



# Chelmsford Amateur Radio Society Newsletter

## Meetings & Events

Tue 7-Apr-2020, 7:30-10:00pm  
Oaklands Museum, Moulsham Street

## Stay Active

By Amateurs on Air

“Events, my boy, Events”\* can cause the best laid plans to be blown off course

The April, May and June meetings including IMD have inevitably all been affected by Coronavirus. A brief summary is below, but not everything has stopped.

### What’s Off:

- April, May and June mtgs at Oaklands
- Activity & Social nights
- Foundation Course-41
- CW Classes at Danbury

### What’s On:

- Nets
- XTRAnets - next is Tue Apr-7<sup>th</sup>
- Online exams
- RSGB Video channel

Amateur radio enthusiast guide to **SOCIAL DISTANCING**  
Keep one wavelength apart at 144 MHz

Topical advice  
courtesy of Keith G6NHU, Clacton

\* Harold Macmillan paraphrased by a journalist

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## Club Diary

Tue 7-Apr-2020	CARS XTRAnet on 2m instead of club meeting	Chelmsford – 145 MHz / GB3DA 8pm
Sat 25-Apr-2020	International Marconi Day - CANCELLED	BAE Systems, Great Baddow

## Club Nets

CARS meets for talks/events on the first Tuesday of the month. The subsequent Tuesdays have club radio nets as follows below and dates listed on our calendar at [www.g0mwt.org.uk/main/events/categories/net/](http://www.g0mwt.org.uk/main/events/categories/net/) :-

- 2<sup>nd</sup> Tuesday in the Month – VHF**  
 The CARS VHF FM Net uses GB3DA from Danbury starting at 8pm (local).  
 GB3DA is 145.125MHz Input and 145.725MHz Output - and CTCSS-only (110.9Hz), 2min timeout  
 If for any reason GB3DA is not available then 145.375 Simplex will be used. Vertical aerials are best for this
- 3<sup>rd</sup> Tuesday in the Month - UHF**  
 The CARS UHF FM Net uses GB3ER from Danbury and starting at 8pm (local).  
 GB3ER is 434.675MHz Input and 433.075MHz Output - and is CTCSS-only  
 Vertical aerials are best.
- 4<sup>th</sup> Tuesday in the Month - HF**  
 The CARS 80m Net on "3756kHz" Night, SSB and starting at 8pm (local).  
 Horizontal aerials are best. The idea is to enable distant CARS Members to join the Net.
- 5<sup>th</sup> Tuesday in the Month (when there is one!) - MF**  
 This is the CARS Top Band Net on 1947/1950 kHz +/-QRM, LSB and starting at 8pm (local).  
 Horizontal aerials are usually used for this Net. A reminder - limit your power to a max of 30 Watts, please.

## Training & Morse Classes

CARS completed its first new-style 2020 Foundation course (See previous newsletter). We were about to start Course-41F when everything became affected by anti-virus measures.

However all is not lost and see the training news article in this issue.

If you are interested in the new RSGB online exam or other opportunities, please contact **John O'Connell M0JOC** our training coordinator and Exam Secretary

John can be contacted via [training2020@g0mwt.org.uk](mailto:training2020@g0mwt.org.uk) or 07868-004380

More info and other updates are at: [www.g0mwt.org.uk/training](http://www.g0mwt.org.uk/training)

Note that Morse classes at Danbury are suspended – see **Andy G0IBN**

 Follow @TrainWithCARS

### March Meeting: Measure It!

The March meeting featured a double instalment on measurements - classical and modern.

**Meters:** Dave Ellis G4AJY started the first session with the moving coil meter. These may seem to be out of date in the modern ham radio scene, but they can still do things that a digital multimeter cannot - and you can pick them up for as little as a pound at a rally.

Dave started with the 'back-to-basics' of how a moving-coil meter is made and how it works. He noted that on better meters there are mirrors to avoid parallax errors when reading the needle. Simple applications of course include using it as a Voltmeter, Ammeter or Ohmmeter.



Whilst DMMs can be superior in some cases (especially in high impedance voltage measurements), the inherent inertia of the moving coil mechanism lends itself to be rather handy. Dave explained how it can rms average variable/pulse waveforms.

This led Dave to show some special projects for a moving coil meter, including a frequency counter and a Morse Code WPM speed meter (once an entry in the 2012 CARS Constructors Competition!).

Some of the basics and key features



Dave's Moving Coil Morse Speed meter

So don't ignore cheap/surplus ones in a rally. Every ham shack should have one!

**VNAs:** After the break and raffle, Bob Tokley G4MDB gave an insight and demos of another measurement tool - really useful for Antenna Design & Measurements.

Bob started with more classic equipment such as SWR meters and the Bird power meter.

A Vector Network Analyser, VNA (unlike a Scalar one) can measure both the amplitude and phase of reflected (S11) and transmission signals (S21).

A VNA can measure give Amplitudes displayed in dB or VSWR vs frequency, using its own internal source and receiver. Using the phase information, additionally impedance can be plotted on Smith Charts to give insights and assist matching circuit design.

Bob then went on to describe and demo the operation and functions of his two miniature Network Analysers, as he owns both a miniVNA and a NanoVNA. The latter model includes its own small display.



VNA models – the miniVNA and NanoVNA

Our thanks to Dave & Bob for insightful presentations and hands-on hardware demos.

**Useful links:**

- CW Meter: [August 2012 Constructors entry](#)
- minVNA: [miniradiosolutions.com](http://miniradiosolutions.com)
- NanoVNA: [nanovna.com](http://nanovna.com)

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## Training:

The virus has stopped all physical classes and exam, but the RSGB has moved quickly to offer remotely invigilated exam sessions as an emergency measure and their news on this from April-3<sup>rd</sup> is below:-

## RSGB News

On the 20 March 2020, the RSGB stopped accepting new exam bookings as part of its response to the government's guidance concerning coronavirus.

Since then, it has been exploring ways in which it can use the online exams platform to enable new people to access amateur radio and obtain their licence.

Following rigorous tests, the RSGB is now able to offer remote invigilation for online Foundation examinations.

The Exams Department will be ready to receive online bookings from Monday, 6 April 2020.

Further information, including an update on practical assessments, is at:

[rsgb.org/syllabus-updates](http://rsgb.org/syllabus-updates)

The RSGB has also published a FAQ about the new process for candidates and tutors at

[rsgb.org/exam-faq](http://rsgb.org/exam-faq).

As CARS Exam Secretary John M0JOC is the contact for those interested

## CARS Slides

Starting with the last Foundation Course, CARS has been using revised slides as well as developing completely new online aids for the new RSGB Syllabus. These are now progressively being released and as an interim measure the slides can be seen at

<http://www.g0mwt.org.uk/training/courses/files/foundation/2020/>

### Index of /training/courses/files/foundation/2020

Icon	Name	Last modified	Size	Description
[DIR]	<a href="#">Parent Directory</a>		-	
[ ]	<a href="#">F1_Nature-Radio.ppt</a>	06-Feb-2020 06:16	831K	
[ ]	<a href="#">F2_Licensing+Operating.ppt</a>	11-Feb-2020 02:04	444K	
[ ]	<a href="#">F3_Technical-Basics.ppt</a>	14-Feb-2020 00:52	340K	
[ ]	<a href="#">F5_Feeder+Antennas.ppt</a>	14-Feb-2020 00:52	651K	
[ ]	<a href="#">F6_Propagation.ppt</a>	07-Feb-2020 10:12	186K	
[ ]	<a href="#">F9_Safety.ppt</a>	06-Feb-2020 06:16	287K	

**Chelmsford Amateur Radio Society**  
**Foundation Training Slides**

This folder has updated sets for the revised RSGB Syllabus. See [here](#) for other material/levels

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CARS: [Home](#) | [Training](#) | [Membership](#) |

Example Directory listing for new slides

## From Marconi to Melba - by Tim Wander

Timed to coincide with both Chelmsford 2020 and the Dame Nellie Melba centenary on 15<sup>th</sup> June, Tim Wander has a new book and online offer:-

### *From Marconi to Melba - The Centenary of the First British Radio Broadcasts by Tim Wander*

2020 marks the centenary of British radio broadcasting, which forms an integral part of Chelmsford 2020 – a Year of Science and Creativity.

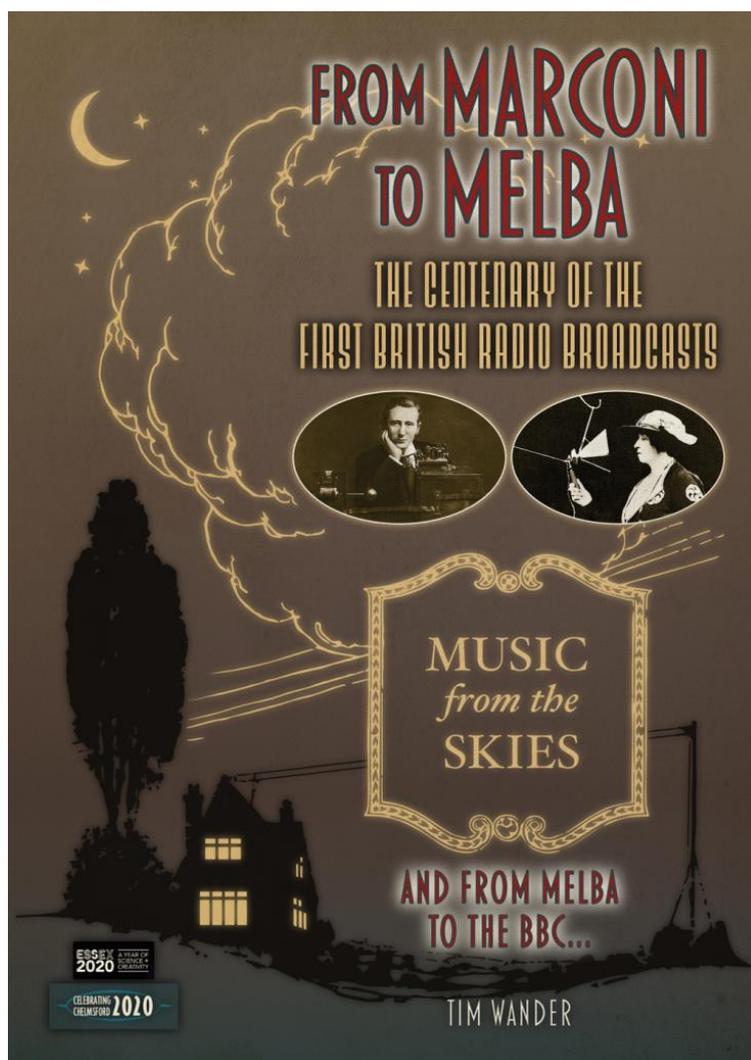
This new book tells the story of Marconi's early work, the historic Chelmsford broadcasts during 1920, Writtle station 2MT in 1922, and then the extraordinary growth of the BBC.

Over 280 pages in a new all colour A4 format, with many images never seen before or coloured to bring new life to these amazing stories.

Limited to just 500 copies. Each one will be hand signed and numbered by the author.

For further information see Tim's website including PayPal order links at

<https://chelmsford2020.co.uk/>



Badge and Book Cover

## RSGB Video Channel

RSGB have released more videos on to their YouTube channel - plenty of scope for self-training etc as it includes numerous talks from the RSGB Convention - <https://www.youtube.com/user/TheRSGB/videos>

## New Additions to the Archives

The CARS History page had a few updates courtesy of some archaeology by Paul G4PVM and his collection of old RadComs. He is now working on establishing a better record of CARS NFD efforts.

More at: <http://www.g0mwt.org.uk/society/history>



**CARS Social evening at the Oakland hotel from RadCom May 1982 (Photo by Roy Martyr G3PMX)**

Later in 1986 club member and a GEC Research (Baddow) Chief Engineer Willie McClintock G3VPK became RSGB President. Past and present CARS members attended his installation at a social function at Furze Hill in Margaretting on 18th January attended by 170 people. CARS President Roy Martyr presented Willie with a honorary life membership scroll to mark the occasion.



**Installation of RSGB President Willie McClintock G3VPK**  
from [RadCom March-1986](#) and [GEC Probe Newsletter](#)

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Editor: [editor@g0mwt.org.uk](mailto:editor@g0mwt.org.uk)

Newsletter and Archive: <http://www.g0mwt.org.uk/newsletter>