



Chelmsford Amateur Radio Society

Established 1936

Affiliated to the RSGB

President: Carl Thomson, G3PEM

Treasurer: Brian Thwaites G3CVI

Club Call Sign: G0MWT

Chairman: John Bowen G8DET

Vice Chairman Martyn Medcalf G1EFL



LOTTERY FUNDED

Newsletter No 565 (E)

Web Address: www.g0mwt.org.uk

April 2013

This Month's Meeting

- **NEW DATE:** FRIDAY, 12th April, 7.30pm
- **NEW VENUE:** Great Baddow Parish Hall, 19 Maldon Road, CM2 7DW

"Kits and Kit Construction" by CARS Member, Mark Sanderson, M0IEO.

With the CARS construction competition coming up in August, it's time to look at what is available in kit format, from simple receivers to the latest Elecraft 10W transceiver kit.

For those who are not quite so experienced in construction, there are kits from the likes of Ramsey, who produce some very good self-build receivers, they are good on their own, but fun to experiment with!

So why not have a look at Kit Build - get those irons hot and have a go - let's give Carl, G3PEM something to look forward to in the Constructors Competition in August.

CARS will have its now famous Raffle run by Carl, G3PEM and James, 2E1GUA.

A good evening is proposed in our New Venue. See Venue photos on the CARS Web Site below the February report and photos.

Dates for your Diary

Tuesday evenings: April 2, 9, 16, 23 & 30 th	CARS - Net Nights starting at 8.30pm local. 145.375, GB3ER, 1.947, 28.375 & 3.756MHz. PLEASE PARTICIPATE!!
Wed 17 th April	CARS Committee Mtg. 7.30pm, Danbury Village Hall.
Saturday 20 th April	CARS operating GX0MWT from Sandford Mill for IMD
Saturday 27 th April	CARS operating GX0MWT from Sandford Mill to commemorate Marconi's Birthday. Open Public Day 10 to 5pm – Free to park and enter – fun for the family.
Friday 3 rd May	CARS Combined Meeting with Thames Amateur Radio Group at Canvey Island. Table Top – Bring and Buy Sale of Quality Equipment.
Friday 10 th May	CARS – NO MEETING IN GREAT BADDOW - See notice above for the 3 rd May.
Sat & Sun 11/12 th May	CARS Operating GB5SM from Stock Windmill.

To be/remain a Member of CARS, send a Cheque for **£15** – Adult Membership (16s and under are FREE) to:- Mr Brian Thwaites, 118 Baddow Hall Crescent, Great Baddow, CHELMSFORD, CM2 7BU.

If you would like a receipt, please enclose a stamped addressed envelope with a 2nd class stamp.

May we remind you that if you have NOT paid your Subscription for this year you may be deemed to NOT be a Member of CARS and NOT entitled to Newsletters, etc.

Thanks to Geoff, G7KLV for sending the postal Newsletters – could it go by E-Mail to reduce our postal costs? Please inform Geoff, G7KLV by E-Mail of any changes to your callsign, postal or E-Mail address, etc. E-Mail him on g7klv@g0mwt.org.uk Only by **YOU** sending Geoff your E-Mail address, can we ensure **WE** get it right!

Club Nets: Tuesdays 8.30pm (1st) 145.375, (2nd) GB3ER, (3rd) 1.9475, (4th) 28.375 (5th) 3.756MHz +/-QRM
NOTE – Simplex 2 Metres on 145.375MHz at present - not GB3DA. Should Net Nights be Friday?

Net Controller is Geoff, G3EDM

Many thanks to Geoff, G3EDM and Patrick, M0XAP for March.

Last Month's Meeting: "Commercial Aerials for the Radio Amateur" **By Justin Johnson, G0KSC, Peter Waters, G3OJV of W&S and CARS Members.**

Our Chairman John G8DET introduced the session by quoting Tony, G4YTG, "Aerials can be likened to ladies hats as their design includes lots of bits sticking out and will no doubt blow off if the wind is strong enough". Then the quote "That if they don't blow down in the Winter's gales then you have not got them high enough".

John Yates G1UZD then told us about his home-QTH three-element hybrid quad beam, the TGM MQ-36SR, and showed us pictures of it on his house. This is a 6-band aerial John has used for some years with great success. It has a very modest turning circle and is fairly unobtrusive on the house. John says it does need an A.M.U. (aerial matching unit) for optimum performance on certain parts of the bands. The elements are tuned by windings on the ends of the elements and capacity hats by spokes for each band. John also showed us pictures of a vertical aerial he uses at his family QTH in Finland when he is there. This is a Cushcraft R6000 which he erects and dismantles on a balcony single handed when he visits. This aerial covers from 6m to 20m, is 25ft long, light to handle and does not need an AMU if assembled according to the manual. John says he is not worried by the neighbours as none are near enough to be concerned and is allowed to run up to 1kW in Finland.

Mark M0IEO gave us a few words on the Clubs' Comet-250B HF vertical which he had erected in the hall. He was unable to fix the topmost section even though the stage height was quite considerable (20 ft+). This aerial will match all the covering bands without radials, its base connector is painted black and finned to dissipate the energy that is not radiated (like a dummy load). However despite all this, it does work and if you can manage to mount it high in the clear will give a better performance than an indoor radiator in ones loft or gutters.



InnovAntennas UHF and VHF LFA-Q Yagis by Justin G0KSC

Justin Johnson G0KSC brought both 2m and 70cms aerials, displayed on either side of the stage. These are designed and built by his company on Canvey Island. These were exceptionally well built with the main elements Quad-fed. They are far more wind-proof than a long Yagi of comparable performance. The range includes design for 6m and could be adapted for other bands.

Justin showed us pictures of many antennas made for customers all over the world with different configurations - high directivity for tracing, high power handling for broadcasting or jamming and stronger for harsh environments. Some discussion took place from the floor with Justin saying how he as a company were very careful to use techniques that did not weaken or damage the performance or the survival of the products

Post Meeting Note - Justin, G0KSC, founder of InnovAntennas, has been awarded the Harold Rose Plate by the Radio Society of Great Britain. Congratulations Justin. Justin is now an Honorary Member of CARS.

Norman Crampton M0FZW then gave us a comprehensive appreciation of Magnetic Loop Aerials with which he was getting great success both from home and as static portable (caravan). He showed us his MFJ Magnetic Loop on the stage to demonstrate how compact and unobtrusive it was and gave us pictures of its tuning control unit. These aerials give low noise on receive as by their nature they are a high Q tuned circuit with a very small bandwidth and can be orientated to null noises from nearby sources (TV sets, washers, hairdryers etc.).

Norman stressed the point that when working they are passing very high currents through the loop and producing very high voltages in the capacitor at the top. This capacitor is usually a butterfly type to allow the connections to the plates to be firmly (high current) connected. A standard capacitor has a sliding contact, a tail connection or via the spindle bearing. This capacitor has to be remotely adjusted and have a very high voltage rating. The very narrow bandwidth of has the noise and adjacent channel isolation advantages, but the disadvantage that it must be tuned at even the smallest QSY.



**Left:
Norman
M0FZW**



**Right:
His
MFJ
Loop**

Tony, G4YTG Note:- The figure of eight horizontal pattern which can be used to null the noises is useful if the aerial is mounted at height, or near the ground (6ft or so away from pets and kids). The low up-angle pattern is circular due to ground reflections. Mount it near the ground and get similar pattern results to a Butternut vertical. (As at the QTH of Charles G0GJS).



Peter Waters G3OJV of W&S told us that the company were celebrating their 40 years in business this year and were congratulated by CARS Members. He said that Justin's Aerials were available from them as well as all the other main manufacturers including Comet, MFJ, Cushcraft, Diamond, Watson, Hygain and others.

Many spares were also held in stock although the stocking was proving difficult due to the many types and configurations (Just like women's hats?). He said one of his best sellers was still the G5RV in its many guises.

Their famous Open Day this year will be on Sunday, 28th July which coincides with the RSGB Centenary. Lots of special goodies could be expected.



Morse Instructor Andy Kersey, G0IBN presented certificates to Robin, G7VKQ for 10wpm, Oliver M0WAG for his 13wpm and Colin M1OCN for 20wpm

The Morse Group now meets in the Bell at Danbury on Thursdays from 7pm to 9pm, dates to be advised throughout 2013. See the CARS Web Site; - www.q0mwt.org.uk

Thanks to all the contributor's for their considerable efforts and although the subject matter strayed a bit from the title it was a well-attended and well enjoyed meeting by us all.

Tony Gilbey, G4YTG

This Month's Radio Sport (Contests) - All in Local times, unless stated

1 April – RSGB Club – CW – 20:00 to 21:30hrs
 7 April – RSGB- RoPoCo – CW – 07:00 to 08:30 UTC
 13/14 April – Japan International DX – CW – 30hrs
 18 April – RSGB Club – DATA – 20:00 to 21:30hrs

7 April – First 70MHz contest – 09:00 to 12:00 UTC
 10 April – RSGB Club – SSB – 20:00 to 21:30hrs
 14 April – First 50MHz Contest – 09:00 to 12:00 UTC

Steve, G4ZUL

CARS Propagation Forecast for this Month, prepared by Gwyn Williams - G4FKH

Asia *Dhahran* - around 18:00 on 18.1MHz for 84 percent of days, with poor signals.
Oceania *Sydney* around 20:00 on 10.1MHz for 73 percent of days, with poor signals.
Africa *Johannesburg* - around 20:00 on 10.1MHz for 96 percent of days, with fair signals.
S. America *Rio de Janeiro* - around 22:00 on 10.1MHz for 83 percent of days, with poor signals.
N. America *Saskatoon* - around 06:00 on 10.1MHz for 79 percent of days, with poor signals.

Gwyn, G4FKH

President's Jottings

We had an interesting evening of presentations last month on various aerial systems, thanks to all the presenters.

From a sentence in the last RadCom HF page, I have been looking at the Reverse Beacon Network. It is interesting to see the distance your CQ calls reach. On 15 metres in a quiet spot on a seemingly dead band, a CQ from my QTH was received by a monitor over on the West Coast of the USA - now that was a surprise!

I have observed that several DX expeditions are using the online QSL system OQRS. The RSGB is also using this system for all QSL requests for G100RSGB. It has several advantages but also a lot of disadvantages if you like to receive cards. I wonder if we should adopt the system for our days of operating from Sandford Mill?

See you all at the Raffle Table at our next Meeting.

Please make a note in your diaries for the dates in April when we are operating from Sandford Mill for IMD and one week later for the Council's Public Open day to commemorate the Birthday of Marconi on 25th April 1874.

Carl, G3PEM

Training Courses – Details on the CARS Web Site

Courses are held at the Danbury Village Hall near Chelmsford on Thursday evenings between 7 and 9pm.

The Intermediate Course started on March 14th. A specific session for the Advanced Exam is planned for Monday July 1st. Please contact Clive G1EUC for more information on this and later courses.

Contact the **Training Organiser Clive G1EUC** on Tel: 01245-224577. Mob: 07860-418835
Email: training2013@g0mwt.org.uk See also our Training page: - <http://www.g0mwt.org.uk/training/>

Thames Amateur Radio Group (TARG)

Please put 19.30hrs Friday, 5th April and May 3rd 2013 in your diary. This is the First Friday in the Month. CARS is the usually the Second Friday in the Month but NOT in May when we team up with TARG for a combined Table Top Sale at Canvey Island – QTH of TARG.

Full details can be found at: <http://www.thamesarg.org.uk/news/>

The TARG Shack is taking shape with more equipment and facilities gradually being added. Come and spend an evening with real amateur radio enthusiasts. Why not bring a friend?

Meetings are at: Jubilee Hall, Waterside Farm Sports Centre, Somnes Avenue, Canvey Island, Essex SS8 9RA - There is large free car park. The hall is immediately behind and hidden by the main Sports Centre.

Norman Crampton, M0FZW T: 07899 803714; E: m0fzw@btinternet.com

Sandford Mill – CARS Operating Amateur Radio

1) April-20: International Marconi Day – IMD – GB4IMD

Sandford Mill will be open only to Members of CARS on Saturday, 20th April to commemorate International Marconi Day for the Radio Amateurs. This event is organised from Cornwall by GB4IMD.

CARS is an IMD Award Station and so persons are keen to work Chelmsford. We will be using GX0MWT for most of this year. Operating times will be from 10am to 5pm.

If you would like operate SSB then please contact Brian, G3CVI by E-Mail or see him at the April Meeting.

If you would like operate CW Morse then please contact Gwyn, G4FKH by E-Mail or see him at the April Meeting. Note that Gwyn has recently changed his email address to: g4fkh "at" sky.com

2) April-27: Chelmsford City Council - Marconi Open Day

The radio collection at the Sandford Mill Museum in Chelmsford will be open to the public on Saturday, April 27 from 10am-5pm to celebrate the Birthday of Marconi who was born on April 25, 1874.

CARS will be operating SSB using GX0MWT from the historic 2MT Writtle Marconi Hut inside the museum, while CW will be sent from Dr Bowles outer office on the First Floor.

The Sandford Mill Museum is home to an extensive collection of historic radio equipment, including Spark Transmitters from the late 1890's and also include, ship's radio cabins 1900s to 1970s and historic collections from Marconi and other Chelmsford industries. There are also special displays on the New Street factory, ship's radio officers and the steam yacht Elettra - Marconi's floating laboratory. Furthermore, there will be plenty of family fun with CARS Members (Colin, G0TRM and helpers) mechanical Morse Code sending and activities with sound, light and electricity.

Sandford Mill is run with the help of the Friends of Chelmsford Museums and other ex-industry volunteers. It relies on the support of several voluntary bodies including the Radio Officers' Association, the Marconi Veterans Association and the Susan Trust. Susan is the last wooden Chelmer Barge and is moored at Sandford Mill. Sandford Mill Post Code for SatNav users is: CM2 6NY.

The museum is open to the public between 10-5pm on Saturday, April 27. Admission and parking are free.

- A map showing Sandford Mill can be seen at: <http://tinyurl.com/7mh7b>
- Chelmsford Council <http://www.chelmsford.gov.uk/marconi-day-sandford-mill>
- CARS at Sandford Mill <http://www.g0mwt.org.uk/sandfordmill/index.htm>
- 2MT hut teaches pupils of past http://www.southgatearc.org/news/april2010/2mt_hut_teaches_pupils_of_past.htm

Trevor M5AKA

For Sale

Quite a few CARS Members have shown an interest in the Silent Key equipment list John G8DET has circulated so I am forced to arrange some sort of fair Auction type arrangement.

Would interested parties please make Offers in sealed envelopes to me at

Mr T Gilbey, G4YTG
83 Chignal Road
Chelmsford
CM1 2JA Or by hand at the CARS April Meeting.

I can then offer the items to people in order starting at the highest bids and if they then decide they don't want it - it can be offered down to the next highest bidder.

The bids will not be opened until after the Club April Meeting deadline .

I have put figures alongside the items that they would be worth if I wanted them to indicate comparative values:-

- | | | |
|--|--------------------------------------|-------|
| • Trio 830 S HF Tran/Rec, Faulty Free | • Trio Aerial Tuner AT230 | 50 |
| • Kenwood 241E 2M Tx/Rx | • Maritime Handheld (dead batteries) | 20 |
| • Icom IC756 HF 3/30 +6M. | • 2M Handheld (Old) | 20 |
| • H.F.125 Communication Rec. | • Tower Computers (old) 2 | 20 |
| • Kenwood LP Filter | • Weather Sat. Rec. | 100 |
| • Kenwood TM701 VHF TX/RX | | 30 |
| • Aluminium mast poles 12 /15ft 5-off various sq or circ section lightweight | | 5/10? |

Tony Gilbey, G4YTG

Wanted - Urgently

Has anyone any 3CX800A7 Triode TX Valves for sale?

Ideally I require a matched pair, but willing to buy single valves if price is right.

Please email me on: glmills3edm@onetel.com or ring 01245 223494.

Vice President Geoff, G3EDM

Which? Investigate LED Radio Interference

The consumer Magazine Which? has been investigating the radio interference produced by some LED light bulbs. People have been finding their DAB and FM radios and even their TV no longer receives stations when LED lights are turned on.

The article appears in the April edition of Which? magazine. Reader feedback can be seen online at <http://conversation.which.co.uk/energy-home/led-bulb-radio-interference-dab-test/>

Trevor M5AKA

Continued.....

Interesting – if you look at the above link it seems to be cheap imported LED lights. They may also interfere with Amateur Radio. I have about a dozen and these are testing alright, interference-wise. A few have failed so there goes 10,000 hours of running!

While on the 28.375MHz Net last night my Tx signal switched off my computer! I think the RF gets into the Mouse lead. Fortunately after resetting it – it came on again OK.

Has any CARS Member got an interference story to tell – please contact the Editor.

John G8DET

Batteries – Primary Cells

At the CARS March Meeting I asked who “Reactivates Primary Cell Batteries?” No-one said they did – do you? I could not believe it. I have been Reactivating batteries for maybe 50 years on and off depending on demand. Less now - more items can be used with Rechargeable Batteries.

In the 1950 and 60s I used a home-made “Dirty DC Charger” – a 6Volt transformer, half wave rectifier with a resistor across the rectifier to produce a low level AC source. In those days batteries would leak far more than the now familiar Duracell – which will leak if abused.

I now have a “Innovations Battery Manager Ultra” from one of these mail order companies. This is no longer available, but there are similar models on sale. This has a few chips which measure the voltage – does a bit of reactivation – pause – check the voltage again, Does a bit more reactivation – pause – read the voltage ...again and again. It indicates when “Charged” on a graphical LCD display.

The secret of “Reactivation” is to do it before the Primary cell voltage falls below about 1.25Volts. Once it is flat – it really is flat! Use a torch for the evening – check the voltage and if not 1.45V or above – reactivate it.

Never get involved with Reactivation of PP3 – 9 Volt Alkaline Cells – the new EU versions can leak after a year without Reactivation! Unfortunately, these are required for Smoke and Fire Alarms – so replace every year.

John G8DET

Vintage Hallicrafters Film

In this 1944 film, Voice of Victory, by the Hallicrafters Company, the Technical Advisor was Cyrus T. Read W9AA. It describes how radio equipment, originally designed for amateur radio use, came to play a vital role during World War II. It highlights the importance of radio amateurs in the manufacture of Hallicrafters transmitters and receivers.

Watch Voice Of Victory (1944): http://www.youtube.com/watch?v=Jps0_2adUvo

Trevor M5AKA

And Finally:- John, G8DET edited this edition; Distributed most by email; Geoff KLV posted the remainder. Material by Trevor M5AKA; Steve G4ZUL; Gwyn G4FKH; Carl G3PEM; Murray G6JYB; Norman, M0FZW; Tony, G4YTG; Geoff, G3EDM and Clive, G1EUC.

Closing date for items in the next Newsletter – Friday 26th April 2013.