

Website: <http://carc.org.uk/>
G3WSC / G6RC / G3M

newsletter@carc.org.uk

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Local Repeaters
GB3MH: 145.625/88.5(FM)
GB7MH: 439.6375(D-Star/DMR/Fusion)
G5BSD: 430.975/82.5(FM)
GB3NS: 439.675/82.5(FM)
GB7NS: 439.1625(DMR)
GB3HO: 430.8875/88.5 (438.4875)(FM)
GB3HY: 430.900/88.5 (438.500)(FM)
Local DX Cluster GB7DXS : Telnet
81.149.0.149 Port 7300

Club



BRICKWORKS
Building on the Foundation
ACCREDITED CLUB

news

March 2025

Editor: Richard, G3ZIIY

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Deadline for contributions to the next Newsletter 15th May 2025

Mills on the Air 2025

CARC have taken part in the Mills on the Air event from Ifield Watermill for the last few years, and we hope to do the same again in 2025.

The Mill will be open on Sunday 11th May 2pm-5pm to coincide with National Mills day. We aim to get access in the morning to set up and get some contacts in before the public arrive.

If you have not been before the mill is well worth a visit. It is usually working on the day and has numerous interesting exhibits.

Please come along, either to visit the mill, keep us company, have a go at operating our special event station (GB0IWM), make contact with interested visitors or help take up and put down our stations. If you have an aerial or rig you want to try out this could be your chance! We usually set up two HF stations, but if there are enough operators we could also set up a VHF station.

We look forward to seeing you! Please contact M0WID if you wish to help or come along. We would be especially interested if anyone who has a gazebo we could use if the weather is bad or very sunny.

David, M0WID

Thinking Day on the Air 2025

- February 20, 2025
- County News



Brownies reach out across the Radio Waves

Girlguiding Sussex Central celebrates World Thinking Day by participating in Thinking Day on the Air (TDOTA).



On Saturday 15th February, 2025, thirty- five Brownies & their leaders were hosted by Crawley Amateur Radio Club and Radio Society of Great Britain volunteers at their Bluewoods base, to take part in TDOTA which is an event for Girl Guides and Girl Scouts worldwide to use amateur radio to communicate with each other on a global scale. It takes place on the third full weekend in February, close to World Thinking Day on February 22nd. For the event the Brownies even had their own call sign.

The aim of TDOTA is to encourage Girlguiding members to make friendships with those in other units across the world, using amateur radio as the means of communication. Unfortunately, there were no other guiding units on air at the same time, although the girls did get to speak to a scout leader in Italy. It didn't spoil the fun though, as contact was made, and the girls chatted to operators from a total of 15 stations:- Italy, Lithuania, Portugal, and Sweden, giving

them the chance to tell them a bit about who they were, what they did and why they were on the radio. In addition, during the event the girls had the opportunity to make morse code keys, and learn the phonetic alphabet for morse code. They also used transmitters to locate hidden items in the locality.

Participating Brownies were from 3rd Horsham, 7th Horsham, 4th Roffey and 7th East Grinstead units

Wendy Colson, county commissioner commented 'I would like to say a great big thank you to everyone who participated in this special day and of course a very special thank you to Crawley Amateur Radio Club and RSGB volunteers for giving our girls the chance to engage in such a different activity and giving them so much fun.

At the end of the event the girls & their leaders were asked what Girlguiding means to them, here are some of their comments !

- Guiding has given me so many brilliant opportunities I wouldn't have had otherwise
- It's given me a family of friends (and a husband!) and many adventures in many countries

- Friendship, fun, laughter, learning new things, meeting new people, sleepovers, camping & badges
- Being part of a community and a home away from home. Guiding has given me so many brilliant opportunities I wouldn't have had otherwise!
- It means friends and being happy and a place you can have a break from everything and just have a good time (and it's a girl only space – yay!)

Notes

TDOTA stations are mostly set up by experienced radio amateurs who voluntarily work to support TDOTA. The positive effects of the event are shown in the increasing numbers of Girlguiding leaders and members with amateur radio licences. For more information go to World Thinking Day on the Air

World Thinking Day on 22nd February celebrates the joint birthdays of Lord Robert Baden-Powell, founder of the scout and guide movement, and his wife Olave, who served as World Chief Guide. It is celebrated by 10.8 million girls and young women from 153 countries. They form the largest voluntary movement dedicated to empowering girls and young women in the world.

Girlguiding Central geographically covers Mid Sussex, Crawley and Horsham areas. Girlguiding is the UK's largest youth organisation dedicated completely to girls. We're over 300,000 girls from 4 to 18 who come together to laugh, learn, explore and have adventures. We're over 70,000 volunteers, and 25,000 local groups having fun and exploring activities week in, week out .

If you or someone you know, wants to give time to your community and would love to empower girls, build your own confidence and make new friends, then Girlguiding actively welcomes people like you. We're an organisation that is easily accessible, rewarding and enjoyable!



*First contact made – Portugal
Photo by Janet Samuel*

*Making radio contact
Photo by Janet Samuel*



*Making radio contact
Photo by Janet Samuel*



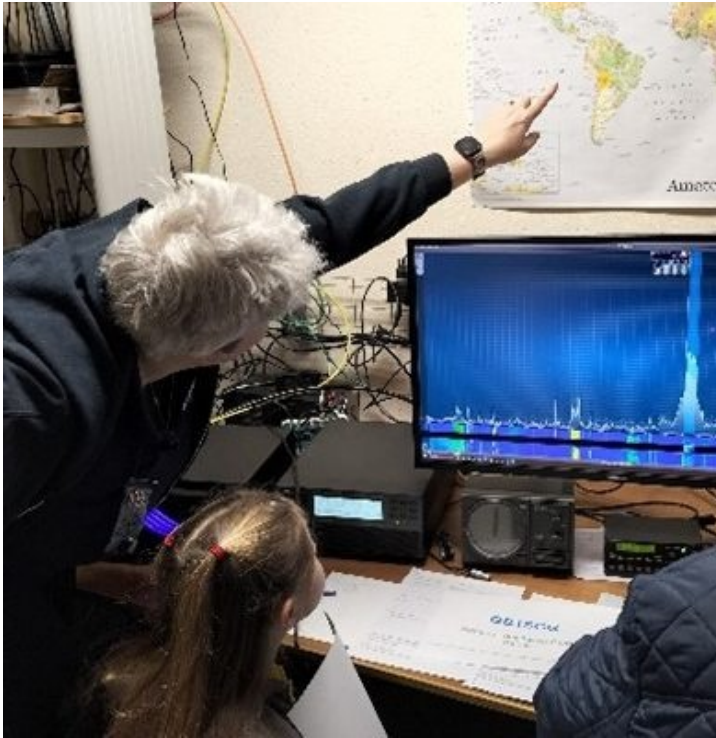
*Using the wireless trackers
Photo by Janet Samuel*



*Volunteers preparing activities
Photo by Janet Samuel*



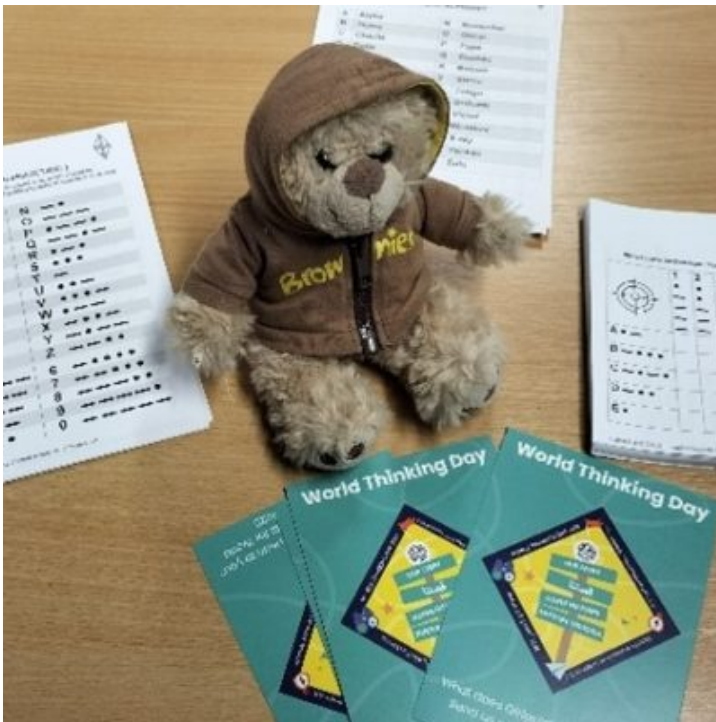
*Another contact made!
Photo by Janet Samuel*



*Locating the caller
Photo by Janet Samuel*



*Using the morse code key
Photo by Janet Samuel*



*Activities
Photo by Janet Samuel*



*Making a morse key
Photo by Janet Samuel*



*Final total of countries made
Photo by Janet Samuel*



Condition of the StepIR Aerial

Below are some images of the innards of the club's StepIR which suffered a breakdown recently.

Repairs are underway.





Quarter Wave Wonders

Ever since Mike G0KAD did a practical session on building antennas, I've wanted to give it a go myself. I follow the avid antenna builder, Walt, (K4OGO) on YouTube. One of Walt's recommendations for the beginner is the Quarter Wave Vertical antenna. These are easy and cheap to build, and have the advantage of a 50 Ohm impedance at the feed point.

The measurements that Walt recommends are shown in the image on the right

One connection is taken from the feeder to the radiating element, and the other is taken to the ground (to form the reflection). As this is an unbalanced antenna it can be easily fed from coaxial cable.

These antennas need an efficient ground system. Some books recommend 20 or more radials. I started with 4, and found this sufficient for my experiments. Most books also recommend the radials should be the same length as the radiating element. I found this not to be the case. The length of the radials will vary depending on the earth.

QUICK REFERENCE QUARTERWAVE VERTICAL LENGTHS		
40 METERS (7.175 MHz)	9.94 M	32.61 FEET (32'-7 5/16")
20 METERS (14.230 MHz)	5.01 M	16.44 FEET (16'-5 1/4")
17 METERS (18.139 MHz)	3.93 M	12.90 FEET (12'-10 3/16")
15 METERS (21.325 MHz)	3.34 M	10.97 FEET (10'-11 5/8")
12 METERS (24.960 MHz)	2.86 M	9.38 FEET (9'-4 9/16")
11 METERS (27.385 MHz)	2.60 M	8.54 FEET (8'-6 1/2")
10 METERS (28.400 MHz)	2.51 M	8.24 FEET (8'-2 7/8")
6 METERS (50.125 MHz)	1.42 M	4.67 FEET (4'-8 1/16")

WALT K4OGO

Equipment:

I decided to start with a 20m antenna. Richard G3ZIY had recently donated me a 50m reel of antenna wire, and to support the antenna I purchased a 7m fishing pole from Decathlon in Crawley. This was just £19.99.

Next, I got a dual banana binding post to female BNC adapter from AliExpress for £1.50:



CAPERLAN
TELESCOPIC RODE - LAKESIDE 100 7M

★★★★ 4.5 | 402 reviews

This telescopic rod is fitted with a line connector so that you can set up quickly at the water's edge. The LAKESIDE 100 is a powerful, sturdy rod thanks to its fibreglass construction.

ID 8648718

Colour olive green



Size 7 m

£19.99

Setting Up

The hardest bit was connecting all four ground wires to the banana socket. I found a banana plug with a screw connector which made the job easier.

I ended up reducing the length of the radials to around half the length of the radiating element. Using my ICOM 705's built in SWR, and my NanoVNA I was pleased to see the SWR under 1.35 between 14 and 14.2MHz. I was able to have a number of QRP QSOs over Europe.

What's Next

I'm planning on building more Quarter Wave dipoles for other bands, and having a go with Inverted V Dipoles. I recommend Successful Wire Antennas by Ian Poole and Steve Telenius-Lowe. This is published by the RSGB. This book is full of great ideas, without being overly technical.



Walt can be found on YouTube at <https://www.youtube.com/@COASTALWAVESWIRES>
Peter, M0LMG



CARC 3D Printer

CARC has generously been given a Ultimaker 2+ 3D printer, along with some reels of filament. The printer is currently in the clubroom.

The 3D printer has been tested and proven to provide reasonable results if the correct printing parameters are used for the filament in use.

Should anyone wish to use the printer then M0WID can provide training in designing your part, using the slicer software (Prusa Slicer recommended over Cura), suitable settings and use of the printer itself.

David, M0WID

Modulation over the last century

Voice transmissions were desired in the early days, and so modulation methods were derived in due course. There was AM, - a carrier with a pair of mirrored sidebands, SSB, - an upper or lower sideband with or without a carrier, ISB, - two sidebands with different programmes on each (mostly used by commercial and military), usually without a carrier, and others culminating with the carrier without sidebands, which didn't really catch on.

Richard, G3Ziy

FREE to a good home!

10 aluminium poles 8' x 1.5". Contact Jim, G4PFT (QTHR).



The DXE-AOK-DCF Direct Coax Feed assembly by DX Engineering for the Hustler BTV series antennas allows direct connection from a coaxial cable with a PL-259 connector. New, never used £40



DX Engineering OMNI-TILT™ Vertical Antenna Tilt Bases DXE-OMNITILT-1P. New, never used £80, Requires two (2) DXE-OTMC-250P clamps to attach OMNITILT to stationary mounting pipe.

Contact Paul, G7KBR at g7kbr@msn.com for further details

FOR SALE

One Moonraker MC-ECH 5m cable kit [SO239-PL259]

Complete in original packaging, in very good condition. Used briefly for experimental purposes. £10 or near offer to richardg3ziy@gmail.com



FOR SALE

- IC-746.....£400
- MFJ Loop antenna 1786X 10-30mhz...£225
- Chinese SDX.....£90
- Call Chris, M0VUE on 07545 097436

When Icom Japan introduce a new radio, the world's leading operators take notice.

IC-7760 200 Watt Remote Head Base

The NEW Icom IC-7760 in stock and on demonstration at the World's Favourite HamStore.

Limited space on your shack operating desk? The latest innovative IC-7760 is your answer.



For more information on this new Icom flagship see our latest review presentation on our YouTube channel. See: Mlands.TV

STOP PRESS
Icom have just launched a remote head unit for the radio called the IC7760 as an optional extra. It's the first for a remote location or a different room in the house, offering full operation over IP.

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