can we see your set please?" Two hours and many cups of tea later they returned to duty full of admiration...but we never heard if they became licensed hams. Their car was one of those beautiful big Wolseleys with the silver gong on the front; you old-timers will no doubt remember them.

That was 1946 and although there was an enormous supply of war surplus gear available there was not a really good VFO at a reasonable

price so we were all "rock-bound" i.e. crystal controlled. However we worked VKs on the full width 40m band like shelling peas. HAJ's aerial was a W8JK two element wire beam at top of two nicely placed pine trees ....60 feet over ground!!! That was some climb!!!

I joined the RSGB in that same year, 1946 hence my 60<sup>th</sup>. Now, in those days the Secretary was John Clarricoats, G6CL. Any problem sorted out by him was said to have been "clarified". This was before the Society became a company. Very few of the old gang are still with us but I do recall Dud Chairman, G6CJ and his aerial circus giving us a demo at Southampton of his polar plotting set-up. He had a large copper sheet about five feet in diameter with a central socket to accept a variety of UHF antennae (for compactness) . He would walk round with a field strength meter on the end of a tight length of string plotting the strength against azimuth. He really was using centimetric wavelengths and a klystron as signal source.

In those days a new ham had to serve a probationary year on CW and 25w maximum. The full "fone" license was granted routinely on that wonderful day when a very impressive letter fell on the doormat. My first transmitter was a single 807 mounted horizontally and running as an E.C.O. (electron coupled oscillator). The cathode grid and screen were on say F1 and the anode tank was on F1x2 and the whole thing would give about 15w before the note got a bit chirpy .I will not describe how the signal arrived at the aerial lest you dare to try it...I blush at the thought even now.

**Thank you Brian, Part 2 next month.**

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### Did you See? (2)

Looking through June RadCom I spotted CARS in three places - receiving the Kenwood Trophy, Training Team in the photograph & the Table Top Sale. Thanks to Trevor, M5AKA & Martyn, G1EFL.

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### Did you See? (3)

Practical Wireless, affectionately referred to as Cam's Comic is 75 years old.

Congratulations to Rob Mannion, G3XFD who so successfully edits it today.

The RSGB presented Practical Wireless with an engraved salver to commemorate the event.

Remember Rob who came and gave us an interesting evening at MASC a while ago.

**John G8DET.**

## Did you Hear?

Just worked the Harwich special event station GB400AA ground wave on 20m. Worked all Friday on the repaired rotator (Ham IV) to get it up into the air (the beams have been fixed direction for a month whilst repairing the rotator). Took 9 hours of solid work to get it there. Thanks to Denis, M0FHA for making up some screws to hold the bell-housing together - the originals were American sizes and virtually unobtainable here.

Just managed to get the mast up before the rain came last evening. And it worked well longpath to Australia this morning despite the poor solar conditions. Yanks coming in well at 2100Z last night on 20m.

### E-Mail received from Geoff, G3EDM on 14<sup>th</sup> May.

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DON'T forget to see **Martyn G1EFL** at the next Meeting for all your **Club Clothing** requirements AND! AND! Check with him about the **CHELMSFORD AWARD**. A fine certificate could be yours. All you need is 30 separate callsigns.

### Trevor M5AKA

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## June Contests from Steve G4ZUL

### RSGB National Field Day / CW.

2/3 June, 15:00 – 15:00 UTC, 24hrs

Bands: 1.8, 3.5, 7, 14, 21, 28MHz

Exchange: RST + serial number

Sections: a) open, b) restricted, c) low power.

all sections are multi operator and portable only.

for all other information on equipment, scoring and general rules for this contest see:

[www.rsqbhfcc.org](http://www.rsqbhfcc.org)

### RSGB Club Championship (80 metres)

Dates for June as follows:

DATA 04 June. 20:00 – 21:30 Local

CW 13 June. 20:00 – 21:30 Local

SSB 21 June. 20:00 – 21:30 Local

further information & rules from [www.rsqbhfcc.org](http://www.rsqbhfcc.org)

### JARL All Asian DX / CW

16/17 June, 24Hrs

Bands: 1..8, 3.5, 7, 14, 21, 28MHz.

Exchange: RST + Age.

Full details from [www.jarl.or.jp](http://www.jarl.or.jp)

### VHF Contest - 50Mhz Trophy Contest

16/17 June:

Starts: 14:00 - Finishes: 14:00 UTC (24HR)

Sections: SF, SO, M, 6S, 6O.

(special rules M4, S7)

Full rules from [www.vhfcc.org](http://www.vhfcc.org)

For any further information on contests or NFD, please email Steve G4ZUL

[contests2007@g0mwt.org.uk](mailto:contests2007@g0mwt.org.uk)

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## Farleigh Hospice Sponsored Walk

James, 2E1GUA has walked from Maldon to Chelmsford in 4 hours 17 minutes on Sunday, 13<sup>th</sup> May to raise money for Farleigh Hospice. Over 1,000 people took part. James reports that from Heybridge to Paper Mill Lock it drizzled but was quite pleasant but from there to Chelmsford the heavens opened and it was very wet. James raised £100 from CARS May meeting & £400 in total. Over £38,000 was raised for Farleigh Hospice. RAYNET did a good job communicating with control points along the way.

Well done James.

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## Future Meetings – December 2007

Programme Secretary, Martyn, G1EFL has suggested that the December Meeting is a picture show – YOUR pictures.

The idea is for John G8DET to collate the digital pictures from your CD & put them together on a CD to be shown at the December Meeting using CARS new projector. If you only have film pictures they can be scanned but not too many, please!

Pictures from Sandford Mill Open Day, IMD, NFD & Sunday Afternoons in August at Sandford Mill would make a good starting platform.

What about in your shack or aerial farm?

The Colchester Club are going to do the same & join us for a "Xmas Photographic Social" – James M0ZZO is going to co-ordinate their end.

Christmas Cake & Mulled Wine will also feature.

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John, G8DET with assistance by Colin, G0TRM, edited this Newsletter. Material supplied by Trevor, M5AKA; Murray G6JYb, Tony, G4YTG; Geoff, G3EDM; Brian G3CVI; Charles, G0GJS; Gwyn, G4FKH and Steve G4ZUL.

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](mailto:editor@g0mwt.org.uk) by 19 June 2007.