



Chelmsford Amateur Radio Society

Established 1936

Affiliated to the RSGB Club Call Sign-G0MWT
President-Carl Thomson, G3PEM Chairman-John Yates, G1UZD
Treasurer-Roland Taylor, M0BDB Acting Vice Chairman-Geoff Mills, G3EDM



Newsletter No 585

Web Address: www.g0mwt.org.uk

December 2014



Tuesday 2nd December, Social Evening

**OAKLANDS MUSEUM, MOULSHAM STREET,
CHELMSFORD, CM2 9AQ**



Our December meeting is on Tuesday December 2nd and will have a seasonal flavour. The event is intended to be a Social Occasion and will include mince pies and a special Xmas raffle. You are also welcome to dress accordingly and bring your own eats as well. We also plan to have a quiz (with a seasonal twist) and an opportunity to have a panel Q&A session too. CARS is not organising a separate Xmas dinner this year, so this is your chance to socialise and have a good time! **Bring your partner to ensure a good family atmosphere!**

Do support the raffle and make sure you also settle up with James if you have not yet renewed your subscription which was due in October!

Dates for your Diary

Tues 9 th , 16 th , 23 rd , 30 th	CARS - Evening Radio Nets @ 8:00 pm (Local). See Website for details.
Every Monday	Essex Ham 2m Net @ 2000h GB3DA
Saturday 3 rd December	CARS & ERG at W&S Open Day, Hockley
Tuesday 6 th January	Awards Carl, G3PEM
Thursday 15 th January	Foundation Course 7:00 pm Danbury Village Hall
Monday, 19 th January	Cars Skills Night 7:00 pm Danbury Village Hall
Saturday 24 th January	RNLI SOS Week. Organiser James, 2E1GUA

To remain a Member of CARS, send a Cheque for **£15** for Membership (FREE if in Full Time Education) to: - Mr James D Beatwell, Membership Secretary, 36 Hunts Close, Writtle, Chelmsford CM1 3HJ

To receive your membership card, please enclose a stamped addressed envelope.

No SAE no membership card!

Please renew soon otherwise your membership will be cancelled in January.

Nets Tuesdays **2000h** (9th) GB3DA, (16th) GB3ER, (23rd) 1.947MHz, (30th) 3.756MHz
Also there is the Essex Ham net every Monday @ 2000h on GB3DA

Net Controller for December is Colin, G0TRM

Thanks to Carl, G3PEM for November.

The CARS Website

For the past month, the Committee have been testing a new website design which is now at the stage where your opinions are required. The new site retains much of the current look/feel but allows for greater flexibility, better navigation and displays on mobile/tablet devices better.

As this is only a test site, not the entire existing site has been replicated, but there are enough pages to give you a feel for what the new site may look like. The address is: <http://www.m0pzt.com/mwt/>
We'd appreciate your thoughts, so if you have any comments (good or bad), please e-mail webmaster@g0mwt.org.uk which will go to both Charlie, M0PZT and Murray, G6JYB who are managing this project.

ALL factual content presented is "as received" from the contributors of the articles; the editor accepts no responsibility for its accuracy, errors or omissions.

November Meeting Tuesday, 4th November 2014, "Essex RAYNET" By Roland Taylor, M0BDB

Roland Taylor, M0BDB gave us a talk about who and what Essex RAYNET are and what they do for our hobby, the local community and nationally. Of particular relevance to us were pictures of the 1953 floods. The organisation receives no funding other than through donations and members giving up their time (and equipment).

The equipment used ranges from off-the-shelf Amateur kit to the more custom such as Raspberry Pi and Tiny-Trak APRS beacons.



Left: A self-contained multi-band station in a flight-case owned by Mark, M6RKC
Pictures courtesy of Roland's presentation



Right: Batteries, a 2m/70cm crossband repeater (yellow box) and some PMR radios

APRS also plays a vital role in RAYNET events and allows "control" to keep track of the team and, in the case of a bike-ride or fun-run, know where the last participant is. The map below shows a variety of positioning beacons during the course of one event:



Showing how APRS (positioning) keeps track of everyone
Picture courtesy of Roland's presentation

You can download a PDF of Roland's presentation [here](#). [1.2MB]



Left: Chairman, John G1UZD - there's a raffle ticket being drawn somewhere!

Right: Roland is presented with a CARS mug from our Chairman

Pictures courtesy of John Bowen G8DET



The usual CARS Raffle took place courtesy of Carl G3PEM and James 2E1GUA. Refreshments provided by David G3SVI and Myra M0MYR.

Thanks to all of the above for their continued sterling work.

Article extracted from <http://www.g0mwt.org.uk/meetings/past14-oct-dec/index.htm> - editor.

CARS Merchandise

An updated range of CARS clothing is now available, including a warm winter fleece and a reversible fleece/waterproof jacket.

Below is the new price list – note that we're not adding a markup to the prices... the price our members pay, is the price they cost the club:

Item	Sizes	Price
Navy Polo Shirt	S,M,L,XL,2XL	£12.50
Navy Polo Shirt (Ladies)	S,M,L,XL,2XL	£10
Navy Fleece	S,M,L,XL,2XL	£22
Navy Roundneck Sweatshirt	S,M,L,XL,2XL	£15
Navy Reversible Fleece	S,M,L,XL,2XL	£28
Sky Blue Formal Shirt	Specify collar size	£18

To place an order or to take a look at the range, see David G3SVI or Myra M0MYR at a club event, or email m0psx@g0mwt.org.uk. Prices assume collection at a club event.

CARS November Skills Night



Monday the 17th of November saw the last **Skills Night** of the year take place at the Danbury Village Hall. In total, over 65 people attended, comfortably breaking the record for attendance at any CARS event this year.

As well as amateurs from around the county, the evening attracted visitors from London, two clubs in Kent, recent CARS Foundation graduates, a new visitor who'd passed one day previously with a club in the south of the county, and Simon VA3SII, visiting from Canada.



The evening included Steve M0SHQ demonstrating working with microwave frequencies, and Peter, G0DZB (*left*) with an Elecraft KX3/PX3 combination plus a Raspberry Pi; three members of the Essex CW club operating a live CW station on HF; Carl, G3PEM advising on stealth antennas and antenna modelling; Jim, 2E0RMI answering M6 questions and demonstrating Echolink; Charlie, M0PZT with his prize-winning tablet logger and a data modes demonstration; Melvin, M6BSX showing some DX nostalgia, and Kristian, 2E0SSX (*right*) helping with handset programming.



Jim 2E0JTW was also present with the ever-popular badge-maker. A selection of home-made cakes was provided by Ann (Mrs 2E0RMI), and refreshments were served by David, G3SVI and Myra, M0MYR.

Membership Secretary James 2E1GUA was on hand to collect subs, and the new range of clothing was also on display. Thanks also to Clive, G1EUC for running the evening's quiz, which makes a great focus point for the get-together.

Since the Skills Night started in January, over 140 **people have attended**, with just over a quarter of attendees holding a Foundation licence.

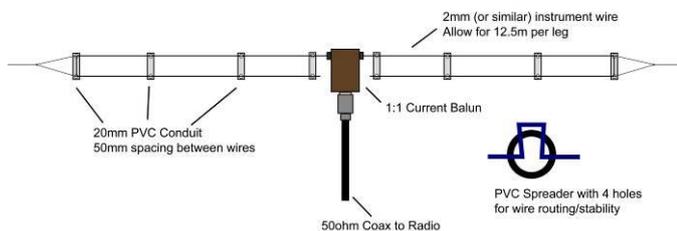
The Skills Night takes a break in December, and will return on Monday the 19th of January 2015.

Thanks to all of the helpers and supporters who've been part of the 2014 Skills Nights.

Photos from the event can be found at www.sxham.uk/skills-nov14.

40m into 50ft Does Go!

I was late getting into HF - I waited about 8 years in fact. Although I had inherited a well-used G5RV "Junior", my interests were more VHF. Several years ago I finally decided to try this HF lark as well as get my CW speed back up again. A fan-dipole for 20m-10m wouldn't be a problem but 40m, where the bulk of the daytime "inter-G" activity is gave me some problems. I don't like loading coils and a vertical is too noisy and not ideal for "local" stations. I could have strung out as much wire as I had room for and fed it with balanced line. However, I was determined to be resonant on 7MHz without buying the house opposite as well so the search continued until I found something called a "Linear-Loaded Dipole".



As you can see from the diagram - it looks like a folded dipole but isn't joined at the ends, is 50 ohms and offers around 100KHz of usable (3:1) bandwidth on 40m. Construction is simple: Raid the spares box for some wire - about 12m per leg (longer than a conventional dipole of around 10.5m per leg) and cut a series of spreaders from 15mm conduit tube. A 1:1 Balun at the feedpoint and a length of coax complete the ensemble.



A series of 3mm holes are drilled (like an Omega symbol) so that the wires loop-through and stay tight - the distance isn't critical but around 5cm (2") is fine. Some have been made from a single length of 450-ohm Ladder-Line - there really is no perfect way so long as the wires don't "bounce" too much in-between the spreaders - about 1m between each spreader worked for me.



Here it is in the PZT garden - you'll notice a 3rd wire at the bottom and this was during a test phase to see how a 20m dipole would interact. Quite a bit, actually - but perhaps I'll save that for another time! Commercially, this aerial is sold in the USA as a "Cobra" and often has a 3rd wire and is fed with balanced line. The original inspiration for my project came from this website: <http://www.hamradiosecrets.com/short-ham-antennas.html>

Charlie, M0PZT

M0RTW now in Antarctica

Cathy Colless, M0RTW arrived in Antarctica at the end of October and Facebook messaged a "big hello" to everyone at the Chelmsford Amateur Radio Society (CARS).

She is now at the Rothera Research Station



where she will be the Radio Communications Officer for the next six months. At the end of 2013 Cathy, then a Senior Systems Architect at Anglia Ruskin University, took the CARS Foundation and Advanced training courses and attended the CARS Skills Nights at Danbury Village Hall. She has written in her blog about the HF radios in Antarctica and the VHF repeater system. More recently she has covered the Radiosonde balloons

which are launched from Rothera and Internet communications in the Antarctic which is provided via a 2.4m dish to the NSS-7 geostationary communications satellite, located at 0°0'N 20°00'W.

Read her blog at <http://passyourmessage.com/>

Advance notice for 2015

Upcoming Club Nights 2015	
Jan:	Awards (Carl G3PEM)
Feb:	Northern Lights (Brendan Goodbody)
Mar:	Beacons (Chris G0FDZ)
Apr:	Raspberry Pi (Peter G0DZB)
May:	Portable Ops (Charlie M0PZT)
Jun:	Bodger's Guide to Microwaves - John, G4BAO
Jul:	To be arranged
Aug:	Constructors Competition (Carl G3PEM) (Prov)
Sep:	Tabletop Sale (Colin, G0TRM) (Prov)
Oct.	Annual General meeting

Events & Field Days 2015		
Date	Event	Organiser & Contact Point
24-25 Jan	RNLI SOS Weekend	James 2E1GUA
20-Mar	Solar Eclipse	None
Apr	IMD	Colin G0TRM
23-Apr	St Georges Day	Charlie M0PZT
21-Jun	Summer Solstice	Charlie M0PZT
Late June	Museum of Power	None
July	YOTA	None
July	Beer Festival	James 2E1GUA
July	RSGB NFD VHF	None
Sept	RSGB NFD SSB	None

Presidential Jottings

The final skills night of the year was attended by nearly 70 people which was a great result to achieve in the first year of this event.

Our thanks and congratulations should be given to Peter for organising such a successful event on behalf of CARS.

Hopefully a large proportion of attendees will come along to our regular monthly meetings.

Jim 2E1GUA has had serious accident on his bike whilst cycling from an amateur radio event, all our good wishes Jim for a speedy recovery.

Our last meeting on RAYNET was fairly well attended and gave a great insight into the activities of this part of amateur radio. Our thanks to Roland for a well thought out presentation.



The December meeting is a social occasion with some Christmas fare so please come along and have a chat, and I know it is early but I wish you all a

very Happy Christmas and I hope to work you on the bands over holiday period.

Carl, G3PEM

Wanted

Returning to the hobby after 30+ years and would be grateful if anyone who has unused, redundant or unwanted items were to consider me for donation or sale.

Happy to pay market price for the right equipment.

Steve, G4GHO (steve@sawfly.net)

For Sale



Watson W-25AM linear PSU

Output Voltage 0 - 15V DC

Output Current 25A (30A Peak)

Over current protected

Dual Meters

3 sets of terminals

Cigar socket

Rubber feet

Front Panel Fuse

Supply 230V AC 50Hz

Size 240 x 150 x 230mm

Weight 8.2kg

Ex G6YUY (who is slowly disposing of all his equipment) and in full working order.

£65 ovno collected from Basildon

Contact Alan alan.g0rth@gmail.com for details.

Closing date for items in the next Newsletter – Friday 19th December.

A little smile

Charlie's article reminded me of this cartoon.



A linear loading problem?

And Finally:-

Remember, any articles you feel may be of interest to members are welcome as are details of items for sale or wanted. Send to cars.editor1@gmail.com.