



Chelmsford Amateur Radio Society Newsletter

January Meeting
Tue 4-Jan-2022, 7:30pm
Online by Zoom

Cheating at Maths using Computers
By Damian Bevan G4WPO

For our first talk of the New Year on Tuesday 4th January, we welcome back Damian Bevan G4WPO. A more serious title for this talk would 'Using computers to solve mathematical problems'.

In 1936, in the 'age of electricity', Alan Turing presented his machine which he hypothesised was able to compute anything which is capable of being computed.

It turns out that around a century earlier, back in the 'age of steam', Charles Babbage and

Lady Ada Lovelace had already been having similar thoughts about mechanical computing engines, designed to solve mathematical problems. In those days, human 'computers' were used to laboriously calculate and tabulate the solutions to maths problems ranging from trigs and logs, to astronomical, nautical, banking and insurance information etc.

Nowadays, computers are immensely more powerful than they were in either Babbage's or Turing's time. Damian will touch upon some modern computing tools, which are available to us all in order to solve everyday problems, before briefly wondering whether computing has anything to say about the nature of our lives and the universe itself.

Zoom:

Quick Link

<https://us02web.zoom.us/j/87126608028?pwd=dmlGWXpBOWF2NnpRQkR1WGNKR2o2QT09>

- Meeting ID: 871 2660 8028
- Passcode: 144180



Charles Babbage, Ada Lovelace and Alan Turing

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Club Diary

Tue 4-Jan-2022	Meeting – Cheating at Maths using Computers	Online by Zoom
Tue 1-Feb-2022	Meeting – Royal Signals and Amateur Radio	Online by Zoom
Mon 14-Feb-2022	2MT Centenary – Special Event Station	Writtle Village Hall
Tue 1-Mar-2022	Meeting – Digital Amateur Television	Online by Zoom

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/ :-

- 2nd 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
- 3rd 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.
- 4th 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.
- 5th 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 Training classes at Danbury: If you are interested in these or other opportunities in 2022, please contact **John O'Connell M0JOC** our training coordinator and Exam Secretary

John can be contacted via training2022@g0mwt.org.uk or 07868-004380

More info and other updates are at: www.g0mwt.org.uk/training

Online Morse Classes: Thursday evenings at 7pm. Coordinated by Andy G0IBN who has on-air practice sessions and via Skype too... <https://join.skype.com/clsfKXXkmlNvf>

- contact Andy via morse2021@g0mwt.org.uk

 Follow @TrainWithCARS

December Meeting: FBK Clubhouse

Our December meeting featured a talk by Peter Ebsworth LB0K / G8KCB who left the UK and moved to Norway 40 years ago.

Peter provided a fascinating insight into a rather unusual club station situated in Bergen Norway, at what is now a museum, but was formerly the FBK - Foreningen Bergen Kringkaster LW/MW AM transmitter site.

Starting with predecessors in the 1920s, the broadcast station as now preserved started in the mid-1930s using Marconi and Telefunken transmitters and provided regional coverage around Bergen and the western coast. The main antenna system used a pair of 150m high lattice masts. The main Telefunken 20kW Tx broadcast on 266kHz LW. This was accompanied by a 1kW Marconi Model-1112 Transmitter that used MT7A PA valves – very similar to 2LO



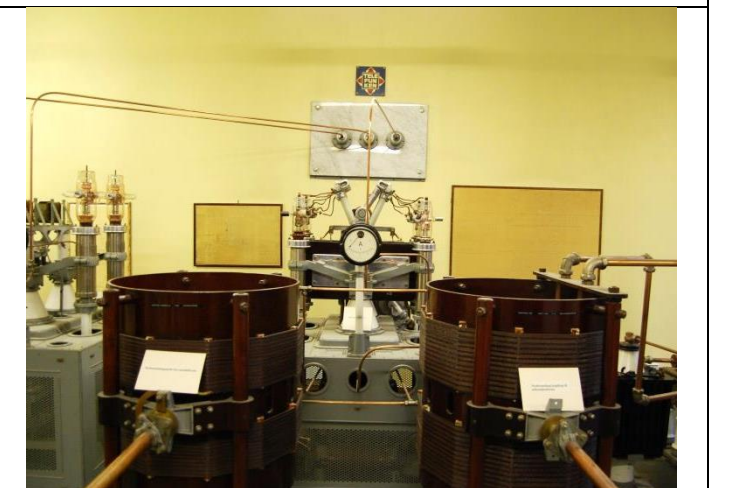
Marconi Transmitter front panel



Marconi PA Valves



Telefunken Transmitter PA Valves



Telefunken tuning and output

In the 1960s the equipment was replaced by a Philips 10kW transmitter with the service lasting until AM was shutdown in the 1970s. Nowadays it's a Norwegian heritage site. A few sections of the original twin antenna masts have been restored to form the rather smaller tower for the LA1ASK resident amateur club station

In addition to amateur band operations, the site continues to operate as a broadcaster on 1314kHz MW



The original two 150m high masts, 195m apart
(now dismantled)



Today – a few restored sections 24m high – used for
the LA1ASK HF antennas



The modern MW transmitter with a 1kW Class-E PA is rather more compact and efficient!

From an amateur radio point of view, the club station is also well equipped including an Icom 7600 dual-SDR, ACOM linear and FT101D. Activities include weekly skeds, contests and the JOTA scout event.



Useful Links:-

- Forening Bergen Kringkaster
a.k.a. Bergen Broadcaster Association:
<https://www.bergenkringkaster.no/>
- LA1ASK amateur station:
<https://www.bergenkringkaster.no/amatorstasjonen>
- Local Kiwi Web-SDR - <http://92.221.217.186:8073/>
- Bergensgruppen of NRRL - www.la1b.no - the other Bergen amateur radio club

2MT Writtle Centenary 14th February

On Monday 14th February 2022 CARS will be running a special event station to commemorate the centenary of the UK's first regular, licenced, entertainment broadcast service 2MT from Writtle.

The station will be located in Writtle Village Hall close to the site of the original broadcasts. A special callsign will be used, hopefully GB100-2MT (TBC). We will start setting up the station from 1200 and we will operate until 9pm. We will operate on HF and hopefully on 2m and 70cm.

CARS members are welcome to come and operate; help set up or just drop in for a chat. If you are interested please contact Paul G4PVM – g4pvm@g0mwt.org.uk

GB120MT Transatlantic Anniversary



In December CARS members operated a special event station to commemorate the first transmission of signals across the Atlantic from Poldhu to Newfoundland on 12 Dec 1901 by Marconi. The team used the special callsign GB120MT operating from their home stations. At the time of writing there were still several days to go and the QSO total is over 1000.

The team has used all HF bands from 10 to 160m, mostly CW with some SSB, and so far has contacted 61 countries in all six continents. The best DX worked so far is Australia, Philippines, India, Cuba plus Reunion Island and Rodrigues Island off the coast of Africa.

One interesting station worked was VO1MRC, the Marconi Amateur Radio Club of Newfoundland. The special call was also used for the club nets on 80m, GB3DA and GB3ER.

This historic event was also celebrated by member of the BAE Systems Great Baddow Amateur Radio Club (MX5BAE). The club used the historic Marconi callsign GB2MT from BAE Systems' site in Great Baddow, formerly the Marconi Research Centre.

The team used all HF bands from 10 to 160m and made 1181 QSOs with 83 countries and 6 continents. DX worked included Australia, Thailand, India and Japan, from Africa Kenya, Mali, Tanzania, The Gambia and Mauritius, and from the Caribbean, Antigua, Bonaire, and The Bahamas.

On Dec 12th, the day of the centenary, the Canadian special event station commemorating the centenary was worked on 20m SSB. This station was located at the Signal Hill where Marconi received the signal transmitted from Poldhu.



Signal Hill Newfoundland

Propagation: Gwyn G4FKH Retires Predtest

Back in October 2018 Gwyn Williams G4FKH gave CARS a talk on his Predtest HF propagation website

- Which you can read about in Newsletter 633 and www.g0mwt.org.uk/meetings/past18-oct-dec/index.htm

From GB2RS Script Friday 17th December:

Gwyn Williams, G4FKH has decided to stop running the Predtest.uk website. It will cease on 22 December 2021. The site has been running for a few years now after Gwyn worked with numerous programmers to give a more user-friendly and graphical output to the ITU's ITURHFPROP propagation prediction program. Predtest has been a very useful tool in the HF user's armoury, allowing point-to-point and area coverage predictions among others.

The RSGB Propagation Studies Committee would like to thank Gwyn for all his hard work on Predtest over the years. Users are being encouraged to move over to James Watson's Proppy tool, which offers a similar experience to Predtest and is also based on ITURHFPROP. Alternatively, VOACAP.com offers a similar experience and is based on the well-known VOACAP software.

- <https://predtest.uk/> - now offline
- **Proppy:** <http://soundbytes.asia/propgy/>
- **Voacap:** <https://www.voacap.com/>

Future CARS Talks

February 1st 2022: Royal signals and Amateur Radio

Geoff Budden G3WZP is from the Royals Signals Museum Outreach Team that takes communication to young people.

The Corps of Signals were formally created by royal warrant in June 1920. The Royal Signals Museum at Blandford Camp in Dorset, is a walk through history, featuring a diverse range of interactive displays illustrating the science and technology of communications.

Geoff's talk will include the work on a mobile trailer and cover their Centenary Special Event Station GB100RSM



March 1st 2022: Digital Amateur TV

Dave Crump G8GKQ of BATC will introduce Amateur TV and talk about the tremendous strides made in full definition digital amateur television, making DATV usable in more amateur bands than ever.



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