



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 510e

Web Address: www.g0mwt.org.uk

September 2008

**This Month's Meeting – Tuesday, 2nd September. 7.30pm at the Marconi Club.
Amateur Radio from Brownsea Island by Peter Best, G8BLS.**

Peter will be driving from Felixstowe where he is the Chairman of the local Radio Club and heavily involved with Scouts.

He is also an experienced Radio Amateur (note his Call-Sign) but has a nice way of describing technical items to Foundation Members. He will talk about the involvement with Radio & Scouts particularly with Brownsea Island (BSI) where Scouting actually started. It was here he demonstrated shaving using a Solar powered 12 volt razor.

As you can imagine we are in for an interesting and fun evening - do join us & support Peter.

CARS will have our now famous Raffle with lots of very useful goodies.

Dates for your Diary

Sunday 24 th August	Sandford Mill – CARS VHF/UHF Radio with the Public at 2pm to 5pm
Thursday 28 th August	CARS Advanced Training Course starts in Danbury Village Hall.
Thursday 4 th September	Morse Code Classes start in Danbury Village Hall, see below.
Wed 10th September	CARS Committee Meeting in Danbury Village Hall – Members are welcome at 7.30pm
Sunday 28 th September	Sandford Mill - CARS Operating Science & Discovery Day at 10am to 5pm
Sunday 28th September	Kempton Park Rally
Tuesday 7 th October	CARS Meeting. Annual General Meeting
Thursday 16 th October	Essex Repeater Group AGM Danbury Village Hall 7:30pm - All welcome

Advanced Training Course.

Last call for the CARS Advanced Course which starts in Danbury on the Thursday, 28th August. See page 6 of this Newsletter – do YOU know of anyone who would like to attend?

Morse Code Classes

The next CARS Morse Code Class run by Andrew Kersey, G0IBN will be starting on Thursday, 4th September. They will be held every Thursday evening at the Danbury Village Hall. To book a place contact Clive G1EUC Tel: 01245-224577

Thanks to Geoff, G7KLV for arranging the Postal Members Newsletter – 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 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) 28.375/1,947 (4th) 1.947: (5th) 145.375. All +/- QRM.
Net Controller for September is Denis, M0FHA. Thanks to Geoff, G3EDM for doing it in August.

Last Months Meeting:- Constructors Competition by Carl, G3PEM.

To stimulate Construction CARS gives away real money: £10, £7, £5, and £5 for 1st, 2nd, 3rd and First Time Winners Award, respectively. Basically anything entered can win, but there is a better chance if it is: a) Safe; b) Connected with Radio; c) Electrical or Electronic or d) Interesting.

Each entrant is requested to tell the audience something about the entry.

After the announcements, Chairman John, G8DET started the event off by showing a Jason FM Tuner assembled by Mr Vincett of Moor Hall Lane in Bicknacre in 1961. It was the main set for the house for some 30 years.

Switching it on produced a distorted sound due to flat batteries of John's audio amplifier but Colin, G0TRM, our Sound Maestro soon patched it into the PA and sweet sounds filled the room.

Next on the podium was John Yates, G1UZD who explained that while working in Finland his switched-mode power supply for his laptop produced so much RF interference he had to replace it with a home designed, home constructed 20 Amp PSU of conventional build. A very large cooling fin had to be fitted soon after construction for continuous rating. An ex-Marconi brass box housed it and the finished diagram was beautifully drawn up using Microsoft Word – a nice piece of useful equipment.

Patrick, M0XAP showed a remote tuning unit as he has a 20m dipole and a long wire for Top Band. His IC775 manages Top Band, but O/P on 80m problematic and 40m more so. The idea was to make an Aerial Tuner that would solve those 2 problems but without switching, relying on a remotely-operated variable capacitor. This was done by trial and error; the coil was wound on a heavy cardboard curtain roll fixed by Ronseal wood hardener. A suitable tapping point was selected and soldered.

The 'Como' electric motor had a built-in 512:1 reduction and was connected by plastic bevel gears to the capacitor. There was a 'straight through' relay which bypassed the secondary in order to work Top Band. The results on 80m locally are excellent, with better reports on 40m as well. Total cost about £40.00

Philip Lewis (who has just past his Foundation Course – Congratulations) said that he had nipped home & brought back an Audio Amplifier

he was involved with the design and construction some 20 years ago. It was a Current Dumping design working at 60 Volts with up to 1 Watt in Class "A", rest Class "AB". It has been tested at 0.001% distortion. It had a "running meter" which recorded 7640 hours – a lot of usage. It was constructed from ex-computer pieces – cost very little to build and sounded excellent.

Anthony, M1FDE runs an Echolink system from his garden shed and an Ofcom requirement is that on receipt of an appropriate telephone call it has to be shut down – how? By obtaining a surplus Key Fob and Receive unit from a scrap car he has modified it to respond to a single key press from his kitchen – to stop it being switched on again he has produced a series of key presses only known to himself. A beautiful piece of micro-soldering and design. It works on 433.92MHz with an output of 10mW and a range of 30 metres.

Anthony has recently been in hospital – we wish him well.

Ron Keefe, G4SIS held up a lovely shining variable Butterfly Capacitor. It was used to tune his single Loop Aerial in the loft and could have many thousands of Volts across it, hence the wide spacing. Each blade was cut out of a sheet of 1.5mm Aluminium sheet – took 3 months in hours to do! It measured about 240pF and had to be completely de-burred or it may flash-over when in use. "Too good to use – put it on the Mantelpiece" was a comment from the floor.

Norman Awcock G8GWP produced a One Valve Reaction Medium Wave Radio from a WWII design using a 6J7 valve. This was supplied from a 30v PSU with 6v for the Heaters. The Audio Amplifier used only 12v HT! He had used Litz wire (from Geoff, G7KLV who had given him encouragement).

Geoff, G7KLV started his presentation with the words "Well you have stolen my pitch. I am going to show a very similar set-up". It transpired both Amateurs had produced the same One Valve Receiver from two different sources – both published by Mr Camm of Practical Wireless fame. Geoff had used an ECH81 and 12v HT.

Richard Beck, M3YLB had built a nice kit Morse Oscillator with two sockets so that he could "send" to his mate who could then "reply" to improve their Morse speed. He had obtained from W&S a beaten-up Morse key which he had stripped down, mounted on a new base, polished up and reassembled to look better than new.

At the Refreshment Break, Carl, G3PEM counted the Voting Forms to produce the results.

Unfortunately, Gary Broad, G6AXE had placed his entry by Harry, G5HF's kit on the back table and so did not get voted for – sorry about that. It was a nicely made unit to mount in a Vauxhall Astra to hold a Mobile Tx with 10 Watts of Audio and a link to the 25Watt Linear mounted in the boot. Replying to a question from the floor, Gary did say that there was a possibility he had blown up the car electronics while testing the unit.

CARS now famous Raffle with lots of very useful goodies was drawn. Geoff, G7KLV provided the mobile strong arm sales patter while Colin purchased many of the goodies assisted by CARS Members and Peter Graves, G0KSJ manned the table – thanks to all.

After the Raffle was drawn, CARS President Harry, G5HF presented the prizes to the Constructors Competition.

- 1st** Ron Keefe, G4SIS for his Capacitor.
2nd Anthony Martin, M1FDE - Remote Unit.
3rd Richard Beck, M3YLB - Morse Key/Sender.
First Time Winner: John Yates with his PSU.

Congratulations to all.

Harry, G5HF then showed us how to make an Electrolytic Rectifier. These were used during the 1920s and 1930 to rectify up to 1,000 Volts but Harry will limit his to only 180 Volts!

Harry started by giving us the background to early Amateur Radio Transmitters. After the First World War mains transformers could be quite cheaply be purchased but Rectifiers at over 1,000 Volts were so expensive & difficult to obtain only Governments could afford them. However by using one electrode of Aluminium & another of Lead suspended in a solution of Ammonia Phosphate and water a Diode is produced. If DC is presented to this "plant" with the polarity one way a Capacitor is formed and the other way, current passes.

Harry demonstrated this with a 45 Volt system. It appears that 1 Amp is possible at over 10,000 Volts (more comforting in the Winter), it produces heat to warm your feet but slightly more disconcerting it glows a yellow hue as you key the transmitter.

Harry concluded his talk by showing a battery which cost nothing to run. It was a cell of dissimilar metals in a glass container of water and powered a Liquid Crystal Clock (which was

keeping perfect time). Unfortunately, Harry said it sometimes stops – the water has evaporated – but a sort trip to a tap soon has it going again.

Thank you Harry for a brilliant end to a very "Constructive" evening.

John G8DET

Sandford Mill – August Afternoons

As in the past few years, Chelmsford Borough Council invited CARS to operate from Sandford Mill as part of their Open to the Public event throughout August from 2 to 5pm.

CARS Committee has suggested that the Marconi, 2MT Hut is used on each Sunday, to get away from the mechanical saw upstairs and to maximise on the publicity.

HF Radio started off the event on Sunday, 3rd August using the 80 metre Doublet wire aerial that proves so good. CARS Publicity duo David, G3SVI & Myra, M0MYR were in attendance and providing a very good interface with the public.

A week later on the 10th August it was the turn of the VHF/UHF party to populate the air waves. James, 2E1GUA provided his own IC706 and worked a good number of local stations via his own Omni-directional aerial which Tony, G4YTG put on top of the office block.

The 17th August was again HF but with a poorer Public attendance thought to be due to competition from the V-Festival, the Olympics and the weather. However those who did attend had a good time and provided plenty of stories & feedback. CARS Members provided a good number of Operators.

The VHF/UHF party finished off on August 24th using a new coaxial cable feeding James's Omni-directional Aerial.

NB: CARS is not operating on the August 31st

Sandford Mill – Science & Discovery Day

This is on Sunday, 28th September when the Public (and their children) are invited to the Museum from 10am to 5pm for a Borough Council sponsored day of exploration with Science.

CARS will have HF & VHF stations in operation similar to that used for IMD in April this year.

Put this date in your diary and see/contact Brian G3CVI for a slot to Operate, Log or Host. As with all these events, entrance & parking is FREE.

CARS Operate from a Lightship!

CARS were invited by Andrew, G0IBN to Operate from the old Trinity Light Vessel 15 moored at Tollesbury to commemorate International Lightship/Lighthouse weekend of 16/17th August.

CARS Members operated in a friendly atmosphere - rather than a contest - from around 0930 to 1530 on both days. Most of the 230 contacts were from Europe, they included Moldova, Spain, Sweden, Czech, European Russia, Poland & Austria. The latter Radio Amateur was in his car and gave us 20dB over, as did most countries, so G3GLL's whip aerial on the helicopter deck surrounded by the River Blackwater Estuary, did well.

Martyn was masterful with his SSB skills, Steve, Rick and I did CW. On the Sunday morning Jeremy and I alternated between SSB and CW.

Report by Andrew, G0IBN.

Well I could not miss this event as I like boats, and in the past had done a lot of sailing through the Scouting Movement. We used to sail from West Mersea and cross the Channel to Guernsey, Alderney & Sark, and where ever we decided to go if we had time.

My slot that I had requested to operate was sometime between 9.30 to 12.00ish. However, Andrew showed us over the ship which I found extremely interesting. Some of the crew were still in bed from the previous course which had finished on Friday, so we had to try and be a little quiet, however, they must have heard us because they got up. They were a very friendly team.

I cannot remember the exact time that I started calling CQ but it was approx 11.00ish, (I was having a little trouble from the CW team e.g. Andrew, Steve and Rick as they thought I should be using CW - to me it is all Dots and Dashes.) There was a lot of friendly banter between them and myself!

I must say Steve did all my logging for me, which was a great help. Thanks Steve. I do not know how many contacts we made but we had a pile up which I enjoyed running. We did make several contact to G1's and others. I had a great time, and I hopefully will be there again next year.

For any of you that like facts here goes:-

Length - 137.25 Feet - Beam 25 Feet.
Draught 15 Feet.- Gross Tonnage 645 GRT
Year of Construction 1954.

Martyn Medcalf. G1EFL.

Feedback (1)

The CARS Web Site has a page to promote the CARS Mugs – in the form of “Mugs Around the World”. This was an idea produced by CARS Commercial Manager, Martyn, G1EFL.

Paul Moss, KB1MTW purchased a mug and so his picture appears. It transpires he is the Director of the Whitman Amateur Radio Club, Inc of Massachusetts, USA.

See the report of this from America on <http://www.wa1npo.org>

Martyn, G1EFL

Feedback (2)

Last month we ran a piece about car filler caps – which side they are on. We have since found out this is not something on the Motor Manufacturer's official list of “Formal Requirements” but a commonsense idea adopted by many; but not on a Peugeot 107.

John Gilliver, G6JPG & Duncan Munro, M0K GK.

Feedback (3)

CARS Member Eric Lawley who now lives near Plymouth has got a ‘new?’ callsign. He was G8ADX but has now resurrected G3MMX. Congratulations working IY1TTM from “The Marconi Tower” as his first contact using the new callsign.

Feedback (4)

Best wishes to Geoff, G7KLV on his retirement as Friends of Chelmsford Museum Newsletter Editor since 2001. It was always a weighty publication of interest and it always ran a nice advert for CARS & Amateur Radio.

The Summer Issue had a nice photo of Geoff in His shack with a pair of WWII headphones on

Feedback (5)

Power Consumption was started by Ken, G7RFT. My "No Break PSU" on my computers takes 40 Watts all the time. 20 Watts was found to be used by the upstairs Lighting circuit – now known to be the Fan in the shower room. It has a "Over run" facility to clear out condensation for 5 mins when turned "Off" - costs typically £17.50 a year.

John G8DET.

September Contests from Steve, G4ZUL

IARU Region 1 SSB Field Day

06/07 September,
Start:13:00 Finish:13:00 UTC, 24hrs
Bands: 3.5, 7, 14, 21, 28MHz.
Exchange: RS + Serial number
Sections: Open – 400 watts,
Restricted – 100 watts.
Full rules & info from www.rsqbhfcc.org

JARL All Asian DX / SSB

06/07 September, 24hrs
Bands: 3.5, 7, 14, 21, 28MHz.
Exchange: RS + Age.
full details from www.jarl.or.jp

144 MHz Trophy Contest

06/07 September.
Starts:14:00 Finishes:14:00 UTC. 24hrs.
Sections: SF, SO, M, 6S, 6O.
(Special rules IARU Co-ordinated S7)
full rules from www.vhfcc.org

CQ WW DX - RTTY

27/28 September, 48hrs
Bands: 3.5, 7, 14, 21, 28MHz.
Exchange: RST + CQ Zone.
Categories: Single operator
(single band & all band)
Multi operator (single Tx, Two Tx, multi-Tx)
QSO Points: own country 1 point, own continent
2 points, different continent 3 points.
Multipliers: US States & VE areas 1 point, CQ
Zones 1 Point
Final score: QSO points x Multipliers.
Full details from www.cq-amateur-radio.com

For full details refer to February issue of CQ
magazine or <http://www.cq-amateur-radio.com>

For any further information please email Steve
G4ZUL contests2008@g0mwt.org.uk

Waters & Stanton Celebrate 35 Years

The partnership between Peter Waters G3OJV and Jeff Stanton G6XYU/M3JJS was formed in the late summer of 1973 and both partners still work full-time in the company at Hockley where a month of shop promotions with special deals available to callers. Full details at: <http://www.wsplc.com/>

Also during August a display of vintage Amateur Radio equipment going back from the 1950s to the present day including the R1155's. HROs, B2 Spy Sets, through the KW range of gear and a whole host of other really nostalgic items.

During the August celebrations, GB73HAM will be operational, both during the day and evenings.

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Trevor, M5AKA

CARS Committee (Nag, Nag, & Nag)

CARS Committee would appreciate **YOUR** support. Could **YOU** please consider using **YOUR** talents to the benefit of CARS and its hundred or so members.

CARS have a number of vacancies and would appreciate more help running the Society. We could do with filling the following vacancies:-
Minute Secretary, Programme Secretary, News Letter Editor, Assistant Secretary and Social Organiser, to quote a few!

Please see any Committee Member at the next Meeting. Tick sheets are available at the signing-in desk.

This advert is slowly working – Thanks!

John Yates, G1UZD has signed up as a **Committee Member** – John has been very strong this year supporting CARS Operating at Sandford Mill & New Street – thanks for that.

John G8DET. Chairman.

For Sale: - "Micro-DXpeditioning Uncovered".
A new book by Roger Western, G3SXW.

Remember, Roger came to CARS and presented a talk of the same subject. This book will entertain and thrill every DXer, traveller and armchair DXpeditioner. Stories of visits to over 20 mostly European DXCC entities, all done on the cheap,

mostly just day-trips or over-night stays. Low-cost airlines have brought us a new era, along with modern technology which provides us with high-calibre 100 watt transceivers for less than three kilos. Your 100+ page illustrated and signed book will provide much Micro-DXpeditioning entertainment.

Send a cheque to: Roger Western, G3SXW, 7 Field Close, Chessington, KT9 2QD, England. Don't forget to mention your Call-sign and Address on your order. Price: £10. More information from: g3sxw@btinternet.com

Martyn, G1EFL.

CARS Training

CARS are running an **Advance Amateur Radio Training Course** starting in Danbury Village Hall on 28th August with the Exam on 4th December. Would **YOU** like to attend? Just time to apply!

For more information about our courses contact: Clive G1EUC
Tel: 01245-224577
Mob: 07860-418835
Email: training2008@g0mwt.org.uk
Web: <http://www.g0mwt.org.uk/training>

Nomination for Amateur of the Year Award

It is now time to consider who will be awarded the honour this year of the "Amateur of the Year". Last year Chairman John, G8DET was awarded it and this has been reported in RadCom.

Carl, G3PEM has volunteered to co-ordinate the poll again this year – thanks Carl. Nominations closed at the end of the August Meeting.

You will find a Voting Form at the Signing-In desk at the September Meeting. Please take one and consider who YOU would like the Award to go to this year. Completed Voting Forms are to be handed to Brian, G3CVI or Carl, G3PEM at the end of this Meeting. The Award will be presented at the AGM in October.

Carl, G3PEM

Bletchley Park

- Save Britain's "Code of Honour".

The leading article in the Wednesday 20th Aug edition of the Independent newspaper highlighted the plight of Bletchley Park. The article says:

One of the greatest of all the wartime stories of dedication and self sacrifice was played out in what are now the neglected, rotting buildings of Bletchley Park. In these rundown, weed-infested old huts, teams of code breakers, linguists, typists and file clerks worked in fantastically difficult and demanding conditions to decode, record and analyse thousands upon thousands of radio messages exchanged by enemy personnel. Their achievements saved countless lives, and may have shortened the war by two to three years. Read the full article at: - <http://www.independent.co.uk/opinion/leading-articles/leading-article-save-britains-code-of-honour-902847.html>

There is a Prime Ministers Petition to request that something be done about Churchill's "Golden Goose which never Cackled" – Click on:- <http://petitions.number10.gov.uk/BletchleyPark/> Don't forget to add your qualifications & Callsign.

Another good read is the following Link: - <http://www.eetimes.eu/208403043>

Google "Bletchley Park" and happy reading.

Trevor M5AKA & John G8DET.

Some Interesting Websites.

1. Firstly the Web Site of CARS Member **Jim 2E0JPS** www.2e0jps.com Contains many pages of interest on radio, aircraft, photography, programming, software, space, conversions, and many links of interest.
2. www.g3txf.com Many items on Dxing, and Dx trips, QSL bureau statistics and very many links.
3. www.g3vfp.org Contains information on radio, circuits, software, interfaces and many links.
4. www.g4nsj.co.uk All sorts, valve data, old radios, manuals, test gear, antennas etc.

Colin, G0TRM

And Finally...

John, G8DET edited this edition. Material by; Murray, G6JYB, Patrick, M0XAP, Martyn, G1EFL; Trevor, M5AKA; Steve G4ZUL, Carl, G3PEM & Andrew, G0IBN.

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 by Thursday, 19th September.