



# Chelmsford Amateur Radio Society

Established 1936

Affiliated to the RSGB Club Call Sign: G0MWT  
President: Harry Heap G5HF Chairman: John Bowen G8DET  
Treasurer: Brian Thwaites G3CVI Vice Chairman Martyn Medcalf G1EFL



Newsletter No 518

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

May 2009

This Month's Meeting – Tuesday, 5<sup>th</sup> May. 7.30pm at the Marconi Club.

## “Honeybees, Amateur Radio and Radar By Geoffrey Mills, G3EDM.

Geoff will give a short history and introduce Honeybees from a non-Beekeeper's point of view and how to distinguish them from other bees. He will mention why they are essential to the lives of every living creature on this planet, including humans. He will say how he got interested in keeping Honeybees... a SWL connection and indicate how and why any Radio Amateur could keep Honeybees. He will mention the Radio Amateurs' Beekeeping net on 80 metres.

The talk will be illustrated with photographs and a display of Beekeeping equipment.

During the Break period, Geoff will be able to answer questions and demonstrate some of the Bee Equipment he will bring.

CARS now famous Raffle will have its usual table top of Raffle Prizes - only £1 per Ticket

As this is a general interest subject (featured on Radio & TV recently), all Partners are invited to attend.

### Contest University

After the Raffle has been drawn, CARS welcomes Mark Haynes M0DXR who wishes to promote the Contest University. Have you ever wanted to brush up on your Contesting skills? Are you new to Amateur Radio and want to get involved with the exciting and fast paced action of Contesting? If the answer is YES to any of these questions, then stay and hear what Mark has to say.

### Dates for your Diary

Saturday, 25 <sup>th</sup> April	CARS at Sandford Mill for International Marconi Day. Open to the Public 10 -5pm.
Sat & Sun, 9/10 <sup>th</sup> May	CARS at Stock Windmill – GB5SM. See page 4.
Tue 12 <sup>th</sup> May	CARS VHF Net on 145.375MHz at 8.30pm, Local
Wed 13 <sup>th</sup> May	CARS Committee Meeting in Danbury Village Hall at 7.30pm – All Members welcome
Sun 24 <sup>th</sup> May	W&S Open Day – Hockley – all welcome
Tues 2 <sup>nd</sup> June	CARS Meeting – Table Top Sale by Colin Page, G0TRM – Get sorting!.

To become 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 2<sup>nd</sup> 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](mailto:g7klv@g0mwt.org.uk) Thanks.

Only by you sending Geoff your E-Mail address, can we ensure **WE** get it correct!

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

Net Controllers for May is David, M0BQC.

Thanks to Harry & Colin for doing it in April.

## **Last Months Meeting:- “Introduction to Military Communications” by Michael O' Beirne, G8MOB**

Those of our Members who attend the Open Day events at Sandford Mill (or look at the CARS Web Site) may have recognised our speaker as the visitor busy with a camera. Later on some of these pictures appeared in the magazine Radio Bygones under the authorship of Michael O'Beirne, our speaker for the evening. Michael's interest in radio dates back to the sixties when he was in the Army Cadets at boarding school. He became familiar with such classic military kit as the 19 Set and the R106 Rx as well as the Type B70 microwave link.

After school he started legal training at Lincolns Inn, London and joined the Inns of Court & City Yeomanry Signals Squadron. He eventually graduated from Sandhurst and started to command desks and soldiers.

At Staff College he learnt high level tactics and, most importantly, how to push paper round! He spent the next six years doing just that at Aldershot and then at Wilton, the Army HQ. He told us that the military had taken computers to their heart, probably more so than industry, and had spent a huge amount of money doing it! Whilst there he learnt to know and eventually love the D11's, designed and made by you know who! He was involved with the Home Defence Radio System, which he considered unsuitable, but was outvoted but after many teething troubles it was made to work. His responsibility was Home Defence and was involved with Kelvedon Hatch. - Happy days!

To understand Military Communications it is necessary to understand the organisation of the Army and the pursuit of Warfare. We were reminded that in 1832 the Prussian Officer, Von Clausewitz stated that 'war is merely the continuation of politics by other means'.

Michael enumerated many of the “Principles of War” which seemed on reflection to consist mostly of common sense. These include the selection and maintenance of the Aim, the maintenance of Morale, Security, Surprise, Offensive Action, Concentration of force, Economy of effort, Flexibility, Co-operation and Sustainability.

The aim of Military Communications is to serve Command. The key elements to success are a firm command structure, the timely passage of information up the chain of command to the decision makers and down the chain of command

to the Divisions, Brigades, Battle Groups, Combat teams and finally to the Troops.

A classic example where adherence to these principles might have ensured a different outcome was the notorious 'Charge of the Light Brigade' during the Crimean War in 1854.

The Army command structure is summarised as follows: Cabinet, MOD, C in C Land Forces (General), Commander Field Army (Lt. Gen.), Divisions (Maj. Gen. 15 K men), Brigades (Brigadier 3 K), Regiments/ Battle Groups Lt. Col. 600), Coys. /Combat teams (Major 120), Platoons. /Troops ( Lt. or 2nd Lt. 20-50), Infantry Sections (Cpl. or L/Cpl. 10).

The different arms of the military structure are: Household Cavalry & Armour, Infantry, Artillery, Army Aviation, Royal Engineers and Royal Signals with Combat Support Arms as follows: Medical, REME, Royal Logistic Corps Adj. Generals Corp and smaller miscellaneous Corps.

We are now in a position to consider tactical radio communications.

1. Levels: Up to Battlegroups, comms are run by the units themselves and from Battlegroups to Brigades, comms are run by the Royal Signals.
2. Portability. Backpacks and vehicles.
3. HF: 1.6 or 2-30MHz. SSB voice with add-on adaptors for FSK/data. eg PRC320, VCR321 + ATR
4. VHF: 30-76MHz. FM at 25kHz spacing - 1840 channels. eg. PRC351 and VRC 353.
5. UHF: 225-400MHz AM ground to air. Eg. PRC344.
6. Microwave: 2.4GHz eg. Personal Role Radio.
7. Of which the late Anthony M1FDE designed the RF Stages.

Messages may be sent in three forms: Informal, Formal using message forms and "Pro-forma" using message formats such as casualty evacuation, ration demands, sit-reps (reports), and enemy contact reports.

As might be expected strict voice procedure is essential to provide: Security - using aids to such as codewords, nicknames, veiled speech, codes and address groups; Accuracy - rhythm, speed, volume, pitch and the use of a phonetic alphabet; Discipline - a responsibility of the control station. We were shown examples of written messages.

After giving us some idea how war is waged and battles fought we were told how the various types of radio are used. HF is used for long distance

communications eg. for supply lines and recce. It is making a slight comeback thanks to micro-processing and improved modulation methods. Satellites have taken over from HF to a limited extent. Battle Groups are heavily dependent on VHF, using 25 kHz channelling - the Army loves VHF! Personal Role Radio has transformed the way the infantry works and is a great success. This is the system that our late friend Anthony did so much to perfect. UHF, as well as for ground to air, is also used for point to point links.

Michael had also brought a selection of hardware to demonstrate at the break time. These included a green box called a "Selector Unit RF" (SURF) and functioned with the companion VRC321 HF transceiver. The SURF was only needed when two VRC321s were installed in the same vehicle and where the respective whip aerials were only about two metres apart. The VRC321s and their respective SURFs could then work independently on full power (about 40 watts PEP output) with only a 20% frequency separation. The tuned loss of Michael's SURF is only about 0.75 dB. The HF SSB backpack shown was the PRC2000 made by MEL in Crawley in the 1980s and covers 1.6 to 30MHz. He also had a trophy of war, an Italian built VHF TX/RX, used by the Iraqi Army.

Our thanks to Michael for a fascinating, informative and highly entertaining evening which, I'm afraid this report, hardly does sufficient justice! I hope he can be persuaded to visit us again.

**Geoff, G7KLV**

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### **Chelmsford Award – Essex Air Ambulance**

Arrangements have been made to present a cheque for £500 to the Essex Air Ambulance on Monday, 27<sup>th</sup> April at 3pm. The presentation will now take place at Boreham Airfield, which is a restricted site.

If you would like to attend you MUST contact Martyn by telephone on 01245 469008 or E-Mail him on [m3vammartyn@supanet.com](mailto:m3vammartyn@supanet.com)

This is the culmination of three years work by Amateurs both around the World and locally to subscribe to the Award, thought up by Vice Chairman, Martyn G1EFL.

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### **International Marconi Day – 25<sup>th</sup> April**

To commemorate Marconi's Birthday, Radio Amateurs throughout the World with an association with Marconi will transmit, generally, using a Special Event Call-Sign.

CARS will be using GX0MWT at Sandford Mill.

CARS will have a VHF/UHF Station in the Caravan by The Barn by kind permission of Mark Sanderson, M0IEO and a HF SSB Station in the Marconi Hut. Additionally Dr Bowles, the Keeper of the Science & Industry Museum has given permission for Tony, G4YTG to install his station in the "Upstairs Room".

Operators, Loggers & Hosts are required – please contact Brian, G3CVI, see front Page for details or simply turn up!

To continue CARS Training emphasis it is proposed that on the hour, hour+15 & 30minutes CARS will announce that from the hour+45 Minutes QRP, M3, M6 and DX Stations would be preferred to be worked. This is to give weak signal stations a chance of being heard and therefore the opportunity of gaining an IMD Award. CARS would be delighted to be able to give "You are 4 by 3" Signal reports!

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### **CARS Sport Radio (Contest) Group**

Steve, G4ZUL will be organising a Pre-NFD CW Contest run-through at the same time as IMD. He will be operating from the car park by the willow trees which line the Chelmer Canal so should not interfere with IMD.

Go and have a look and see what they are up to – maybe you would like to join them in the future.

Gwyn, G4FKH has the new CARS Laptop running and he thinks it is fantastic, lovely screen, even his XYL is impressed! It runs the Club's IC756 Pro-III with no problem.

### **The Contest Group.**

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### **May Sport Radio (Contests)**

#### **VHF Contests**

2 May: 432MHz Trophy Contest  
Starts: 14:00 - Finishes 22:00 UTC  
Sections: SF, O. (special rules S6)

16/17 May: 144MHz May Contest  
Starts: 14:00 - Finishes: 14:00 UTC (24hr)  
Sections: SF, SO, M, 6S, 6O. (special rules M1)  
full rules from [www.vhfcc.org](http://www.vhfcc.org)

for any further information please email Steve G4ZUL  
[contests2009@g0mwt.org.uk](mailto:contests2009@g0mwt.org.uk)

## RSGB Club Championship (80 metres)

Dates for May as follows:

SSB: 4 May, 20:00 – 21:30 Local

Data: 13 May, 20:00 – 21:30 Local

CW: 21 May, 20:00 – 21:30 Local

Further information & rules from [www.rsgbhfcc.org](http://www.rsgbhfcc.org)

## CQ WW WPX / CW

30/31 May, 48hrs

Exchange: RST + serial number

Categories:

Single operator (single band & all band)

Multi operator (single TX, Multi two, Multi TX)

Scoring: 3 points on 28, 21, 14MHz / 6 points on 7, 3.5, 1.8MHz if on different continent and if same continent then 1 point & 2 points respectively.

Prefix multipliers: The number of valid prefixes worked.

For full details please refer to February issue of CQ magazine or

[www.cq-amateur-radio.com](http://www.cq-amateur-radio.com)

For any further information please email Steve

G4ZUL - [contests2009@g0mwt.org.uk](mailto:contests2009@g0mwt.org.uk)

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## Playing about with WSPR

Last month, Peter, G3SUY wrote an article suggesting you tried WSPR to broaden your experience of propagation. Did you?

Well John Greenwood, G3KRZ did and made some very good copy and comments.

He noted that because of potential Earth Circulating currents which can destroy Rig and Computer interfaces, one should really use an isolated Interface, preferably opto-isolated. He sent in photographs of a beautifully home built interface. John also had a few problems which Peter identified as being "noise" but was pleased at least one CARS Member had tried WSPR. If you had a go – please tell the Editor.

If you wish to see the detailed inter-change between John, G3KRZ & Peter, G3SUY, please contact the Editor.

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## CARS - Windmills on the Air - 9/10<sup>th</sup> May

CARS will be at Stock Windmill using GB5SM from Mark Sanderson's (M0IEO) lovely caravan.

Patrick, M0XAP is organising this event – give your name to Brian at the May Meeting if you would Operate, Log or simply Host.

It was a great event last year with very good weather.

## Slow Morse Transmissions (2<sup>nd</sup> Time).

Andrew, G0IBN has kindly said he will (work & others things allowing) operate Slow Morse transmissions on 3555-3560kHz +/-QRM at a nominal time of 2015 on each Wednesday and 2015 on every Sunday. Please look out for him. He will also be running Morse Classes in the Danbury Village Hall - Hawkins Room – Contact Clive Ward, G1EUC – see below.

## Andrew, G0IBN.

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## Training - New Intermediate Course

A new Intermediate Course starts on Thursday 30<sup>th</sup> April at Danbury Village Hall, bookings are now being taken, contact Clive below.

Congratulations to the candidates who passed the recent Foundation exam. They should have their new call-signs by now so listen out for them on the air.

Members can help us by telling people about the Courses CARS run by putting up posters in public places. A poster for display can be downloaded from: -

<http://www.g0mwt.org.uk/training/poster2.pdf>

For details of all CARS Training Courses contact Clive Ward G1EUC

Tel: 01245-224577 Mob: 07860-418835

E-mail: [training2008@g0mwt.org.uk](mailto:training2008@g0mwt.org.uk)

The CARS training page is at

<http://www.g0mwt.org.uk/training/>

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## ICQ Amateur Radio Podcast comes of age

Launched in July 2008, the ICQ Amateur / Ham Radio Podcast provides a mixture of news, views, training, technical reviews and information for all levels around the world. This month, April 2009, the ICQ Podcast came of age with the publication of the 21<sup>st</sup> edition. Previous episodes have included roundtable discussions with new entrants to the hobby and seasoned pros discussing the hobby. Technical reviews have covered aeriels, modifications, product reviews and interviews with Hams advising their latest innovations.

The ICQ Amateur / Ham Radio Podcast is a fortnightly radio type show, downloadable from the internet. Episodes can either be downloaded direct from the website <http://www.icqpodcast.com> or by subscribing to iTunes

<http://phobos.apple.com/WebObjects/MZStore.wa/wa/viewPodcast?id=284922000>).

By registering with the ICQ Podcast website, an email will be sent to you with a direct link to download the latest episodes. Episodes can be played back either from the computer or by loading the mp3 file onto an mp3 player.

The ICQ Podcast is a podcast "for Amateur's by Amateur's" and we would be very interested to hear for anyone who would like to be involved. If you would like to contact us, please email [info@icqpodcast.com](mailto:info@icqpodcast.com)

We hope you enjoy the ICQ Podcast.

Kind regards

Martin Butler (M1MRB) and Colin Butler (M6BOY)

<http://www.icqpodcast.com>

[http://icqpodcast.com/index.php?option=com\\_content&task=view&id=152&Itemid=2](http://icqpodcast.com/index.php?option=com_content&task=view&id=152&Itemid=2)

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## CARS Personalities

When our CARS Chairman, John Bowen G8DET asked me to write a short article about the family from a radio viewpoint, I didn't think we were so unusual to be honest. Three License holders in the family is not so rare these days, but then I thought about the backup team behind us that allow us to operate radio in almost any situation and, well yes, perhaps that is not so common, so here goes, an introduction to my Family.

The team is divided into two groups, those of us who are lucky enough to hold Amateur Licenses and those who provide the all important backup services, the antenna erection, tea delivery, catering and general help with setting up and packing away duties that go into making a successful radio team.

Belinda, my ever suffering Wife who proclaims to have no interest in radios, but can erect an antenna quicker than most amateurs and to be honest is the reason I can enjoy this hobby to the extent that I do. Belinda or Ben as she prefers to be called can always be relied on to attend Field Days (and IMD & Open Days) and is always on hand for the setting up of the caravan and awning and to some extent the radios as well. Once we are set up and on air, Ben is always happy to greet members of the public and tell them about the kit being used, the club and the courses available from CARS. As an unofficial PR officer for the club she makes a fine cup of coffee, and my life a lot easier.

Susan and Peter, although not interested in radio as yet, they both enjoy the field days and helping out with the setting up of the caravan, although Peter will, given half a chance at Sandford Mill, be away to the main hall to look at the exhibits so

there is the spark of interest there which I can build on. Susan on the other hand seems to have no radio interest at all and once the caravan is set up and running will be just as happy sitting with a book until packing up time. Although Susan and Peter claim to be uninterested in radio, I always have a set of four PMR radios in the caravan who they like to play with and to be honest, some of the operating practices they employ on these put some of us so called proper amateurs to shame! For example, always saying "Over" at the end of an over.

And that brings us to the licensed part of the team,

Laura, M3LIQ, has been licensed since October 2005. The main problem for Laura is that she is mic shy. This is not so uncommon in teenagers, although to hear her on the telephone or when chatting on the X-Box you would never believe that she was mic shy. Laura prefers to work 2m simplex with one or two stations but gets flustered when there are a lot of stations on the channel. I have tried Laura on 20m SSB but she is not comfortable working international stations. Laura enjoys setting up the station but will sit back and listen to others operating rather than getting on the mic herself, but she does have a good technical knowledge of the station and can overcome most of the problems encountered on field days.

Ross, M6ORM, is the latest addition to the team. Ross passed his M6 license only last month after attending the CARS course at Danbury which started in February. Ross is enjoying working 2m mobile from his car at the moment but is working on being allowed to install an antenna at home so that he can enjoy HF operation as well. Ross only discovered Amateur Radio at the IMD 2008 at Sandford Mill, and has picked up the hobby quite quickly; he is looking to take the Intermediate exam next year and has a keen interest in Amateur TV.

And that just leaves me, Mark M0IEO. I am enjoying the hobby at least as much now as when I was first licensed. My main interests are anything that involves setting up a rig and transmitting although I do like to find sites that have an historical interest and transmitting from them which interlinks with my other hobby of caravanning. Whilst on a recent camping trip to Norfolk we discovered the USAF 100th Bomb Group airfield control tower and am now in negotiations with the Museum there to set up a special event station but that is a story for another article in the future.

So you see, although there are three of us in the family who are Licensed Radio Amateurs, radio

has turned out to be a hobby that the whole family share even to the point that Ben was at the top of a tower scaffold with me not so long ago on a freezing cold January day to erect the home QTH antenna, an MA5B mini beam, while the kids were all in the garden pulling on the guy lines, now that is family involvement!

## Mark M0IEO

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### For Sale – VHF/UHF Valves (2<sup>nd</sup> time)

CARS are very pleased to have been given the opportunity to sell the following: -

- **Seven 4CX250BC Valves**  
– **Brand new by Amperex or Eimac.**
- Four Bases plus another fitted with Ceramic Chimney.
- Four Ceramic Chimneys.
- Brass fitting strip.

Sensible offers, please to John, G8DET.

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### Power but Not Radio Power

The Irish electricity grid operator Eirgrid has awarded the English company ABB a contract worth £390 Million Pounds to supply the power equipment for a transmission link between the National Grids of England and Ireland. It will be 186km under water and 70km getting there. It is designed to carry 500MW in either direction using 200kVolts DC by Sept 2012.

By passing DC the two 50Hz national grids don't need to be sync'd. Converter Stations at each end will convert the DC into AC.

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### Downing Street's Response & PLT

Earlier this year an E-Petition was sent to the PM at Downing Street complaining about PLT. Read the Government's response: -

*Thank you for the E-petition demanding a ban on powerline adaptors like the ones currently supplied by BT.*

*As with all electrical and electronic products sold in the UK, Power Line Technology (PLT) equipment is required to meet the relevant regulations before it can be placed on the market. In particular, it must comply with the Electromagnetic Compatibility Regulations 2006 (the EMC Regulations) which are based on a European Directive, and any person who places such products on the market (usually the manufacturer or the importer) must ensure that the products comply and apply the 'CE' mark.*

*The Department for Business Enterprise and Regulatory Reform (BERR) is responsible for the EMC Regulations. Enforcement powers are delegated to local Trading Standards offices and to Ofcom where there is a radio spectrum protection or management issue.*

**Ofcom estimates there are around 500,000 pieces of PLT equipment in use in the UK. Ofcom have received around 84 individual complaints of interference attributed to PLT equipment.** All of these complaints are in the process of being investigated or have been successfully resolved. Each complaint is investigated on its own merits. We do not believe an outright ban of all powerline adaptors is justified.

*It is often the case that electrical equipment that is used in the home has to comply with the EMC regulations. Some of this equipment has the capacity to cause interference to other radio communications equipment in certain circumstances; this can be due to the manner in which it is installed or operated.*

*Ofcom can provide advice and assistance to those who complain of interference with radio communications equipment. Any individuals who wish to report specific cases of interference that may be caused by PLT apparatus, or any other source, should contact Ofcom's Advisory Team on 0300 123 3333 for further assistance.*

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### “Sunspots” on BBC Radio 4

On Tuesday April 21 the Today show on BBC Radio 4 featured an item on the current lack of sunspots.

The Sun is the dimmest it has been for nearly a century. In the show Mike Lockwood, Professor of Physics at Southampton University, explained why there are no Sunspots and very few solar flares.

The item was broadcast at 07:44 and is available on the BBC's Listen Again service and as a podcast.

BBC Radio 4 Today homepage

<http://news.bbc.co.uk/today/hi/>

Listen again:

[http://news.bbc.co.uk/today/hi/listen\\_again/default.stm](http://news.bbc.co.uk/today/hi/listen_again/default.stm)

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### And Finally.....

John G8DET edited this edition. Material by; Murray G6JYB, Trevor M5AKA, Steve G4ZUL, John, G3KRZ; Peter, G3SUY, Mark M0IEO & Geoff, G7KLV.

Items for the next Newsletter should be sent to the [editor@g0mwt.org.uk](mailto:editor@g0mwt.org.uk) by Friday 22<sup>nd</sup> May.