



Chelmsford Amateur Radio Society

Established 1936

Affiliated to the RSGB Club Call Sign: G0MWT
President: Carl Thomson, G3PEM Chairman: John Bowen G8DET
Treasurer: Brian Thwaites G3CVI Vice Chairman Martyn Medcalf G1EFL



Newsletter No 540

Web Address: www.g0mwt.org.uk

March 2011

This Month's Meeting – Tuesday, 1st March, 7.30pm at the Marconi Club “quod erat demonstrandum - Q.E.D”. - which is to be demonstrated

Or in English “Quite Easily Done – Providing you know how!

A number of tables will be set up around the room while the central area will be for having a social natter.

CARS own a SDR-IQ Receiver and this will be demonstrated using the Digital Projector and screen. This will show Waterfall Display of the RF taking place in the room.

Another table will have a rig on it connected to an aerial outside for local QSOs. The opportunity to practice tuning the ATU to the aerial in readiness for IMD in a month's time should be taken. Club Call-Sign GX0MWT will be used.

If the large copper wire connected from a rig to the outside RF Earth is a critical length it may result in the rig not seeing the Earth at all. An Artificial Earth will be demonstrated.

How do you solder a PL259 Plug? A table will be set up to have a go at doing a little soldering.

Another table will have a computer connected to the Internet to enable people to Re-Licence their License.

Another table will be for YOU to bring something of interest for other Club Members to have a look. If nothing turns up then a number of CARS Expert(s) will be on hand to try and solve your problem(s).

Yet another table will have a computer to demonstrate an Aerial Prediction Program.

A very interesting evening is promised.

CARS will have its now famous Raffle with at least 10 prizes - only £1 per Ticket.

Dates for your Diary

Monday, 28 th February	Dengie Quiz - . Henry Samuel Hall, Steeple Road, Mayland. CM3 6EG. – see page 6.
Tues, 8-15-22-29 March	CARS CW Net starts at 8pm on Tues 8 th ; SSB Nets starts at 8.30pm (Local)
Wed, 9 th March	CARS Committee Meeting – Danbury Village Hall – 7.30pm. All welcome.
Tues, 5 th April	CARS Meeting – Radio Transmitter constructed for Radio Caroline by Oliver Swain.
Sat, 30 th April	CARS Operating from the Marconi Hut, Sandford Mill – International Marconi Day
Thursday 9 th June	CARS Operating from the Marconi Hut, Sandford Mill – G5RV Anniversary Day
Sundays in August	CARS Operating from the Marconi Hut, Sandford Mill – Public Open Afternoons 2-5pm.

To be/remain a Member of CARS, send a Cheque for £12 – 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.

Thanks to Geoff, G7KLV for sending the postal Newsletters – could it go by E-Mail? Please inform Geoff, G7KLV by E-Mail of any changes to your call-sign, 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: (2nd) 145.375: (3rd) GB3ER: (4th) 1.947/50: (5th) 28.375. All MHz +/- QRM.
Net Controller for March is Ron M3CAM. Thanks to Geoff, G3EDM who did it in February.

Last Month's Meeting:-

"VP8CR – Two Years in the Antarctic" By Prof Les Barclay, G3HTF.

The club would like to thank Prof Les Barclay for a most informative and first-rate presentation describing his experiences with the Royal Society Antarctic base at Halley Bay. The base was established on sea ice in 1956 for the International Geophysical Year (IGY) 1957-58.

Les described how the IGR had evolved from earlier meteorological polar research as far back in time as the first international polar year in 1882, the intention then being to mount a polar year every 50 years. A second polar expedition took place in 1932 and much information was gained into the world weather patterns. The period was subsequently shortened to 25 years with the next event taking place in 1957–58 as part of the IGY. There is now a permanent base in Halley Bay.



Prof Les Barclay, VP8CR



Halley Bay – Home for 2 years

An advance party had erected a large prefabricated wooden building to house the expedition, to accommodate the personnel and instrumentation. A separate building housed the large diesel generators, which were accompanied by 800 drums of fuel. Radio communications were maintained with the help of two rhombic aerials principally orientated for London, Port Stanley and Australia. The aerials were supported by tubular guyed masts with "dead man" anchors. For ionospheric soundings a large delta antenna was deployed and orientated to produce high angle for the radiosonde equipment.

With the help of many excellent photographs Les described the life in the hut and the conditions under which they worked with the blizzards, wind and whiteouts, together with the penetrating cold. In a relatively short time the huts were buried beneath the snow and access had to be dug to doors and frequently cleared. As time went on the roof was covered and it became necessary to extend the chimneys and flues to clear the snow. Sometimes it was necessary to exit the building via the attic and the roof space. The expedition was in touch with nearby bases with aircraft and these supported the base with additional provided medical assistance.

Measurements within the research programme included weather patterns, the ionosphere, atmospheric ozone and the aurora. Maps were drawn of the area and the motion of the sea ice monitored. Les presented several slides showing the remarkable life of the Emperor Penguins and of his reception of BBC Band-I television sound signals using a home brew Yagi. This event coincided with an exceptionally high solar sunspot maximum.

The expedition ended in 1958 and the old hut was eventually abandoned. During the passages to and from Halley Bay both supply ships became stuck in the ice and required human assistance and gelignite to free them. The talk was a first-hand account of life in the Antarctic in 1957 and of an expedition that changed the scientific and political landscape of the world for the better.

Peter Bridgeman, G3SUY

Post Meeting Note by President, Carl, G3PEM.

That was a good talk by Les, and nice to see the early photos. Seeing the ship Magra Dan reminded me that when I was at the University of Southampton, Navigation College in late 1958/ 1959, when the ship returned it was at Southampton Docks for a short while and I went on board and was shown over it.

The owners of the vessel were "J.Lauritzen". My Aunt was his Personal Secretary in the Copenhagen office. My Cousin started work in the 1960's for the British Antarctic Survey and has just retired as the Chief Geologist.

Thanks Carl – That adds a personal touch to a wonderful story.

Re-license your Licence

When Ofcom issued the last paper Amateur Radio Licence in 2007 it stated that all Amateurs had to Re-Licence their Licence every 5 years, at the latest. This meant 2012 but since this now coincides with the Olympics they have now added another year of grace to make it 2013. However a number of CARS Members had requested the Committee to consider providing assistance, as they were "not very Internet savvy". Re-Licensing using the post costs £25.

To provide experience, Mark, M0IEO ran through the procedure and noted a few pit-falls such that he had to contact Ofcom who were able to solve the situation. John G8DET will undertake to Re-Licensing a number of CARS Members.

To make the evening easier, please complete the following questionnaire. If you are on the Internet then send these details to John [john.bowen "AT" btinternet.com](mailto:john.bowen@btinternet.com) before the meeting so that Pre-Registration can be attempted.

The information required BEFORE you (or G8DET) contact Ofcom online to Register at : - <https://services.ofcom.org.uk/> (Note, NOT a www). is as follows : -

FIRST NAME - As used on your paper Licence.

MIDDLE NAME - As used on your paper Licence.

SURNAME - As used on your paper Licence.

CONTACT E-MAIL ADDRESS

CONTACT TELEPHONE NUMBER Including Code and do NOT enter any spaces.

CHOOSE A PASSWORD

Must have a Capital Letter, Lower case letter and a Number and be between 7 and 14 characters long. Suggest starting with the Capital Letter.

YOUR CHALLENGING QUESTION

Such as "My Favourite Holiday Resort" or "My Favourite Band" or "My First School"

YOUR ANSWER

HOUSE NUMBER OR NAME

POST CODE

Lastly – your *LICENCE CALL-SIGN*

Having got to this stage do a Print or Print Screen and put the details in your folder safely.

You think you can remember – I know you cannot!

Having successfully registered, Ofcom say they will E-Mail you and give you the *Registered Name* they have allocated to you. In the past it has been your name or your name with a number but at the time of writing it is your "E-Mail Address" in full.

If you change your current email Address, your Ofcom allocated Registered Name will remain the same as originally allocated.

Once you have logged back in using the same Web Address as above, look for "Actions" and the "Validation" link on the right hand side – click it – you are required to check your details are correct – if OK - the expiry date will show 5 years more.

Take a "Print Copy" or a "Print Screen Copy" to prove you have Re-Licensed your Licence.

If you print from the PDF you normally only need the first 3 pages and they will (at time of writing) be dated 2007! Take care though if the rest of the license conditions do get updated on later pages!

Log-out. You are registered for the next 5 years. - *or until the license terms change and you wish to personally benefit from them*

If all else fails, telephone Ofcom on the numbers supplied – they have proved to be usually very accommodating in the past.

Please tell me how YOU got on. Or see you on March 1st.

John G8DET.

Dates for Your Diary - IMD

CARS is pleased to see in February RadCom that IMD is now publicized as Saturday, 30th April. CARS will be at Sandford Mill.

The idea is to have SSB in the Marconi Hut and CW from Dr Geoff Bowles's office upstairs. We may be using GB100MWT. Watch this space.

March Radio Sport (Contests) All in UTC

07 March – RSGB Club – Data – 20:00 to 21:30
5/6 March – 144/432MHz – 14:00 to 14:00 – 24hrs
5/6 March – ARRL DX SSB – 48 Hours
16 March – RSGB Club – CW – 20:00 to 21:00
12/13 March – RSGB Commonwealth CW – 24hrs
24 March – RSGB Club – SSB – 20:00 to 21:00
26/27 March – CQWW WPX SSB – 48 Hours

For further information please email Steve G4ZUL
contests2010@g0mwt.org.uk

Steve, G4ZUL

CARS Propagation Forecast for March

These are provided "Only to CARS by Gwyn, G4FKH". Thank you Gwyn.

Asia: Dhahran - around 14:00 on 24.9MHz for 95 percent of days, with fair signals.

Oceania: Sydney - around 18:00 on 10.1MHz for 72 percent of days, with poor signals.

Africa: Johannesburg - around 20:00 on 10.1MHz for 92 percent of days, with fair signals.

South America: Caracas - around 22:00 on 10.1MHz for 72 percent of days, with poor signals.

North. America: Washington - around 06:00 on 7.0MHz for 70 percent of days, with poor signals.

Comments are welcome. Please E-Mail Gwyn at:
[g4fkh "AT" btinternet.com](mailto:g4fkh@btinternet.com)

Gwyn, G4FKH

Sunspot News

The Sun must have read that we reported in the February Newsletter "*that Solar Cycle 24 is proving disappointing, so far...*". A Solar Flare was detected by Peter and Richard with their Magnetometer.
www.petermeadows.com/mag.

Patrick, M0XAP also detected it with: -
www.solarcycle24.com

Regular sun spot updates are available on the desktop page of the UKSMG web site at

<http://www.uksmg.org>

www.spaceweather.com

Geoff, G3EDM – "Best conditions since Set 2005"

A New Aerial Company – 1st March

Do you remember, Justin Johnson, G0KSC came to CARS when he presented his new range of "square driven element" aerials. Well he is launching his new company called **InnovAntennas Ltd.**

<http://www.innovantennas.com>

John G8DET

Canvey Rally – Sunday 6th February 2011

This year the Canvey Rally was well organised by SEARS and had a very good attendance.

Mark, M0IEO and Belinda his YL manned the RSGB Stand selling books etc while Murray, G6JYB; Clive, G1EUC, Roy M3KWG and Bob Cheverall M0DTA manned the ERG tables with Zipy wearing his Norseman's Helmet.

CARS had a table piled high with goodies, manned by David, G3SVI and Myra, M0MYR with ready assistance from Peter Bridgeman, G3SUY and Patrick, M0XAP. The items on it ranged from SK Sales to Club items brought by Colin, G0TRM; Tony, G4YTG and Geoff, G7KLV.

Some horse-trading took place early and trade was brisk for most of the day. As with all of these events some items went which were thought "junk" and some "lovely" items were not sold.

Thanks to all CARS Members who contributed, attended and emptied their pockets and to David & Myra for their efforts in running the stall.

SEARS have both photos and a Youtube movie clip clip of the event at -

<http://www.southessex-ars.co.uk/rallypics1.html>

and

<http://www.southessex-ars.co.uk/rallypics2.html>

A Troublesome Mullard Valve Tester

A very good friend of mine who specialises in restoring 1950's televisions owns this particular piece of test equipment and could not understand why it would not test pentode type valves any more. He said that he saw a small wisp of smoke coming from it. He had spent some time trying to find out why it behaved in this fashion without success.

I volunteered to investigate the problem. Over a matter of two weeks working on it, checking various components like resistors and the like for any signs of a burn up job. I replaced four 16uF electrolytic capacitors which I suspected may have gone down, after all the machine was put into service in 1955!

I then decided to test an ECL80 on both the triode section and the pentode section. The triode section proved OK but testing the pentode section really put the machine under stress! Sure enough up came the wisp of smoke. The next thing was to find out exactly where it came from and the only way to find the problem was to sniff all the way along the test valve bases that are on the top panel.

The good old reliable sniffer soon found the culprit - an adaptor in the B7G base. On close examination the casing of the adaptor had cracked very slightly and caused the high voltage HT to leak to the chassis of the tester. Removing the adaptor and then setting all the preset controls, located under a flap on the front panel, proved beyond doubt that the machine was back in fine fettle. I also had to make a spring for the cut out relay that acts like a hair trigger latch.

So, there it is folks, if you are having trouble with some piece of test gear and it's got valves in it then I might take on the challenge to get the thing working for you!

Ken G00SI

For Sale

Gould Advance, Oscilloscope model OS250B - £50. Contact Ken G00SI on 01376 334110

Drawing Circuit Diagrams.

Drawing nice looking circuit diagrams is something I've never been able to master so computer aided design [CAD] programs seemed to be the answer. After much searching I think I have found the answer.

CAD circuit drawing programs include the operating program itself and a parts library. You select the parts from the library and place them on a grid [drag & drop] and then connect them together. Some have the extra facility for transforming the circuit into a printed circuit board [PCB] design. They vary in price according to the facilities and there are free trial versions with various limitations.

Spice [Simulation Program with Integrated Circuit Emphasis] programs always include a circuit drawing facility. For those who have not heard of *Spice*, it is a very sophisticated circuit analysis system and it all starts from a circuit diagram which you draw using a built in CAD facility outlined above. Having drawn the circuit it will then analyse the circuit operation in great detail. There are many versions of *Spice*. The free versions all have limitations and the parts libraries do not include things like switches, relays and plugs and sockets that are not necessary for circuit analysis. A free trial version of *Spice* - called 5Spice - has a very nice easy to use circuit drawing facility but it will only print an A5 size drawing.

Maplin sell a piece of software called *Livewire Circuit Simulator*. The cost of the Standard version is approx. £35 and the Pro version is £50. As its name suggests it will simulate the operation of circuits that you draw, using parts from a self-contained library and it is, in effect, a simplified, easy to use, simple *Spice* system, using virtual instruments. The Pro version includes more instruments and an enhanced parts library. I have the Standard Version, which is easy to use and produces very nice circuit diagrams.

There are two other approaches to circuit drawing. John G1UZD produces first-rate diagrams using the draw facility in MS Word. His entry to the Constructors Competition some years back demonstrated not only his constructional skill but also his considerable drawing skill as well. I tried it, but wasn't successful

A rather novel approach was described in RadCom [October 2006] by Jim Hardcastle G0JUA. His method uses a symbol font. The font includes characters that are outlines of circuit components and

connecting wires. Using a normal PC keyboard the characters can be typed directly in to a word processor document. With practice this method can produce excellent circuit diagrams but is rather fiddly.

Just recently, with the aid of Google, I have discovered an excellent CAD program that is easy to use, produces excellent diagrams and is free with no limitations. It also comes with a really helpful Help, which in my experience is unusual! It is called *TinyCAD* and Google will find it for you.

I hope that these few notes may be helpful to others with circuit drawing problems. I would be interested to hear of other programs that Members may have discovered.

Geoff G7KLV

Also take a look at LT-Spice and other free tools at <http://www.linear.com/designtools/software/> - Murray G6JYB

Gerald Wells – Keeper of the Vintage Wireless Museum – London

Trevor, M5AKA has pointed out that a very good Youtube film about Gerald is available on the Web. CARS had a trip to his Museum a few years ago – very enjoyable.

<http://s276.photobucket.com/albums/kk1/kevvywevywoo/vintage/?action=view¤t=Movie.mp4>

Dengie Quiz – 28th February 2011

Dengie Amateur Radio Society invites CARS to the Henry Samuel Hall, Steeple Road, Mayland. CM3 6EG. Doors open at 7.30pm for 8pm start. - <http://www.dhars.org.uk/>

All welcome, XYs in particular. Please tell Geoff G3EDM if you can go - 01245 223494. Take a “doggy bag”.

The evening is always good. See CARS Web Site - <http://www.g0mwt.org.uk/events/dengie-quiz08/quiz-08.htm>

Douglas Byrne, G3KPO Lecture – 1st March

The first lecture in memory of Douglas, G3KPO will be presented by Prof Peter Scott of Reading University in the Bodleian Library, Oxford on Tuesday, 1st March, 5.30 to 6.30pm. His subject will be “Radio Manufacturing in the Interwar Years (Marconi). If anyone would like to attend – please contact John, G8DET for more details.

President Jottings Number 5

I am pleased with the discussions the Fun Contest produced – what I would like now is to see the final Contest Logs by/on Tuesday, 1st March, please. Please send in any “Check Logs” also - thanks.

Carl, G3PEM. President

Training

The first course of 2011 drew to a successful conclusion on Thursday 17th February when all eight candidates passed their exam at the end of the 23rd CARS Foundation Course. Clive is now registering candidates for the next Intermediate course at Danbury, which starts on 17th March and runs until June 2nd. More information and photos of the successful candidate at: <http://www.g0mwt.org.uk/training/>

And Finally:-

John G8DET edited this edition. Material by; - Trevor, M5AKA; Steve, G4ZUL; Gwyn, G4FKH; Ken, G0OSI; Carl G3PEM; Patrick M0XAP; Geoff G7KLV; Geoff G3EDM; Murray G6JYB; Peter M0ZBU & Richard M0SBU.