



Ham Radio Ireland



Δεξ μελσταλ αρ τηραιδισιουν δεξυς αρ σπιωραδ αν ραιδιό αμαιτέαρχ



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Vol. 3 Issue 03

June 2025



HAM RADIO IRELAND

Ham Radio Ireland has been well supported and we have achieved over 5,000 downloads from our links in over 68 countries each month.

In point of fact we are the ONLY independent Radio Magazine in Ireland geared towards the Radio Experimenter.

We repeat forthcoming events in our News Section right up to their date of operation. In this way we hope to encourage many groups or clubs to take part. If you have an event planned feel free to promote it through our Magazine

Through the Collective Communications Group, Ham Radio Ireland was re-launched in January 2025. This magazine is for all radio amateurs and electronics experimenters! We remain non political in all respects of the hobby. We will endeavour to print any radio orientated articles submitted to us.

We welcome any articles submitted for publication and encourage those who have never written for a magazine before.

Special thanks to the many who have supported this Magazine and encouraged us to re-launch it. By popular demand no less!

We publish bi-monthly and welcome any articles from Amateur Radio circles and CB or PMR 446 operators.

We primarily seek technical articles covering home built equipment, antennas, outdoor portable operating, VHF, UHF, Microwave and Satellite operation.

If you have never written an article before - NOT A PROBLEM as we will help in any way possible.

We welcome Feedback
If you enjoyed this publication please email
Steve EI5DD
wright14@gmail.com

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Submitting Items for This Magazine

We are always delighted to receive any radio related material for this magazine in word format. Pictures should be submitted in an uncompressed JPG format to ensure best quality reproduction.



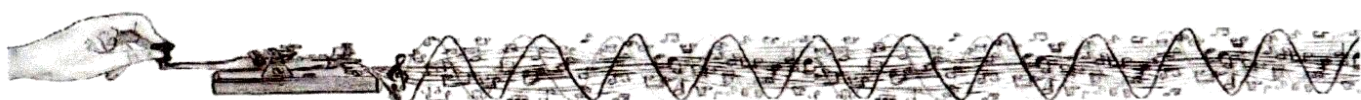
Cover Image

Danny M0SDB operating his portable station from a hilltop.
Main interests are POTA,
SOTA, BOTA and WWFF.

Views expressed in this publication do not necessarily reflect the views of the Editor, those of Carrion Press or the Ham Radio Ireland
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the options available.**

**this year we can now offer public
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collei3cc@gmail.com
or Revolut: @john83mj6**



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Mugs And our
well traveled
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Contact Sue, on messenger or WhatsApp
for all orders

News and Forthcoming Events Planning 2025

Freedom of association: a right in danger in amateur radio

Some IARU RI member societies have threatened their members with expulsion if they join EURAO, clearly violating freedom of association, a fundamental right enshrined in article 12 of the EU Charter of Fundamental Rights.



The "argument" put forward by these societies is that EURAO is a competitor, overlooking the fact that IARU and EURAO are also collaborators in areas of common interest, such as CEPT. And if they don't remember that, they should see the joint statement resulting from the 2017 meeting between both organizations.

For this reason, EURAO does not rule out taking appropriate legal action if the case arises, beyond the crude and stupid threat.

We know that it seems incredible that this mentality is still in force today, but it is and we will do everything possible to unmask and combat it. Some would need to brush up on their HAM SPIRIT...

Parks On The Air

Currently POTA has 5 official events throughout the year, as detailed below.

Events start at 00:00:00 UTC and end 23:59:59 UTC on the days listed:

New Year's Week



First full week of the new year. January 1-7, 2025

Casual contacts to help ring in the new year!

Support Your Parks

This event happens seasonally, on the 3rd full weekend of the month (Saturday & Sunday UTC). These are 'activity weekends' where the main purpose is to get out in the parks, and have as much fun as possible.

Winter - 3rd Full Weekend of January. January 18-19, 2025

Spring - 3rd Full Weekend of April. April 19-20, 2025

Summer - 3rd Full Weekend of July. July 19-20, 2025

Autumn - 3rd Full Weekend of October. October 18-19, 2025

More Info: <https://docs.pota.app/>



Friedrichshafen

June 27 –29, 2025

As Europe's largest amateur radio exhibition, HAM RADIO provides the perfect platform for radio enthusiasts from all over the world.

Exhibitors and visitors gather in Friedrichshafen from over 59 countries to explore the full spectrum of the radio universe in three exhibition halls and the Foyer West. A unique aspect of HAM RADIO is the combination of commercial exhibitors, internationally networked associations, and the largest radio flea market in Europe.

BREAKING NEWS



National Hamfest

The National Hamfest 2025

Will take place on the 5th and 6th September.

George Stephenson Hall, Newark Showground, NG24 2NY.

We look forward to bringing you news and other information as we progress the build up for this years event.



Nervous Novices CW NET

Wednesday's at 20.30 UTC

Listen for "CQ NNCW"

The Speed of the Net is the speed of slowest operator

Net Controller

Eamo EI7LC

Freq 3.555 +/-

So call in and say hello



We Have a Facebook Page Ham Radio Ireland



<https://www.facebook.com/groups/1437072523434876>



European Radio Amateurs' Organization
the open global radio amateurs community



EURAO was established to promote and support the interests of amateur radio operators across Europe and around the world. For two decades, it has provided a strong voice for hams, encouraging cooperation, technical advancement, and friendship among radio amateurs globally. Whether you're chasing special event stations, participating in EURAO activities, or simply curious, thank you for stopping by. We appreciate your QSO and your interest in amateur radio! In a very short period of time, EURAO has managed to gather around itself many radio amateurs from all over the world in an exciting collective project that has received recognition from many international bodies.

Association, clubs, groups and individuals are part of this young, global and open ecosystem called European Radio Amateurs' Organization. Thanks to all for your support.

News and Forthcoming Events Planning 2025



The ILLW takes place over the 3rd weekend of August commencing from **00:00 16th to 24:00 on the 17th of August 2025**. August seems to have become the international weekend for lighthouses. Countries all over the world have become involved in one for or another of lighthouse activity. Some years ago the United States Congress declared August 7th as their National Lighthouse Day and during that first week in August amateur radio operators in America set up portable stations at lighthouses and endeavour to make contact with each other. This event is known as the US National Lighthouse Week. In Britain the Association of Lighthouse Keepers, ALK, conducts International Lighthouse Heritage Weekend on the same weekend as the ILLW in August. Their objective is to encourage Lighthouse managers, keepers and owners to open their lighthouse or light station and related visitors' centres to the public with a view to raising the profile of lighthouses, lightvessels and other navigational aids, and preserving our maritime heritage.

The ILLW usually takes place on the 3rd full weekend in August each year and attracts over 500 lighthouse entries located in over 40 countries. It is one of the most popular international amateur radio events in existence probably because there are very few rules and it is not the usual contest type event.



New RSGB President



We congratulate Bob Beebe, GU4YOX, on his new role of President of the RSGB who will serve for the next two years. Bob has been a member of the RSGB for over 60 years and served on various RSGB committees. Bob has been a board member and written articles for RadCom for 13 years and also had two books published by the Society

Ham Radio Ireland

Scan the QR Code to find Current and Back Issues of Ham Radio Ireland.



International Museums Weekend 2025



Museums on the Air takes place over the weekends of **21st - 22nd and the 28th - 29th of June 2025**.

The intention of the event is to set up amateur radio special event stations at as many of the museums as possible throughout the whole of the world. I would hope for an HF, VHF, and if at all possible, a Ui-View (APRS) packet

station to be set up at each museum site, but the scope of your station is entirely up to you. The choice of museum is also left very much up to you, however aim for the largest and/or most unusual site you can find.

The museums taking part over the years have included ships, castles, air museums, Napoleonic forts, pumping stations, wireless museums, racing museums and many others. For the purposes of the event, the word 'museum' is loosely interpreted. There really is no shortage of venues in which such an event can be staged, no matter where in the world you might live.

During the first IMW in 2002' over 80 museums from all over the world took part. The museums varied from tiny local village museums manned by a single lone operator, to some of the worlds most prestigious ones. These were accompanied by a great number of military museum sites, such as HMS Belfast in London, the Battleship New Jersey in the US, RAF museums as well as very many non-military types (see the Museums List).

The event has proven itself to be extremely popular and well supported special event particularly amongst the UK radio amateur population. It also went down very well at the museums which were used as the venues for the event, and invitations have again been extended for the coming June. It has shown itself to be a tremendous public relations exercise, as well as all of us having lots of fun over the IMW weekends.

Those clubs and museums which do decide to take part, should please use the free on-site 'Registration' facility. The 'Registration' is simply to assist us in administration of the event and provide those taking part with an indication of how many and exactly where the museums taking part are located. We also send out a participation award to all stations that register. Registration at: <https://www.radio-amateur-events.org/IMW/Registration.htm>

MUSEUM SHIPS WEEKEND

0000Z 07 Jun 2025 - 2359Z 08 Jun 2025

PLEASE NOTE: **This is NOT a contest!**
It is a FUN Event!



Irish Net

Active not only on Sundays, but most weekdays starting at around **16:00 UTC**, the **informal gathering on 14.156 MHz** frequently suffers from QRM during contests and DXers unaware of this long standing net of North American operators with an Irish connection. In a recent contact on 20m with WI1IDP, QTH Tuscon Arizona, operator Jerry confirmed that the net now also uses the **17m band** operating on **18.112 MHz** moving up in increments of 3KHz. This move avoids the increased QRM on 20m and taking advantage of improved propagation conditions.

News and Forthcoming Events Planning 2025

British Railways Amateur Radio Society

The British Railways Amateur Radio Society is running special event station GB0LMR and GB2SDR during 2025 to celebrate 200 years of train travel since 1825. Starting from April, it will also be running GB2TT to celebrate the same anniversary. QSL will be via the Bureau. More information is available at QRZ.com and via www.brars.info (<http://www.brars.info>)



New Band Allocations for Italian Operators



Hams in Italy have been granted permission for experimental activity on three radio bands for the remainder of the year. The Italian regulator ARI made the announcement on the 18th of April that it was giving an eight-month extension to the previous period which ran from late August 2024 until the end of this past December.

Italian amateurs may operate with a maximum of 10 watts on 40.660 MHz to 40.700 MHz, 8 metres, the same range used for industrial, scientific and medical purposes. This permission coincides with the peak of the Sporadic E season.

Similar use was also granted for 70 to 70.400 MHz, 4 metres, and 1.810 to 1.830 MHz. The 8m band is expected to be the busiest of the three. (A.R. Newsline)



WWFF, World Wide Flora and Fauna in Amateur Radio, is encouraging licensed ham radio operators to leave their shacks and go outside operating portable in Protected Flora@Fauna areas (PFF) all over the world.

RSGB News Services

For your weekly fix of GB2RS, from 80m to UHF DMR. Full schedule available from rsgb.org.uk/gb2rsschedule.

09:30 145.5250 FM

10:00 3.6400 LSB

12:00 DMR BM TG2354

19:30 DMR Phoenix TG880

Brazilian Regulator Proposed Changes

Brazil's telecommunications regulator, ANATEL, has two big changes planned for the nation's hams. The Brazilian regulator will no longer require Morse Code for amateur licences under changes that have been under consideration since 2020. The regulator will update content in its exams for its three licence classes. This is one of several changes contained in a resolution released on April 28th by ANATEL. The resolution also grants hams the ability to operate on Citizens Band 11-metre frequencies. They must identify with their callsigns and are limited to 10 watts of power in AM and 25 watts of power in SSB. They must also stay within authorized channels. The regulator expects to move ahead with these changes after a six-month period in which supplementary regulations will also be issued. (A.R. Newsline)

BiWota (BiWota) 2025



The next British inland Waterways on the air (BiWota) event will be held over the August bank holiday weekend: **23 to 25 August 2025**.

The event is open to all Amateurs who are boaters, cyclists, walkers

and other users of the canals, rivers, towpaths, riverbanks for work or recreation. Many clubs and individual Amateurs on or near the UK inland waterways obtain Special Event Station (SES) callsigns. Others operate mobile or portable using their call signs. Many more like to contact the BiWota stations. It is also a good chance for WAB enthusiasts to get some rare WAB squares. The primary bands will be 40m (7MHz) and 2m (144MHz SSB and FM) but all bands will be acceptable. More info from: m0jav@rsgb.org.uk

GB2RS 70th Anniversary Celebrations Continue



Celebrations continue for the 70th anniversary of the RSGB's weekly news broadcast GB2RS. A special callsign GB70RS will be active throughout the year operated by the radio amateurs

who deliver the GB2RS new each week and RSGB Headquarters staff. Operation will be on all modes and all bands. More info from <https://rsgb.org/main/gb2rs/gb2rs-70th-anniversary/>

News and Forthcoming Events Planning 2025

Dwingeloo Telescope Bounces 1296 MHz Signal off Venus

CAMRAS is founded by Dutch Radio-amateurs for this project. "CAMRAS" – letters originate from C.A.Muller Radio Astronomy Station.



The goal of CAMRAS was to save the Dwingeloo Radio Telescope from destruction as it had not been in use for at least 10 years.

Probably the most historic moment was the successful EME QSO between PI9CAM and ON7UN on 1296MHz.

CAMRAS have more recently changed their callsign to PI9RD.

On 22 March 2025, CAMRAS used the Dwingeloo telescope to successfully bounce a radio signal off the surface of Venus. At the time, Venus was in its closest approach to Earth at about 42,000,000 km. Such a conjunction happens when Venus is between the Sun and the Earth which happens approximately every 580 days.

The Dwingeloo telescope was commanded to transmit a 278-second-long tone at a frequency of 1299.5 MHz. Since the light travel time to Venus and back was about 280 seconds, they could receive the reflection of their own signal afterwards. The cycle was repeated four times.

While Dwingeloo received its own echo, the Stockert radio telescope, operated by Astropeiler Stockert e.V., also successfully received Venus' echo of Dwingeloo's signals. The receptions in Stockert were stronger than those received in Dwingeloo, since the Stockert receiving chain is a bit more sensitive.

They were planning to send complex modulated signals to perform more analysis on the correlations between transmitted and received signals. Unfortunately, the transmitter, mounted in Dwingeloo's focus box for the occasion, started failing after four successful transmissions. They will postpone these other experiments to the next Venus conjunction in October 2026.

In March 2009, a team from the German space organization AMSAT-DL successfully bounced a radio signal off Venus, achieving the first known amateur Earth-Venus-Earth (EVE) bounce, using the 20m Radio telescope at the Bochum Observatory.



REF: <https://www.camras.nl/en/blog/2025/first-venus-bounce-with-the-dwingeloo-telescope/>
<https://amsat-dl.org/en/earth-venus-earth-experiment-of-amsat-dl-successful/>



On 16th of June 2025 members of the Mayo VHF Group will commemorate the eight members of RAF 202 Sqn. Flight registration number RG843 who lost their lives when their aircraft crashed in very thick fog into Croaghan mountain in Achill, Co. Mayo, Ireland.

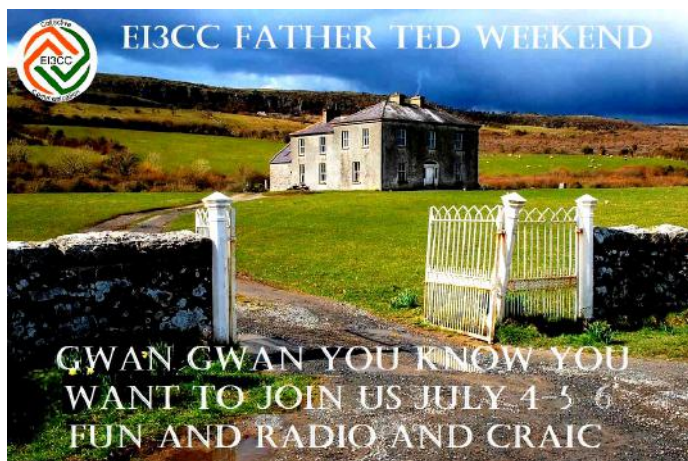
On this day, members of the Mayo VHF Group will commemorate the 75th anniversary by laying a wreath at the actual site of the crash and operating a Special Event Station at the base of the mountain beside Lough Accormore.



The Dutch Marine Amateur Radio Club celebrates its 40th anniversary this year. To mark this occasion they will be using the special callsign **PA40MARAC**. The Call will be active between the **7th and 8th of June** during the museum ships weekend from the former minesweeper Abraham Crijnsen Navy Museum in Den Helder, Netherlands. A QSO with PA40MARC earns 10 points for the MARC award and trophy. More information from: www.marac-radio.nl

Events & Activities Planner

EI75RAF Special Event Station	16th June
Museums on the Air 1st W/E	21st - 22nd June
Friedrichshafen Ham Radio Exhibition	27th - 29th June
Museums on the Air 2nd W/E	28th - 29th June
Fr Ted Weekend	4th, 5th, & 6th July
Vintage Rally (Stradbally)	1st - 4th August
ILLW Lighthouses on the Air	16th - 17th August
British Inland Waterways on the Air	23rd - 25th August
International Dog Day	26th August
G-QRP Convention	30th - 31st August
Newark Ham Fest	5th - 6th September
Churches on the Air	13th September
Railways on the Air	27th-28th Sept
JOTA Scouts on the Air	17th - 19th October





Carrickfergus Amateur Radio Group

The Club meets every Tuesday evening during normal school term time from 7pm in Elim Pentecostal Church, North Road, Carrickfergus, BT38 8ND. All visitors are welcome. Regular news and updates are provided on the CARG website <https://gi0lix.home.blog/>. It is expected that the CARG Annual Rally will take place on: Saturday 25th October 2025 in Elim Church, North Road, Carrickfergus, Co. Antrim, BT38 8ND from 11:30 am - the final date to be confirmed (I will advise of the confirmed date in advance).

CARG will participate in the annual [International Lighthouse/Lightship Weekend](#) (ILLW) on 16th & 17th August 2025 adjacent to [Chaine Memorial Tower](#), Larne, Co. Antrim (WAI: D40, IOTA: EU-115, IO74CU, ARLHS NTI-004 - see the Club website for further details).

Bush Valley Amateur Radio Club

Meets on the last Thursday of each month at 8pm in the Burnfoot Community Centre, 294 Drumane Road, Burnfoot, BT47 4NL. We now have over 20 members, and are a very active club and we hold a number of events throughout the year. Website: bushvalleyarc.org
Enquiries to: bushvalleyarc@gmail.com

West Tyrone Amateur Radio Club

West Tyrone ARC GN4OMA, has regular monthly meetings. Our meetings take place in Order of Malta Hall, Brook Street, Omagh, BT78 1DE on the second Wednesday of every month at 7.30 pm. Enquiries to: info@wtarc.org.uk

Lough Erne Amateur Radio Club

Meets at the Share Village, Smith's Strand, Linaskea, Co Fermanagh at 19:30 on the first Monday of each month. More info: <https://lougherneradioclub.co.uk>

Mid Ulster Amateur Radio Club



The Mid Ulster Amateur Radio Club (MUARC) has been active since 1965, our Club call sign is MN0VFW. Please take time to look through our FB page where you will find information on our club, activities, events and members as well as a great gallery full of images of our latest activities. Mid-Ulster Amateur Radio Club meets on the second Sunday of the month except July/August in Tandragee Golf Club at 3pm.. We organise

field days for St Patricks day, Marconi weekend, 145 Alive, Sota weekend and other events. If you're in the region, and would like to take part, the club secretary can be contacted on the following email address:

Email address: muarc.secretary@yahoo.co.uk

Antrim and District Amateur Radio Society

The Antrim and District Amateur Radio Society meets on the 2nd Friday of each month in the Greystone Community on the Ballycraig Road, BT41 1PW 7:30 - 9:30pm. For More information: Email secretary@adars.co.uk

Ballymena Amateur Radio Club

The Club meets every Thursday night at 70 Nursery Road, Gracehill, BALLYMENA except during the summer months (June, July and August) when we only officially meet on the first Thursday night of the month, but there are some members there nearly every Thursday night. E-mail: HKernohan@aol.com

City of Belfast Amateur Radio Society

The City of Belfast Amateur Radio Society meets on the first Monday of each month at 8pm in the Shorts RecreationClun, Aircraft Park, Holywood Road, Belfast BT4 1SL. Contact Paul Irwin GI6FEN for more information E-mail: paulirwin@btinternet.com

Northwest Group Amateur Radio Club

The Northwest Group Amateur Radio Club, meets last Tuesday of the month at Shantallow Community Centre, Derry. Contact nwgarc@gmail.com

Bangor and District Amateur Radio Society

The Bangor and District amateur Radio Society meets on the 2nd Tuesday of the month in the Marquis Hall, Abbey St, Bangor BT20 4JE 19:30 for 20:00. We don't meet during July and August. Facebook page: <https://www.facebook.com/BangorDistrictARS/> Contact GI4JTF for more information.

**BDARS 56th Annual Rally to be held on the 21st of June 2025 at the Ballygilbert Presbyterian Church Hall, 376 Belfast Road BT19 1UH.
Doors Open at 11:30 am**

If your Club, Group or Society is not listed here, please notify us and we will add to the next issue of Ham Radio Ireland



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NEW Yaesu FTM-150 ASP 55/50W 144/430MHz FM Dual Band Mobile Transceiver.

Versatile dual-band mobile
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NEW Yaesu FT-3185 ASP 85W 144MHz VHF FM Mobile Transceiver. Powerful 2m

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select from three power levels (65W/30W/5W) to suit
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Perfectly sized & simple to use. £985.00
FT-710 Field (no speaker)£899.00
Yaesu FTM-300DE 50W C4FM/FM 144/430MHz Dual Band
Digital Mobile Transceiver.....£349.99

Yaesu FTM-200DE Single RX C4FM Mob£269.00
FTdx101D 100W HF/6m Transceiver
.....£2999.00 plus FREE Speaker

FTdx101MP£4099.99
Yaesu FT-dx10 Narrow band SDR and Direct Sampling
.....£1339.99

Yaesu FT-891 HF/6m Base/Mobile£639.00

20% discount off FC-50 when bought together

Yaesu FT-991A All-Mode Transceiver£1199.00

Yaesu FT-5DE IPX7 Dual C4FM RX Handie.....£344.00

Yaesu 70DE

C4FM/FM 144-430MHz Dual Band Handie.....£167.95

Yaesu DR-2XE C4FM Repeater.....£1249.99

Yaesu FT-65E VHF/UHF 2m/70cm Dual Band
FM Handie£84.95

Yaesu FT-4XE

5W VHF/UHF FM Portable Transceiver£59.95

Yaesu M-70 Desktop Microphone.....£129.95

This month's Featured Yaesu

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Another Dream Radio
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Taking over from where the best-
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HamRadio.co.uk/FTX1F

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**New! Dual Band
remote TM-D750E.
First shown at Tokyo
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Coming Soon!**

This month's Featured Kenwood

Kenwood TH-D75e

144/430MHz Handie

The new TH-D75E is the logical
evolution of Kenwood's popular
TH-D74E duo bander. 5W on 2/70.
FM & D-Star, Built-in Digipeater,
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Kenwood TS-890S -
BACK IN STOCK!
Probably the best
HF/6m Transceiver
Kenwood have ever
made.

Peter Hart was astounded by the receiver performance &
general build quality. This month's deal includes a
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Products

This month's Featured Icom It's Back! Icom IC-718



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Base Transceiver with no frills, just a good honest
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200W HF/6m 50MHz Remote
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RC-7760 Remote head accessory for
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Icom IC-705 Transportable Masterpiece!.....£CALL TODAY

Bundle deals available
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Amplifier



A high-performance, multi-function
linear amplifier is one of the key pieces
of equipment for keen competition
in DX hunting and contesting. Increased Linearity & Clean
Transmission with the Digital Pre-Distortion (DPD) Technology (with
the IC-7610). RRP: £5375.00 ML&S: £CALL TODAY

Icom IC-905 VHF/UHF/SHF D-Star Transceiver

The IC-905 is a versatile all-mode transceiver that covers
144-5600MHz and includes a 10GHz transverter option,
providing access to VHF/UHF and SHF frequencies.
£2849.00 or CALL for package price!

Icom CX-10G 10GHz Transverter£1450.00
Or buy together with IC-905. Call for package price!

The Icom CX-10G 10GHz Transverter is a high-performance radio
frequency (RF) converter designed for amateur radio enthusiasts
and radio experimenters.

ID-52E PLUS Dual Band D STAR Digital Trsvr£559.99

Icom IC-7100 HF/6m/4m/2m/70cm Base & Mobile
Transceiver including D-Star with remote control head unit
NEW LOW PRICE £1095.00 and FREE UK SHIPPING

IC-R6E 0.100-1309.995MHz Handheld receiver
.....PRICE DROP £220.00 ML&S £199.00

Icom IC-7610 SDR HF/50MHz Transceiver with
FREE SPEAKER and Mic.....£3299.99

Icom ID-50E Compact VHF/UHF dual bander with both
D-STAR and FM dual modes.....SPECIAL PRICE £299.00

Icom IC-705 The worlds best selling All-Band All Mode
Transportable 160m-70cmPRICE REDUCTION £1195.00

Icom AH-705 Random wire auto tuner for IC-705.£299.99

Icom IC-7300 Best selling 100 Watt - HF/50/70MHz
Transceiver with SSB / CW / RTTY / AM / FM
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EI0EVRST Operating From Dunmore East



Today we Went to Dunmore east in county Waterford the home town of Adam Sweeney who, at the age of 22, is planning to climb Everest in 2026.



Dunmore east is mainly a fishing village but as the years have gone on and a decline in fishing, more recently tourism has become the main source of income.

We decided it would be a good starting point to put the Call EI-O-EVRST on the air and we will through 2025 run it at various activations.



reports coming in were that the bands were not good so at least we would be able to work through the satellite.

We set up our RCU radio control unit as we like to call it with its back to the wind as being up on the edge of a cliff we didn't have any shelter for the northerly breeze, we also brought with us our 1.2metre Sat dish for Q-100 system as the



This idea was not going to work as the breeze was that strong the dish would have folded in two or blown into the ocean.

HF operation was the only alternative, We set up on 40 metres and surprisingly contacts started to come in fairly fast and more so when we appeared on the clusters.

Soon we were in pile ups and it was great to have Philip logging on the laptop with the HAMRS program.

The Public came to see us and some expressed an interest in the hobby, some having never heard of amateur radio but could relate to the days of CB radio.

One man in particular, Ed, visited us twice and was very impressed with the gear and had some experience of CW back in the days as a merchant seaman.



Young and old enjoyed EI0EVRST activation and were even happier after being able to have a go on radio or CW.



Check out the video of this activation on the link provided.

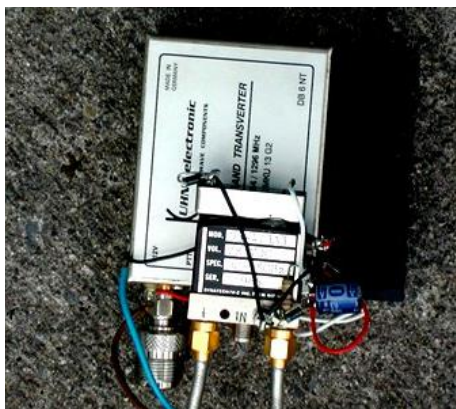
<https://youtu.be/F8r1dNVZL64?t=15> •

Collective Communications EI3CC
ei3hqb@gmail.com

Mayo VHF Group's First Steps Into the World of Microwaves

The initial interest in 23cms occurred when John, EI7FAB, purchased a new Khune 23cm transverter back in 2006. He was using a Yaesu FT290 Mk1 as the driver and a Tonna 55 element Yagi antenna. Initial tests were carried out at the EI3IX's QTH where reception was possible on an ICOM IC R-7000 using a Discone antenna as he had no 23cm transmitting capability at the time.

Initial tests were carried out to see what the received signal was like. The received audio was perfect. John, EI7FAB, set up a few miles away resulting in a strong signal reception. The discone antenna was set up indoors in the loft and would not have been the ideal test set up.



Khune 23cm transverter with 12V coaxial relay

Using a Yaesu VR-120 receiver, which could receive up to 1.3Ghz, it would be possible to receive John on 23cms with a talkback on 145.450Mhz. Driving to Balla, some 4 miles away, John was to attempt to keep track of EI3IX/M which would not be an easy task with a 55 element beam which has a very narrow beam-width. The results were encouraging with the first mile yielding a solid 5/9+30. There was a temporary loss of signal en-route but, on reaching Balla, there was still a 5/5 signal. We were impressed with the results, and this paved the way for further experimentation on 23cms.

Over the following two years a number of contacts with Tony, EI4GHB, and John, EI7FAB, took place on FM and SSB over good distances.

Tony's line of business took him to many interesting hills that would normally have been off limits to the majority of the average radio experimenters. Tony would text in advance to organise a sked from a high spot if he was working in the area. Distances worked would range from 60 – 100Km with reception reports between 5/5 and 5/9.

During July 2014 EJ4ABB was worked on Inishbofin Island (IO43VO) from Croaghmoyle, 4 miles north of Castlebar (IO53HW) on 1296.200MHz SSB. The received signal was 5/5 using a WIMO panel antenna and 5/9 using a Tonna 55 element beam antenna. Interestingly, locking beams gave good two-way communication but beaming 90 degrees away towards Clare Island resulted in an increase of signal strength. This phenomenon was experienced on both the panel and the Yagi antennas – exactly what would be expected from microwaves – a very strong reflection.

SOTA activations were a high priority for 2016 on VHF and UHF. Securing a 23cm Icom-120 made SOTA operations on this band now



23cm Tonna 55 element Yagi

possible with a sealed lead acid battery & a 35 element Tonna Yagi. Later in the year came the Alinco DJ-G7 tri band held hand with 1w on 23cm, this was a game changer for future SOTA activations. Croagh Patrick, Nephin and Minaun in Mayo were activated on 1296MHz during the year, an EI first.

From 2014 to late 2016 the equipment for 23cms had now expanded from the initial WIMO panel antenna & 55 element Tonna Yagi for SSB, we had now added a 35 Element Tonna Yagi for SSB and ATV, a Kenwood 10W mobile 1296MHz mobile rig, ICOM IC-120 1W mobile FM rig and an Alinco DJ-G7 handheld tri-band rig.

There were now a small but growing number of 23 cm operators in the west and northwest.

EI7FAB, EI3IX and EI7IX in Mayo, in Galway Steve EI5DD & EI4ABB.



John EI7FAB operating 23cm with transverter and Wimo panel

We are now looking at the possibly of setting up an EME station as a future project. Most of the components had been acquired so it is just down to familiarisation with the JT65 program for weak signal operation. A small 40-Watt amplifier and a single 55 element Tonna Yagi and the JT65 mode is more than enough to work the big stations like PI9CAM and HB9Q. As we had a few old 6ft satellite TV dishes, if a proper LNB was found much more could be possible!

Although a steep learning curve to start with 23cms is an interesting band and while there were a few obstacles to overcome, I'm sure with perseverance everything will gradually fall into place. It's a band that has much to offer and definitely more challenging than HF & VHF●



John EI7FAB assembling 23cm 55 element Tonna Yagi

*Joe Fadden EI3IX
joe_fadden@yahoo.com*

EI75RAF Special Event Station



EI75RAF Special Event Station

On 16th of June 2025 members of the Mayo VHF Group will commemorate the eight members of RAF 202 Sqn. Flight registration number RG843 who lost their lives when their aircraft crashed in very thick fog into Croaghan mountain in Achill, Co. Mayo, Ireland

On the 16th of June 1950 the aircraft a Handley Page Halifax Met6 was conducting a BISMUTH meteorological survey on the west coast of Ireland and was returning to base at RAF Aldergrove, Belfast in Northern Ireland when disaster struck. All eight crew members were killed

The crew members were:

Pilot: Flying Officer Ernest George Hopgood

Navigator: Flying Officer Joseph Kevin Brown

Co-Pilot: Flying Officer Michael William Horsley

Flight Engineer: Engineer 1 Harold Shaw

Air Signaller: Signaller 1 Cornelius Joseph Rogan

Air Gunner: Gunner 1 Martin Gilmartin

Meteorological Observer: Leading Aircraftsman James Charles Lister

Air Signaller: Signaller 1 Bernard Francis McKenna



On June 16th 2025 members of the Mayo VHF Group will commemorate the 75th anniversary by laying a wreath at the actual site of the crash and operating a special event station at the base of the mountain beside Lough Accormore

Further details and bands of operation will soon be posted on QRZ.com

Satellite Antenna Project

Having been involved in Amateur Radio since 1973's, I have played with a few parts of the hobby at different stages.

The part that always interested me was satellites, back in the day Oscar 10 was the bird in the sky and long before the internet we relied on info passed on radio for info on passes and booklets like you get today for tidal charts.

Hitting Oscar 10 back then was like trying to hit a golf ball flying just over your head as its orbit was so low, but it was all good fun even on cold nights out in the middle of a park trying to get a blip from a golf ball traveling like a bullet.

AO-10 (AMSAT OSCAR 10) was a star-shaped German AMSAT micro-satellite, launched alongside the European Test Satellite (ECS-1 on an Ariane 1-06 launcher into a GTO orbit). This was changed to a Molniya orbit using an attached booster, to support world-wide amateur satellite communications.

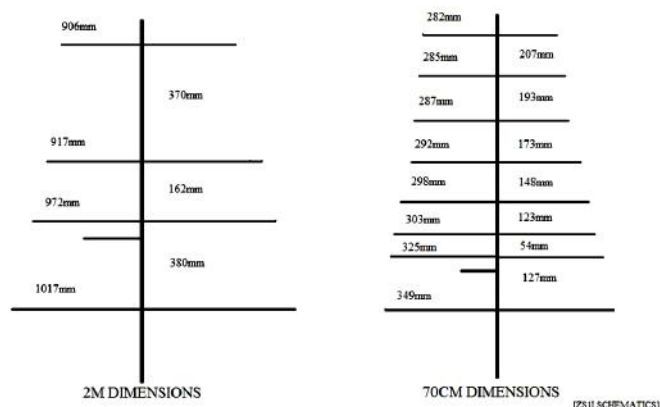
These days it's so much easier with internet offering live coverage times of passes and now a large number of satellites connect with.

Many groups have been formed and information can be got through these and one in particular would be AMSAT.

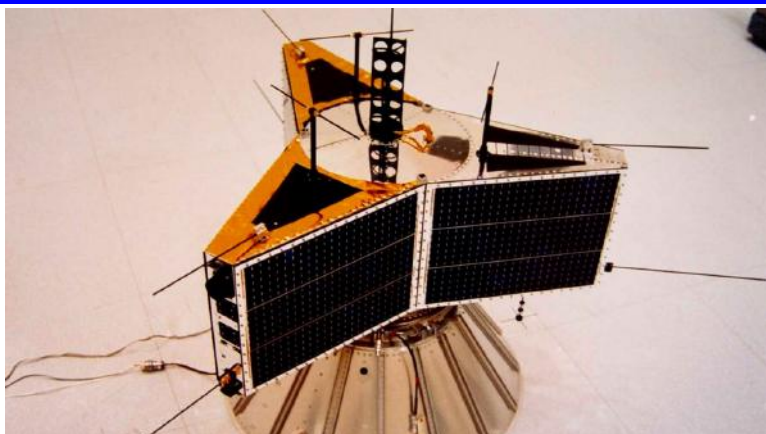
To be able to work the birds, as they are called, you need a dual-band antenna you can buy an over-the-counter antenna but I prefer to make my own. The pleasure of seeing the antenna coming together and more so when it works.

The antenna I chose is a 2mtr and 70cm Yagi at 90 deg to each other.

"BOW" AND "ARROW" SATELLITE ANTENNA SCHEMATIC



Building any antenna takes time and in any case what is the rush it only leads to mistakes so take your time make sure all your measurements are 100% before committing to a cut or drill hole.



Components for the antenna were sourced from my bits bin as I have made a number of various antennas you always have pieces left over.

The boom is 20x20mm and I will be using 10mm tube for the elements the elements are through the boom and care needs to be taken when drilling these as a rule I center punch and then pilot with a 4mm and 7mm and then to 10mm, I drill the 4mm pilot first then go to the 7mm from each side and then on to the 10mm from each side as this prevents any distortion in the holes.

A great idea when working with aluminum is where ever you need to mark for drill or cut stick some masking on the tube as its easier to see where your marks are.



Once drilled and that includes the holes for the screws that will secure the elements you can then cut the elements, and insert as per drawing, I secured on final assembly mine with stainless steel screws.



The next item is where the connection to the antenna will be made via coax cable weather PL259 or a N type the mount is the same, I used a piece of flat aluminum and the drilled the holes to suit the connector and once happy I folded it in the vice as in images, I then used 4mm rivets to secure the connector and mount in place.

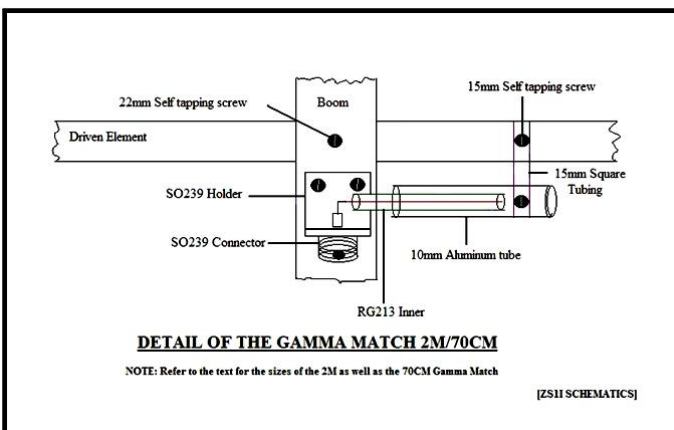


This antenna is tuned using a gamma match, Gamma impedance match for the antenna is also known

Satellite Antenna Project

simply as gamma match. In case of a Yagi-Uda type of antenna, it allows the driven element to be a single rod or tube without being cut at the feed point, giving more physical integrity to the system. As the RF voltage at the center of a half wave antenna is zero, the outer sleeve of the coax can be connected here, which corresponds to the position on the boom as well.

The central conductor of the coax is then connected beyond the center point through a capacitor to tune out the inductance of connecting arm of antenna. The name gamma match comes from the resemblance of the shape of connection region to the Greek alphabet Gamma (Γ).



Again, a piece of my 20x20mm box is used and drilled to suit elements 50mm centers, I will have end caps on these when finished so once the holes were drilled, I fitted the caps and drilled again just incase caps might get caught.

Next was some 213 coax I trimmed the outer sleeve and braid away and then inserted it into the piece of 10mm tube, this then slides in and out of the tube to tune the antenna.



To tune a gamma match, you undo the self tappers and slide the trumpet type section along the element to get resonance and then secure the self tappers again.

Once the rg213 is soldered you can trim antenna for resonance and if you have done your job right the antenna will now be tuned.

I finish my antenna with element end caps and square tube caps. It gives a more professional look to your work and they are cheap as chips.

I also fitted an inclinometer from Ali express for €10.00 a small piece of angle galvanised was riveted to the boom as the inclinometer has a magnetic base. I then adapted a microphone stand to hold the antenna while in use..



The finished product ideal on a mount a bit heavy at arms length but all in all it worked out well and made from bits about the workshop.

If you had to go get the tubes I would say you would make this antenna for about €40, so go on have ago it's fun its experimenting which is what our hobby is all about and if you feel you can comment or even share an antenna you built then feel free to post in an article to me and we can include it in the next magazine as I always say knowledge not shared is knowledge lost ●



John Tubritt EI3HQB
ei3hqb@gmail.com

Tips and Topics

The ICOM 7600 is a fantastic HF radio launched in 2008 with stunning features and is still considered a rig to keep but one thing that has shown up now with a little age is the wobbly knob syndrome.

What is the wobbly knob syndrome? Well, it's the main VFO tuning dial that develops a wobble, its not as most think wear on the shaft that the VFO dial is mounted on its actually a slight design fault where by the shaft and sleeve are not a snug fit and with use and the lubricant moving out of the sleeve it gets a wobble.

So can it be cured? answer is yes, and you will see here how that can be achieved quite simply.

First task is to remove the dial contrary to what you might think these are just a push fit no screws under the rubber dial cushion.



Once the dial is removed you will see the damper mechanism, this is in place so the owner/operator can adjust the speed of the dial as he/she tunes the radio.

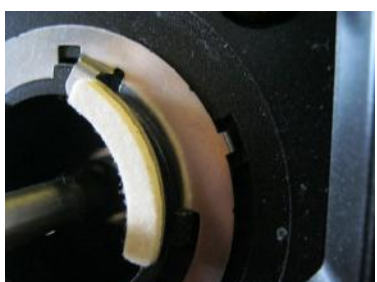
Under the dial you have a little lever that when pushed left or right it will move the white felt pads onto the dial to increase the tension and speed that the dial will move. The dial its self is quite a hefty weight and feels very positive in use.



The two felt pads that create friction when the lower lever is moved left or right to suit the operator

This ring is made from stainless steel and needs to be removed as we are trying to access the hole behind it where as you can see the shaft and sleeve are for the VFO Dial.

Removal of the ring is quite simple as can be seen from the next image. To the right of the ring you will see where a tiny piece is folded at 90 deg and in turn located into a small slot.



If you lift this fold with a small screwdriver under the main ring and turn the stainless ring anti clockwise it will unlock its self from the radio. Refitting is the reversal of removal and will return without any issues.

Now you have

exposed the area on the front panel where the shaft and sleeve for the tuning dial enter the front panel of the radio.

As I said earlier the shaft/sleeve are not worn it's a design fault in tolerances and in that sense, there is no point replacing it.



So the first thing needed is a bearing and the one needed is 626 Z 6 x 19 x 6 mm this bearing fits snug on the dial shaft and will support the shaft in its new home.



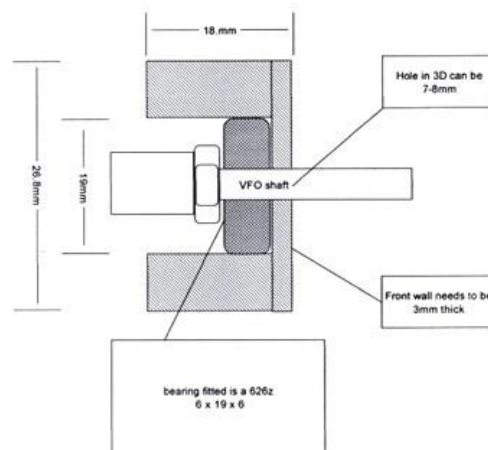
The bearing 626Z push fitted for test fit

I did a drawing of what we plan to do with regard to a mount for the bearing and which in turn will fit inside the hole in the front panel carrying the bearing and removing the wobble.

As can be seen by the drawing I had to have a 3D sleeve made to carry the bearing and also fit snug into the front panel.

A couple of the 3D printed pieces were made until the exact sizes were achieved.

All measurements here are the final numbers and as such should produce exact bearing mounts.



Thanks to Sam EI6IUB a neighbour who was the owner of the printer.



Now that you are happy with the 3D piece you are ready to mount the bearing inside it.

This is easy enough with a bolt nut washer and a couple of spanners. Place the bearing in the 3D piece and then the washers and bolt as seen in the Image, the washers apply even pressure when you are tightening the

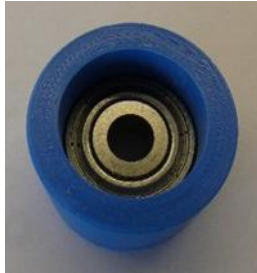
Tips and Topics

nut and bolt and thus allowing the bearing to slide into place with ease.



This then is the finished product a 3D sleeve with a bearing inside it to support the shaft.

This is then inserted onto the VFO shaft and then into the front panel of the radio where it will be a snug fit, it will end up slightly receded into the hole and once all removed components are refitted it will be out of sight and the radio VFO will be free of the wobbly knob syndrome.



If you have any mods on radio's you would like to share please let us know and we can add them to this wonderful magazine.

As I always say knowledge not shared is knowledge lost so send the editor: Steve EI5DD

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or myself an email
ei3hqb@gmail.com

John Tubritt EI3HQB
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Hillwalking Radio Club



Hillwalking Radio Club in partnership with Aherlow Failte Society organised our second annual the Glen of Aherlow Holistic Pilgrim path walk. This walk was over a 15k stretch taking in many of the religious sites along the base of the Galtee mountains.



On arrival at Clonbeg Anglican Church we were met by Rev Mike O'Meara who took us to St. Sedna's Holy well where he gave a lovely blessing and read the Pilgrim's Prayer.

The walkers were able to visit the Church and take in the beautiful stained glass windows and timber work and hade a sit down before the real walking started. Our next stop was at the iconic statue of Christ the King which faces the Galtee mountains with it's hand raised as if blessing all hill walkers and keeping them safe. We had a number of other sites on the 15klm track before ending at the ruins of

the old Franciscan Friary where we were met by Fr. Tom Breen.



Everything ran smoothly with John providing recovery and Leah who carried the first aid bag. Overall comms went well and we were in constant contact with John in his van and we were able to direct him to pick up a walker who had to come off the trail •

Tracking Down and Identifying a Source of Interference

One of the major issues we have as Radio amateurs is noise and interference on our frequencies, this can make operating a nightmare.

Back in the days gone by, we were always made conscious of the fact as operators we needed to be sure we did not interfere with any other radio equipment or TVs for that matter. We can and did install filters if needed and did our best to pacify the victims that had interference from our station (even if it was your own parents TV).

Today is a different story, we now are the victims of interference from many sources, we are however represented as license holders by ComReg here in Ireland. ComReg issues the license to operators and are obliged to, if needed, deal with any situation of interference we may encounter.

Recently, a case came to light where an operator had noted an issue on the 80-metre band. The issue was only allowing the use of a portion of the allocated frequency as can be seen in Fig 1.

All the other amateur bands had shown no sign of any issues, and the operator had no idea as to when this issue had occurred.

Initially, it was considered that maybe with ongoing issues in the Ukraine that it could be over the horizon radar.

The usual shut down of the house mains followed as did checking of all COAX and fittings but to no avail. The main antenna was moved further from the QTH to see if the situation would improve, but there was no change. Occasionally the QRM would disappear, but that was few and far between.

I conducted walk around the QTH checking electricity poles for damaged isolators that may be arcing. Even the local shop was checked in case something new had been installed and was causing the issue or that a fridge had become faulty

Nothing obvious seemed to be causing the issue at the QTH. While on a visit to the house, I was shown the problem, so I followed a checklist similar to that of the operator. As there was no obvious solution, it was time to bring in more specialised equipment.

I have access to a selection of handheld directional antenna Fig. 2 and a Rohde & Schwarz PR-200 Portable Monitoring Receiver Fig 3 which can be used to locate transmitter and interference sources.



Fig.1 S9 interference across the 80 metre Band

Simply put, bearings can be found by manually pointing the antenna in the direction where the signal is strongest, taking measurements from multiple directions to triangulate the “offending” signal source.

The antennas are customised to the equipment, consisting of an antenna handle, a receiver-customized cable set, and different antenna modules that can easily be attached using a locking ring. Various antenna modules are available, allowing the reception of vertically or horizontally polarized signals (detected by how the module is connected to the antenna handle). A built-in low-noise amplifier (LNA) can be activated to increase system sensitivity, and, in passive mode, the amplifier is bypassed, and the antenna can also be used in the vicinity of strong transmitters.

The integrated electronic compass delivers exact azimuth and elevation data. Together with the sensitive GPS and GLONASS-capable receiver in the antenna handle, precise location accuracy is provided by triangulation. The integrated trigger button can be used to externally trigger a receiver-configurable action, in this case, record the approximate bearing of the strongest signal.

Primarily, scans were performed in the rear garden of the QTH and calibration the equipment for scanning, the screen image on the ROHDE & SCHWARZ was a mirror image of the waterfall seen on the ICOM Fig. 4



Fig.2 The Rohde and Schwarz directional antenna selection



Fig. 3 Rohde and Schwarz Portable Receiver SPR-100

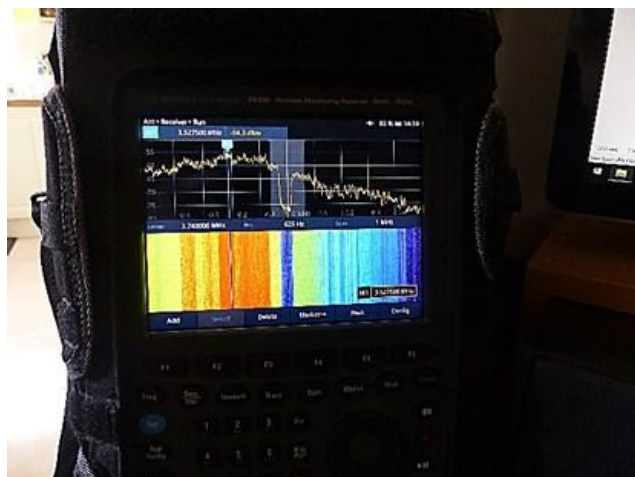


Fig. 4 Spectrum display of interference on the waterfall display of the Rohde Schwarz receiver

Tracking Down and Identifying a Source of Interference

Scanning a few directions gave us a more intense reading in a westerly direction of the QTH so we headed out to the front of the property to continue with further scans to compare measurements. **Fig.5**

As can be seen here the PR200 showing the direction of the noise issue **Fig 6**.



Fig. 5 Sweeping the area for a peak in the interfering signal



Fig. 6 The PR200 displaying the direction of the noise issue

Further sweeps were taken around the front of the premises. These were from different directions to get a bearing on the source. After a few sweeps it became clear that a newly installed telephone pole with an old telephone company box attached may be the offender, again more sweeps were conducted and indeed the readings were showing a marked increase at the pole.

The telegraph pole as mentioned earlier was replaced with a nice new timber pole and any items attached to the old one were refixed to the replacement pole.

Once under the pole and pointing the directional antenna up at the box mounted on the pole the screen went potty (a technical term indicating success in this instance) **Fig 7**

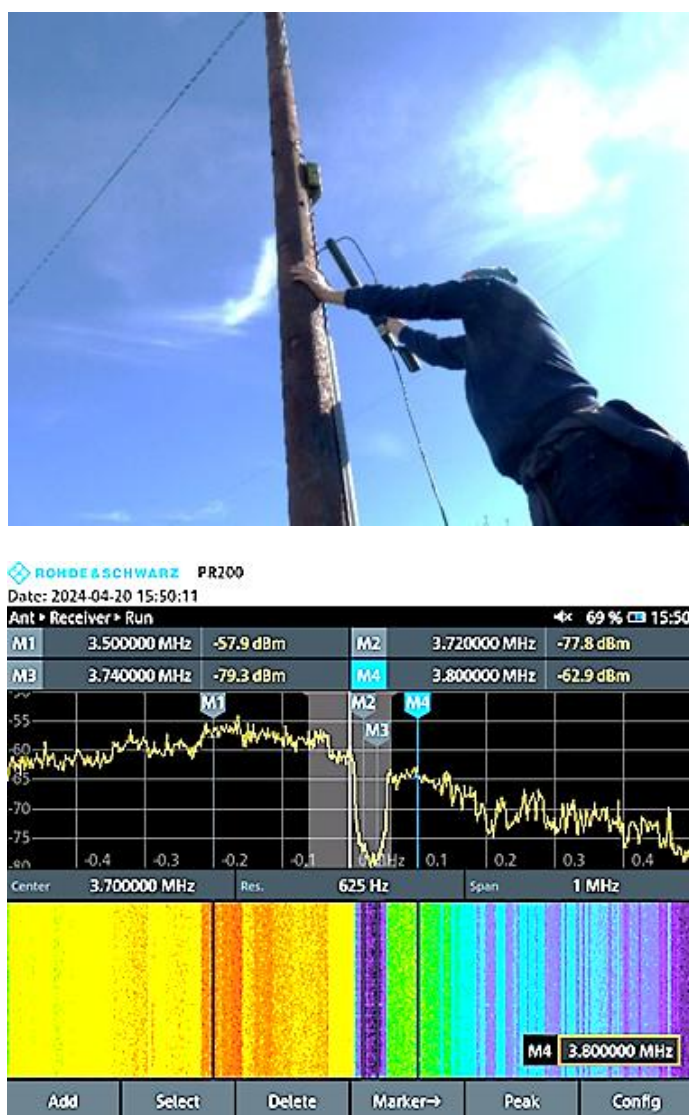


Fig. 7 The source of interference located

When you contact ComReg you should receive a case reporting form and all your information as usual is required i.e. Name, address etc. To help your case, you need to give them a comprehensive report on your issue, in this case we looked at google maps, showing the location and where we thought the signal was coming from, and then used the provided google maps "measure distance link" to show distance from the location of the signal source to the centre of the antenna. **Fig.8**

Tracking Down and Identifying a Source of Interference

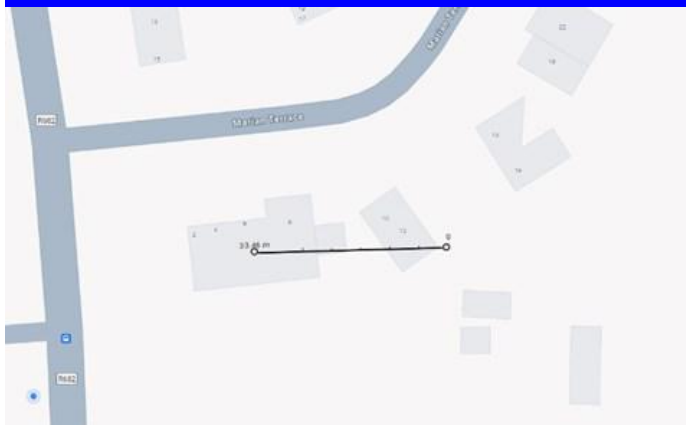


Fig. 8 Map showing location and distance to source of interference

Straight away ComReg have all the information on your QTH and can see the distance from you to the potential offender.

The more information you provide, the easier you will make the technicians job, and should be better it for you. The last thing you need is for a ComReg technician to be trying to contact you requesting more information, you don't see the call, or don't answer because it could be a scam call from an unknown number and before you know it, you are in the file marked pending.

Notes:

We included the type of box on the pole and also the pole ID Number so at least when ComReg contacted the telecommunication company they would know exactly where to send repair crew Fig. 9



Fig. 9 The location of the interference and Pole ID number

If you think you have an issue try and make notes of time and date of when it first started, and try and provide as much info on what effect it is having on your operating. See elsewhere/opposite/above/below for a copy of the form you will need to fill in with kind permission of the owner (this may be different in your country) but as can be seen, the information provided in the initial application meant that ComReg did not need to contact the operator as all the info was available, including the photo's.

Hopefully this may help others who may be having difficulty with QRM. As can be seen, detailed information is invaluable and should speed up the process. In this case it was only a matter of 3 weeks and the issue was resolved.

Ultimately, some part of the installation of telecommunication equipment on or near the pole was defective, and, once replaced, operating could continue on

Case Reporting Requirements

All fields must be completed. Incomplete forms will be returned

NAME OF LICENSEE OR SERVICE	
ADDRESS	6 Marian Terrace Tramore
PHONE NUMBER	086 870 9265
EMAIL ADDRESS	ei3hqb@gmail.com
NAME OF PERSON REPORTING INTERFERENCE	John Tubbritt
ROLE OF PERSON REPORTING INTERFERENCE	Amateur Radio operator

CASE DETAILS

LICENCE NUMBER OF AFFECTED SERVICE (if applicable)	
DATE OF FIRST OCCURRENCE OF INTERFERENCE	Sometime in late 2023
REGULARITY OF INTERFERENCE (Is it constant or intermittent, at set times, days of the week, hours of the day etc.)	constant 24hrs
FREQUENCY OF INTERFERING SIGNAL (MHz)	Noted on 80m band (3000-3005) May be occurring elsewhere
MEASURED LEVEL (dBm)	-65dBm approximately
POLARISATION	Vertical
BANDWIDTH OF INTERFERING SIGNAL (MHz)	Most of the 80M (3.5-3.8MHz) band (see attached screenshot)
ADDRESS OF APPARATUS EXPERIENCING INTERFERENCE - INCLUDING EIRCODE	6 Marian Terrace X91W886
NUMBER OF BASE STATIONS EXPERIENCING INTERFERENCE	All my receivers, which is 3 at present.
(If multiple base stations are affected, please provide the co-ordinates of the worst affect base station)	
HAS THE INTERFERENCE RESULTED IN A COMPLETE LOSS OF SERVICE?	yes

Case Reporting Requirements

All fields must be completed. Incomplete forms will be returned

WHAT WORK HAS BEEN DONE BY YOU TO RULE OUT AN INTERNAL FAULT IN YOUR SYSTEM?	Considerate work was done to relocate the antenna as well as changing the antenna type as originally I thought that the interference was coming from a shop in the West. The receiver was sent back to Com in the UK for servicing at considerable expense in case it was a fault. Various other filters and chokes were tried in an attempt to reduce the level of the interfering signal.
PLEASE ATTACH DOCUMENTARY EVIDENCE TO SUPPORT THIS	
DO YOU SUSPECT THE SOURCE OF INTERFERENCE TO BE COMING FROM ANY SPECIFIC LOCATION OR SOURCE?	Yes. Some equipment attached to a nearby Eircom Pole (Pole 02787589). A friend borrowed a R&S PR200 receiver from his workplace. After we verified the signal was still present on the PR200 using my antenna. We walked around the area looking for a strong signal, after several minutes we narrowed down the source of the signal to the pole. (See attached pictures)
IF YES PLEASE DETAIL WHAT STEPS HAVE BEEN TAKEN TO COME TO THIS CONCLUSION AND PROVIDE DOCUMENTARY EVIDENCE. PHOTOGRAPH, RECORDING ETC	
PLEASE PROVIDE A SCREENSHOT SHOWING THE INTERFERENCE HAPPENING	Please refer to the screenshot showing bandwidth of interfering signal.
IF YOU CANNOT PLEASE STATE WHY.	
NUMBER OF USERS AFFECTED (Where applicable)	Only 1 at present, another affected Radio Amateur has recently moved home.
ANY OTHER RELEVANT INFORMATION	

the 80-metre band. Unsurprisingly, the noise floor on other bands seemed to improve when the matter was rectified ●

Pictures of Rohde and Schwarz equipment from https://www.rohde-schwarz.com/home_48230.html

ComReg Interference fORm: <https://www.comreg.ie/media/2022/03/Case-reporting-requirements-updatedV4.pdf>

John Ronan EI7IG
jpronans@gmail.com

The Key To Our Hobby

Many operating radio's nowadays are turning a few coils on the clock a lot of us out there got the bug for radio back in the days of Citizen band radio, and prior to that it was surplus radio equipment left over from the world war of 1945.

Much of the interest after the war was a result of guys who had used equipment as signal operators and now able to purchase or even be given radio sets that may otherwise have gone for scrap.

On those figures we have a bulk of let's say mature operators and that number is decreasing each year with SKs. So, what is the answer?

Very simple Youth, we need to get youth into the hobby and that is not as easy these days as it sounds. Youngsters in my day were in awe of the world of electrics and science we had electronic kits for Christmas as well as chemistry sets too.

In between those we had radio sets or transistors that we could turn the dial and have a listen to short wave or even tune into the local taxi company or police/fire comms too. To us this was ground breaking stuff.



Now we are in a situation where every youngster carries a device on their person that can communicate all over the planet and not only that can give internet access at the blink of an eye if info was needed on a topic of interest. Basically, a computer with more power than that used to put men on the moon.

Now how do you get a young person into a hobby that to you is still amazing and has kept you glued to it for a good proportion of your life? that's where it can get tough and a hard task to follow up, but surprisingly

the interest of how things work is still there and all is needed is to tap into it.

Most of the youth have no idea of how a phone works as they say it just dose but if you explain to them the whole process of the signal heading off to a mast / repeater and being retransmitted up the line then they start to lift an eyebrow.

Scouting and youth groups are a great source of youth who can be gathered in groups and then given talks and demos on radio equipment and then be in a situation where they can use radio equipment

ELECTROMAGNETIC WAVES FOR COMMUNICATION



(supervised) and experience the wonderful world of communication via radio waves.

We at EI3CC encourage youth into our hobby at every opportunity when out activating. Some of the equipment used to draw them can be surprising. One item we used in 2024 at a vintage show was a set of stocks and you had to get whoever was with you to send your name in CW to be released.



This proved ever so popular and once at the display they then looked at the electronic kits we had and then onto the radio's and wee then amazed to be talking say to someone in Brazil / USA etc.

The interest is still there, it is just a case of changing how you approach it and making it fun.

We participate in JOTA every year and the scouts/guides etc. all enjoy the weekend in communication either via Q-100 satellite or on the HF bands working other scout groups all

over the world, they are awarded a badge for the radio work.

In 2024 we had two camps separated maybe by a mile or so and we had communication via the camps also with CB radios.

This proved very popular as they had full use of the radio and supervised themselves. Some of the transmissions used were to try and work out who was at each end of the radio with cryptic clues to who was the operator we also have a number of treasure hunts using PMR radios and again its against the clock with teams.

Get involved with community events such as carnivals festivals and so on. We have even had an activation where we were the main entertainment for the holy communion party.

We have a number of simple games that always attract the kids and one most popular is the loop buzzer even the parents get involved in this and on occasion have taken over the game.



Get involved with youth we need it to keep our hobby strong and lasting other wise it could be a case where the young of the future are looking up on there phones (what was amateur radio) and how did it work.

Remember to make it fun and not the image of a SWL/Operator as a guy in the wooden shed at the bottom of the garden twiddling a dial with weird noises emanating from there.

Covid helped the hobby to the point where people looked at things they had on the to do list and either got into the hobby or came back to the hobby but youth is needed to sustain the hobby for the future ●

If you feel you can add to this topic feel free to contact:

John ei3hqb@gmail.com

Portable Operating

I was operating from a local park not so long ago. A dad came up to me with his young son who, at a guess, was around 11 or 12. The dad was very interested in what I was doing and tried, enthusiastically, to get his son involved. 'But what's the point?' the boy asked, 'you can just use your phone'.

'But' I said, 'phones are meant to just work, the internet is meant to just work. This is magic'. I pointed to my radio and simple antenna and said, 'With this I can talk to anyone anywhere in the world by sending a signal from this antenna, bounce it off the edge of space, back to the Earth to bounce back to the edge of space. Then someone in Europe, America, Brazil, wherever, will pick that signal up with their simple antenna and talk back to me.'

'That', I said, 'that is really cool'.

The boy looked at me for a moment and replied, 'Yeah, I admit that's pretty cool.'

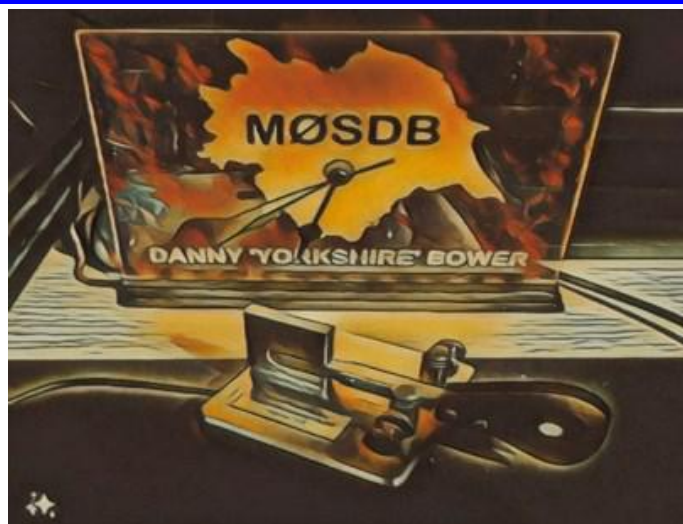
I firmly believe that as well as being cool and, despite the physics behind HF communications, there is an element of magic too. Being able to send a signal from a simple piece of wire and have that signal bounce off the edge of space and round the world to be picked up by someone else's simple bit of wire and for them to hear you and communicate with you – pure magic.

For me, that magic is amplified many times when working portable. Everything about my system is just that little bit simpler; the radio is usually a small QRP rig, often one I have made from a kit, the antenna is very basic – a linked dipole or a $\frac{1}{4}$ wave vertical, my paddle is a basic twin lever etc. And everything is powered of a cheap 3s lipo pack or a lifepo4 pack.



This simple kit can be set up pretty much anywhere and, as well as just having normal QSO's whilst out and about, there are many activities that you can take part in: Parks on the Air (POTA), Summits on the Air (SOTA), Bunkers on the Air (BOTA), Worldwide Flora and Fauna (WWFF) and among others.

The excitement of being sat out in the wilderness, or even just a local park and being able to talk to people around the world using whichever mode you choose, being



completely self-sufficient – no cellphone network, no internet or WiFi, just you, a battery powered radio, a bit of wire and a bit of physics – is hard to beat.

My first experience of working portable was whilst on holiday in Cyprus. I was in the final week of the CWOPS Academy Advanced module and had initially been planning on working mainly SSB however since the CW bug had bitten my plans changed and I decided I would try using only CW. I had acquired a lovely little Elecraft K2 and took this together my W1SFR Fat Boy Cootie Paddle and a Buddipole Buddistick antenna, found a spot by the shoreline and started calling CQ.



Whilst I did not have a huge number of QSOs whilst I was there, I became hooked on the idea of portable operations and when I returned to the UK, I started to refine my /p kit so that I could work effectively in the Peak District and surrounding areas.

I now have a number of QRP radios which are ideal for portable operations. In no particular order I have a ...

QRP Labs QMX Lo Band, QRP Labs QMX+, Xiegu G90, Yaesu FT817ND, a handful of Kanga Products Roosters (they are single band, single frequency, 2x Kanga RockRose and a truSDX.

The QMX/QMX+, the Roosters and the truSDX are particularly fun as I built these from kits and there is something special about making contacts on a radio you made and have the soldering iron burns to prove it!

Portable Operating

I am not a fan of the Buddistick – very fiddly to tune and not the easiest to set up.

So that has gone and my antennae are a Sotabeams Bandhopper III, Sotabeams Bandspringer, a JNC MC-



750 and most recently an EFHW which I use a kite to lift. All get used and all work brilliantly however the Sotabeams wires need a bit of space to set up and a mast for support. I use the Sotabeams Tactical Mini which again is a brilliant mast; well priced, sturdy and packs small enough to fit into a 33l rucksack.



The Keys I use are a CW Morse Aluminium paddle, a Clansman straight key and a homemade Mecc-key-no Cootie sideswiper I made from Meccano.



Other essential kit are a lovely little folding table and chair, various connectors and wires, a Leatherman multi-tool, pencil and paper and a first aid kit. For batteries I tend to use 3s lipo batteries although Lifepo4 packs are great too.

I have now operated from various beautiful spots in the Peak District, from local parks and woodlands, country parks and most recently Tenerife. I have worked stations all over Europe, the US and as far afield as New Zealand.

Working from abroad is a particular privilege I enjoy – just being able to turn up in a foreign country, set up on the beach or high up in the hills with stunning views to soak in and work the world in dits and dahs is just awesome

All from the same simple kit. As I say, pure magic.

Anyone wanting to learn morse (cw) feel free to contact me via email I can also be contacted thru the Slow morse club

[The Slow Morse Club | Facebook](#)

Also, a great starting point is the CW Ops course and you can contact them via <https://cwops.org/> •



Danny M0SDB
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POC Radio

Push to talk Over Cellular (POC Radio) is a system that is based on the Cellular Network using 3G, 4G and 5G LTE technology and incorporates PTT technology into a cellular radio handset. POC radio can support video calls, GPS location tracking and multimedia messaging. Whilst a POC radio appears like a walkie talkie there are substantial differences.

POC Radios have opened many avenues for communication and have since become an alternative to Business/Commercial systems that use point to point communication, repeater stations or networked repeaters.

POC Radios are essentially slightly more advanced Cell Phones with a PTT button on the side and some units are built like a car transceiver with an external microphone.



POC Radios come in all shapes and sizes

To set up these radios specific software would be required such as PTT4U which is one system used commercially. Naturally, it is an expensive system but incorporates fleet management and dispatcher facilities. For non-commercial use one can use **TeamSpeak** which enables a channel to be set up for individual members to log into for general chat. **TeamSpeak** was often used by online gamers to communicate strategy with each other whilst battling through levels of World of Warcraft or similar multi-player team games. The channel can be password protected for members only.

The **International Radio Network (IRN)** is one such channel open to Licensed Radio Amateurs here individual channels can be set up, some of which may be linked into Digital or Analog Repeater Networks. The alternative is to set up your own club or group channel and password



A typical POC radio system network

protect it for local chat. Of course, you could leave it open access then everyone can join in on a worldwide basis.

Zello is a popular platform widely used allowing channels to be set up in a similar fashion to TeamSpeak. Login to Zello to set up an account for yourself and then you can set up a meeting channel. Alternatively, you can call others directly person to person once you have set up permission for them to contact you. This does not require a radio license so anyone can use it.

Zello has been used to connect into repeater networks, and it is up to the owner of this channel to ensure that only licensed operators are given permission to use the channel.

Echolink is a popular system available on most simplex gateways and repeaters. Whilst normally accessed from an analog handheld radio, this can be added to your POC phone and accessed via the cellular network. This is only available to licensed amateur operators

Peanut gives access to many digital networks such as DMR, C4FM, and D-Star. Available only to licensed operators.

APRS Droid is a GPS tracking software that will continuously track your movement and send GPS location to the aprs.fi website. This is only available to Licensed operators and there is a small once off fee to obtain a pass code to use the program. I am sure there are also systems available for the non-licensed operators.

Disadvantages

The only disadvantage of the POC radio is that if one is not in range of a Cellular Service, or WiFi then it is not possible to communicate. Not an system to be used in the wilderness or in the unlikely event of the cellular network going down..

Advantages far outweigh the disadvantages!

Internet radio is not dependent the on line-of-sight communication paths, a repeater, or enhanced propagation for reliable communications. The communications are not impaired by QRM, Contest Operators or those who like to tune up and splatter on top of others. Basically, it is a gentlemen's operating system as there are no hassles. On TeamSpeak, abusers are transferred to the "naughty room" for their transgressions.

POC Radio

They can exit the room but if they find themselves there on a frequent basis they will be removed and barred altogether.

It is possible to link into hubs with Repeaters, EchoLink, and Digital modes of operation which are connected to a common group area on TeamSpeak. These areas include the UK Hub, the Scotland Ireland Hub and there is also a London Area Hub to mention but a few as there are many more. This ensures plenty of activity most hours of the day. Zello does give access to the Southern Ireland Repeater Network once permission is granted.

Some years ago, the Bike Marshals and Blood bike operators were seeking an efficient communications system for their bikes. PMR 446 had its limitations to line of sight and VHF was not much better. POC radio was the only solution. The added advantage was that it was not just confined to their own locality. It was no possible to communicate right across the country and into other countries.



POC Radio adverts seem to boast that they can transmit over 5000 Kms if there is a cellular network.

Is it Real Radio ?

This debate can go on for ever. Looking back in time, it could be said by CW operators that the new AM mode was not real radio. The introduction of SSB caused more discontent and, to cap it all, the introduction of FM was the last straw! I even remember saying that FM would never catch on in the 1960s as there were very few using it - a bit like comments about digital radio today. FM resulted in the introduction of Repeaters at this point it was absolutely necessary to hold up the crucifix. In time, this sacrilege soon became acceptable and the norm. One should not forget that, as time progressed, many Analog repeaters were linked via IRLP and EchoLink and the first generation of Yaesu's Wires system, all being internet based.

Whilst discussing Digital Radio, at an IRTS Lecture in Dundalk, a few years ago, two Radio Amateurs became quite irate and irrational, saying that Digital Radio would never be encouraged in their area - end of story. Famous last words me thinks! Their part of the country now has the highest uptake of Digital Radio according to the DMR listings. They also have **Zello** access into their Repeater network. **The circle turns!**

A certain well-seasoned HF contest operator would throw forty fits at the thought of an internet connection to a major remote HF radio installation in a beautifully RF quiet area. I am sure that WiFi radio would provoke an instantaneous TIA in his case.

Looking outside the box, one must see the way commercial broadcasting has developed. Not only is it Digital but almost all commercial broadcasters stream via the internet and can be picked up on WiFi radios or mobile phones with the correct app. Nobody bats an eyelid about this, and it is an excellent opportunity to listen to stations in HiFi quality from locations all over the world.

Commercial two-way radio is very much influenced and controlled via the internet whether it be by DMR, P25, NXDN or TETRA operation. Security companies would be lost without video feeds from remote sites via the internet. Taxi company dispatchers are a prime user of 4G Data communications.

Terribly sorry, but things are changing, and we, as radio amateurs, will have to adapt, adopt and improve as this is what we do. DMR, D-Star, Yaesu Fusion, P25 and NXDN all have an input and output via the internet somewhere along the line. One can transmit into a repeater or gateway in Galway and come out in Australia over another repeater. Hey - how many sit patiently waiting for DX on the HF bands. Australia is not DX on Digital Modes! A few seconds of a call will bring up an Australian station almost immediately on Digital Radio - no pile ups or poor operating here. Digital operators are gentlemen.

The formation of interlinked modes, EchoLink and repeaters into a Hub has proven successful and it has facilitated many operators who just cannot transmit on an external antenna or who are not in the range of a repeater to communicate.

If you are not into Amateur Radio, this is the ideal system to keep in touch with family and friends all over the world via Zello or other personal talk areas not associated with the licenced operators. The cost is minimal.

Whilst Internet Radio is so often branded as **"Not Real Radio"** by the "old and bald" and in fact, the "neo bald", it provides a means of communication to those with limited resources for antenna installation and who are dogged by QRM complaints. Irrespective of where in the world one wishes to operate, provided there is a cellular network there is access. Operating mobile does not require any external antennas making life simple. If one is away on the holidays it is possible to keep in touch with the hobby through the Internet radio system. How many access remote SDR radio receivers via the internet? If you have no license at all, use Zello to set up a personal channel to keep in touch with family and friends.

Whatever floats the boat at the end of the day!

To quote Chris, G7DDN, **"Does the fact that one transmits on cellular frequencies at 800MHz, 900MHz, 1800MHz, 2100MHz or on Wi-Fi on 2.4GHz or 5GHz really matter? Is there something intrinsically evil about that?"**

Is there more virtue in using 14 MHz or 144 MHz, for example?

They are only "frequencies" after all" •

R.F. Byrnes

Mills on the Air with EI3CC

The aim of Mills The Air is to bring together amateur radio operators and clubs to promote the hobby, whilst helping preserve some of the wonderful heritage of our Windmills and Watermills. However we will welcome any Tidal Mills, Treadle Mills or Horse Mills as there is a wide variety of those to choose from.



Tacumshane Mill, Co. Wexford

This would be our third year participating in this event and we were heading to Tacumshane windmill in Wexford.

Designated a national monument in 1952, Tacumshane Windmill is the only surviving complete windmill of its kind in the Republic of Ireland. Built in 1846, it features a rare revolving straw thatch cap to catch the wind for its sails. <https://www.discoverireland.ie/wexford/tacumshane-windmill>

The mill is also adjoined by the Meylers bar/restaurant <https://meylersmillhouse.com/> where the food is a joy for the pallet.

As usual we set off from the QTH on Friday morning and traveled to passage east car ferry, this takes us across the river Suir and reduces the miles to the mill by some margin.



On arrival at the mill, we set about getting a station setup. We have what we call our RCU radio comms unit. This is a station trailer unit fully self-supporting with solar power and all onboard equipment needed for an activation.

A number of windmills are operational on air over the weekend and we try and log as many as we can' 40m is the preferred band as most of the operating is into UK and Europe,

Friday evening, we got set up and we then enjoyed a BBQ our chef was Sam EI4VI a new member to EI3CC, Sam hails from south Africa so the BBQ (Braai) had a south African flavor and was delicious.



Later I retired to the radio unit and had a few contacts on CW and made sure we were ready for Saturday the official day for the Mills activation.

Saturday morning arrived and after breakfast we went live from the mill, conditions were not great there was some heavy QSB and a lack of any mills into Europe with those conditions. But we pressed on and logged what we could and talking to other stations they had the same issues.

Our activations are also a promoting exercise and we always endeavor to encourage kids into the science of the hobby, so our tables have a number of electronic kits that they can play with and an explanation of what's going on each time.

Kids are the future of our hobby and in this world of phones it's good to get them back to grass roots of science.

Mills on the Air with EI3CC

The CW key, as always, fascinates them and after getting some use on a straight key they can then have a go on the paddle and see where time has moved on even with a CW key.



Wayne was busy in QSO's also on the QO-100 satellite some visiting operators were intrigued with the QO-100 and Wayne was able to explain how to set up a station from scratch and what equipment would be needed.

Wayne EI7HKB showing Martin EI3GO a band plan for the QO-100 and how he was able to use the FT-290R as his satellite radio.



We use the Sat Rover unit on a 1200mm dish and it works very well. This system is particularly useful if the HF Band conditions are in bad shape as we can still make

plenty of QSOs

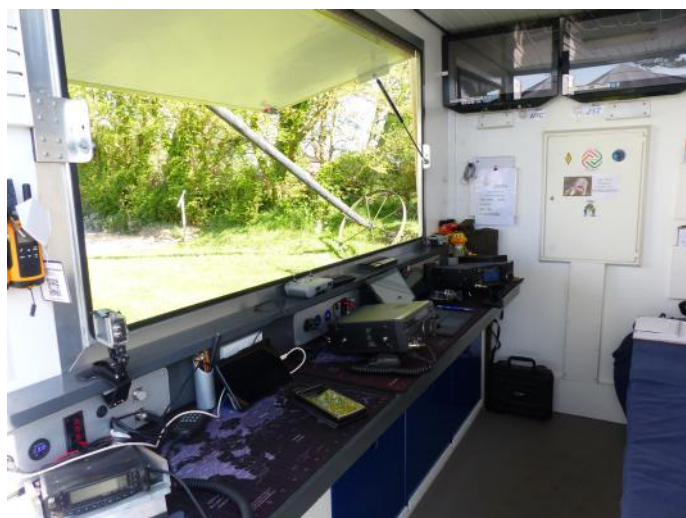
During the afternoon, we were kept busy as the Bar/Restaurant next door was holding holy communion party's we had placed our club sign in the beer garden and this pulled in the public into us at the mill.

We have a club selfie frame which is always an ice breaker if you want to get pictures of your visitors and needless to say it was in use all day

Here we have Jorge and his son Bruno our newest members enjoying the first EI3CC activation and posing for the selfie.



With a long day over a good few contacts in the log, I think we worked maybe 18 mills which was not bad considering the conditions.



We took a decision Saturday evening to leave the mill early Sunday morning as rain and thunder had been forecast for mid-day and nothing worse stripping a camp in rain.

We have a video on our YouTube channel of this activation as with many others we have done check out the link provided here:

<https://www.youtube.com/channel/UC1A1qJM-kdhq-cKiHV6zu0A>

Roll on next year and again we will be back in Wexford and trying again to get as many mills in the logs ●

My Journey Into Radio

I always had a fascination from a very young age. I can remember visiting elderly relatives many of whom had old sideboard type radios in their houses. I used to be fascinated looking at the tuning dials marked with all these distant countries on them and including 'ATHLONE' my hometown marked on most of them due to the old RTE transmitter site in the Moydrum area of Athlone since 1933.



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Many trips to the library and getting books out from the school library about radio ensued and my interest was well and truly peaked. Someone had given me an 11-band shortwave receiver and I spent countless hours tuning around on this thing to see what the furthest station was I could pick up. Aged 7 I seen 'Smokey and the Bandit' for the first time and I dogged my old man to get a CB. This was in 1982, and CB was still very popular at the time.

Eventually, he caved and we had a little Sharp CB-2460 40 channel AM set installed in the old man's Hillman Avenger. My 'handle' was 'The Viperman' and the old man called himself 'the faker baker' as he was a baker by trade. Back then there were loads of local breakers on the rig. We used to have great craic chatting and pretending we were Smokey or the Bandit. I recently got my hands on a Sharp 40 and restored it just to have for nostalgias sake and sometimes to listen to the 'Superbowl' on channel 6 where even today you'll hear the big stations from the USA clear as a bell.



Some time down the road after that we had a sideband rig in 'the wrapper' I think it was a Ham International Concorde II if memory serves, and I discovered channel 52 or 27.555 on USB. This opened a

whole new world of obsession for me in terms of DX'ing and seeing how many different places I could talk to. We had a base station set up in the house at this stage in the shed comprising of a President Madison and a Bremi BRL 200 Amp and an Antron 99 on the stack. I often remember staying up half the night on that radio.

I'm going to fast forward a pile of years now and get to the stage where I started messing around and taking things apart to see what was inside or steal a couple of bulbs from the Christmas tree lights for the meters in my madison. I have always been the inquisitive type and took things to bits. It took a decade of that or so before I could put things back together. Radios, cars, engines, motorbikes do not matter to me I'll have a go. My wife calls me 'MacGyver'.

I think it was in 2008 or so I went and got my ticket and became EI7GKB. Had good fun for a few years but a 'Chicken Box' was always on my operating desk. I really started to tinker with them at his point as I had amassed a lot of them in deals and they had various problems or just plain didn't work at all. Some I managed to fix and others I had no clue. During all this, I put a video on YouTube of a Ham International Jumbo I had and had fitted a Superstar 3900 inside it with frequency readout and all on it.



Looking back, it was very crudely done, but I loved it and so did the people on YouTube. I continued tinkering and honing my craft and uploading videos. People were starting to subscribe to my channel, and it was starting to grow. I started to get a bit more serious about it and got my self some test equipment to help me along and started the

My Journey Into Radio

first of many iterations of my electronics bench in the 'Empire of dirt' aka the shed.

It was popular back in the day for CB sets to be modified or 'converted' to have extra channels. My Madison was, it had a 6 position switch where the Phone jack use to be and it went from 25 to 28 MHz and covers all the 'alpha' channels. All I knew back then was they were done by 'yer man in Dublin' I used to admire the way he braided all the extra wires and other little attention to details here and there. A friend (Andrew McEntaggert) gave me a President Adams that had been very battered, parts plundered from it and what not. Over a period of time, I got it fixed up and working.



audio processing. Dicking around making aerials G5RV, ZS6BKW and finally settling on a 204-foot doublet fed with open wire all the way to the ATU. I really love to make and tinker with things rather than buying them. I get immense satisfaction from that. At this point I'm unsure of exactly how many radios I have done. But most of them are on YouTube. I deleted a lot of the very early stuff as it was crap, but there's a pretty extensive back catalogue there. YouTube for me is now a way of life. Its like a peek into my life and the things that interest me and will always be there and nice to look back on.



I noticed straight away it had been done by 'yer man in Dublin' as I recognised the work. Andrew told me his name was Ray something or other. I had made a couple of videos on the progress of the Adams and mention that all I knew was his name was Ray. Next thing he commented on the video, and we exchanged details and have been really good friends ever since. Truth be told, without ray I'd be lost for problematic radios. We don't call him 'The Jedi' for nothing you know. As time progressed people started send me their radios to do what I do with them. I spend a huge amount of time on the cosmetic end of things.

I've taken radios that were thrown in sheds and gone all rusty and everything and turned them in to total one offs. A lot of people don't like what I do to them but all I can say is its called Irish Custom Radios for a reason. Besides, I have returned plenty of radios back to bone stock as they came out of the box like new condition also. If someone wants a radio done in pink with yellow spots and blue LEDs, I will make it happen. Later in the Ham Radio side of things I went and did the CW test at the Rally in Coolmine around 6 or 7 years ago and I became EI7KO.



I'd like to thank some people

Tony Magliocco EI6DL and Mick Burke EI4AL both SK now.

These two guys were my mentors, they taught me so much and I will be forever in their debt.

My Long-suffering wife Denise for being a shed widow.

Ray Byrne for being a great friend and saving me when I make a mess •



Various journeys ensued of playing with outboard

George Donaldson EI7KO
ei7kogeorge@gmail.com

Galway VHF Group EmComms

The Galway VHF Group have been involved with Emergency Communications since 1983 where we provided emergency communications for the Galway Head of the River, a rowing event. This was a demonstration of Emergency Communications for the IRTS Committee who were considering a National Emergency Communications Network at the time. Gerry Gervin, Sean Nolan and Paul Martin spent the weekend in Galway to observe the operation. Over subsequent years we have employed HF and VHF systems during many EmComm operations. We even wrote the first copy of the AREN manual.

During the Head of the River event, we provided communications for the water safety boats deployed long the 3.1mile course on River Corrib. In addition, we logged the boats entering the course at the start line and leaving the course at the finish line this ensured that they were all accounted for. This would have been well before the National AREN Group was set up.

As we are *not* members of AREN, we do not refer to our activities as AREN operations or training.

Following the Head of the River, we were asked to assist with the



The Order of Malta Ambulances on Standby at the Connemara Ultra Marathon 2025

Galway Regatta, The Croi Cycle around Connemara, the Cong Galway Sailing race, the Galway Croi Etape, Castlebar 4 days Walking Festival, the Kinvara Rock and Road, Marathon, the Connemara Ultra Marathon, The Fanore Greenway Loop walk, the Galway Walking Club Western Way Walk and Galway Motor Club Rallies.

We have a good working relationship with Galway Civil Defence, The Order of Malta, Bike Marshals, Galway Mountain Rescue, the Gardai and the Ambulance service. This relationship has been built up via many events over time.

We often test our equipment in areas prior to an event to check out best locations to optimise communications and on the day of the operation the results would be entirely different when using VHF. This was found to be a result of setting up just a few feet from the original position previously tested.

Whilst operating in Leenane we were receiving poor signals from our Base in the Maam Valley. Thinking that the rig was maybe at fault, I got into my car and listened on my own radio. Superb S 9+ signals were received on a mag mount antenna. We set up the query faulty rig into my car and it also received at S 9+. Problem solved in previous years the station had been set up in a different part of the car park. By moving the station 10 feet to the from its current position, we opened a good VHF Path to base. This was presumably down to the refraction of the VHF signal though gaps in the mountains.

Always expect the unexpected and ensure that there is a backup plan to make changes on the hoof.

Over the years, we have tried several communications systems. VHF is not favourable in Mountainous areas and 80 metres is way better at penetrating hills and valleys. There is little point in using VHF and tying up operators relaying messages. By sending messages direct to net control one can reduce the numbers of operators required or deploy them to more useful tasks. Better to send the message direct to Net Control rather than through a chain of operators. VHF and UHF operation with handhelds is possible where the activity is mainly line of sight and we often use this for Regattas and the Head of the River.

Top Band was excellent and very good at penetrating the hills and valleys in Connemara via ground wave, but the major difficulty was the cumbersome mobile antennas and providing sufficient earthing under the whip antenna. Some cars are just



Denny O'Dwyer and Ailish at The Connemara Ultra Marathon 2025

Galway VHF Group EmComms

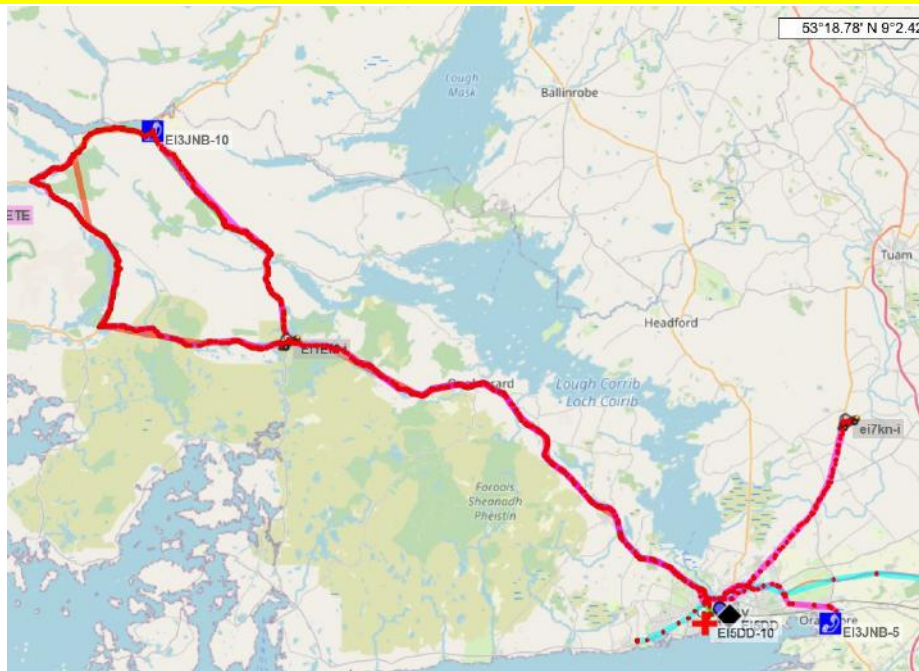
impossible to get good earth continuity on the chassis.

5 MHz operation has been tested in Connemara with good results but not many in our group had an interest in this band. It is an excellent compromise between 80 and 40 metres and ideal for NVIS communications. 40 metres operation, whilst attractive, would be impossible for the group to hold a frequency as the band is so narrow and trying to hold onto a frequency without QRM would be difficult.

We determined that 4 metres mobile operation does have an edge over 2 metre operation and obtained surprising results when experimenting with it during a cycle race through the hills in Connemara. 4 metres gave huge improvement in range between two mobiles even with obstructions. Naturally 4 metres has been employed as a backup system to the HF operation.

We have experimented with PTT over cellular (POC) systems and ran an entire event using this although we did have back up communications to be on the safe side. Most of the digital modes have been tried using Hotspots in cars and they performed very well. My personal favourite was P25, however, not many possess P25 equipment. A certain organisation frowned upon digital modes of communication thorough hotspots, but we can assure them that it worked for us and the quality of communications were reliable. We have a Hytera UHF DMR portable repeater if circumstances were suited to its use.

By testing the PTT over cellular system, we were able to suggest a



APRS Map showing the paths of Vehicles throughout the Ultra Marathon 2025

solution for the Bike Marshals who were initially having difficulties using PMR 446 radios. They now have a similar commercial system and can literally communicate across the whole of Ireland and beyond. An ideal system for the "Blood Bikes" who transport products from the Nation Blood Transfusion Centre in Dublin to Hospitals throughout the country on a voluntary basis.

Hamshack Hotline, a VOIP phone system, has been used between three base locations located at medical centres during a hillwalking Festival. In addition, the radio operators in these locations were communicating with the portable and mobiles in their area. The hotlines enabled event information to be passed quickly between medical centres. Maybe not radio, but Hamshack Hotline is another facility that one can marry into an operation.

The use of APRS on VHF is a bit of a disaster in Connemara and the Burren as mountainous terrain would require too many remote stations. We employ APRS

DROID on the mobile phone to give us position reports. No apologies for doing this! Cellular Networks are Radio Communication and if the system works, we incorporate it.

APRS DROID works extremely well and as a result we can reduce superfluous communications by eliminating frequent "Where are you Messages". We can leave the phone on the Dashboard with the APRS.FI map on screen everyone's location displayed on the map. This has proven invaluable when the Gardai want to know when they must close a section of road as the deluge of marathon personnel approach.

Data Comms have been investigated, and Packet Radio would have been our initial choice many years ago. So many different systems have become available since and each with their own merits such as error checking and correction. RTTY was used by the Territorial Army Signals Regiment to update the situation during the Oxford and Cambridge boat race back in the 60s. I would not discount RTTY or ASCII for solid point-to-point links, but we must move forward.

Some say that JS8 Call is the way to go but it is clunky and cumbersome. We have proven that VARA is by far the most superior system available. A form of VARA is employed by the military in some countries, therefore a proven and reliable method to transfer data.



Always time for a coffee and bun at Phoebe's in the Inagh Valley

Galway VHF Group EmComms



Marathon Runners in the Inage Valley 2025

VARA data transfer speeds are second to none over a good path and are also superior over low signal paths on HF. Files and Pictures can be transferred via VARA at high speeds. Email messages can be sent via WinLink which is an Email system operating on HF and VHF. VARA can be used on HF and VHF. Naturally VHF links can be extremely fast, and this system would be an ideal choice for a BBS network on VHF. VARA is fast on HF, even with the rapidly changing conditions and disturbances. VARA can also be used over the QO-100 satellite.

With the availability of the SatRover and DXPatrol systems, QO-100 is a possibility for future operations where long-distance point to point communications to Collective Communications from Waterford to Galway later in the year. Both voice and data may be used via satellite links.

Whilst we would consider using repeaters, we would not rely on them as they are likely the first systems to go down in bad weather and subsequent power outages. A portable repeater may be employed for a specific operation, but simplex is the first choice. If HF operation can reduce numbers in the field, it would be the preferred system.

Basically, systems tested over 42 years have worked well for us but tomorrow may bring new systems and we will give them a rigorous workout before making any decision to incorporate them. We never dismiss anything without trying it first. We continue to test new systems to determine whether they can be utilised for our operation.

If we had a larger group, we would certainly consider a Radio Trailer from which our operations could be based although most of our events are based in the local Community Centres in the Connemara area.

We do not strut around in "Michelin Man outfits" and puffy luminous jackets instead we do try to blend into the background but occasionally we must identify the cars as

Hillwalking Radio Club based in Tipperary who have a good working, tried, and well tested system developed over time. The Galway Radio Experimenters Club look after the Maamturks Hill Walk, in conjunction with the UCG mountaineering Club, and the Finney Walk. All three Groups, plus the Galway VHF Group, have documented their activities in Ham Radio Ireland and have benefited from regular operations. Their operations have been fine-tuned from their many years of service.

We have never needed to make ourselves known to the local services as they are aware of us. We respect the fact that they may never ask for our assistance as they are a professional body, well trained and they are members of a Trade Union. Local emergencies are dealt with by professional services, and they draw upon their own personnel in times of crisis which is understandable.

In times of major emergency such as the COVID crisis groups should have been willing to assist those who were unable to get out due to illness and requiring medications. This would not have been an onerous task for any group and relatively easy to coordinate. Why did it not happen in this country!

In times of a major disaster, it would be a requirement of all groups to pool their resources and work together putting any differences aside.



Marathon Runners leaving Leenane 2025

EmComm vehicles to be allowed into closed roads. The event is not about us! We keep all messages brief and to the point. We don't spend our time discussing the weather over repeaters during storms. An operation where there is very little conversation but ready to step in when required is obviously working well.

There are no prizes for being verbose.

We acknowledge the East Leinster Amateur Radio Club, and the



Marathon Runners heading towards Maam Bridge 2025

We should be mindful that we are there to assist our communities on a voluntary basis if required.

This is what our hobby and training is all about •

The Kernow Shed of Build Development of 2m Beams

Greetings from the KSOB
Today's article is on my history of going onto 2m band mainly SSB and Hoz beams building up to the current 2m Death ray I current run. All, Home brewed and it's not hard as you think as well the planning stages using On Line calculators.

Many, many, moons ago I brought a very nice FT857D to which opened up for me 2M and 70Cms and built a 6 element Yagi beam for 2M using a Plastic conduit boom and 6mm Ali elements cut to spec and DP as the driver element that was an old beam for 17m given to me and cut up to make up the elements of this 6EI Yagi beam that got me onto 2M. This was thrown up on a hand held telescopic pole and hand rotated at first until I made a home brewed rotation system

I have built; one that will go into in another article.



This got me on air on 2m and seemed to work well and making

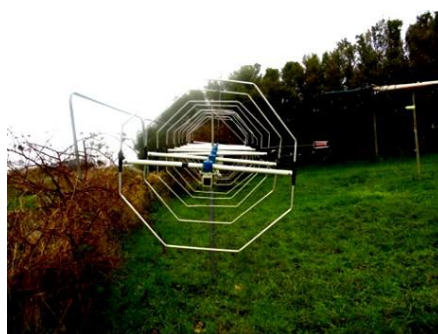


localised contacts as it was a Horizontal polarised antenna. But felt one could do better and came across the Quagi design. This is a Driver and Reflector that's Full wave loops and rest of the elements are Yagi type elements making up total of 7 elements. Pucka antenna and worked a lot better and bigger gain than my old 6 element Yagi.



I wondered if one could increase to 9 Elements BUT add first couple of directors as Full wave loops and then afterwards rest of the directors were Yagi elements again and rebuilt me old Quagi into a more Hybrid version.

This increased gain again was noted. But, me being me and running on ideas on how to improve that and even better still and get more gain out of the antenna for 2m. In my eyes it's how can I throttle more out of the current TX power I put into it. Remember better antenna means better output and gain coming in also to match. Reach more; hear more is what you're after.



Then I came across a Quad site and learnt using Full Wavelength



My 2m Death Ray Antenna

elements on VHF/UHF antennas will give you further gain either way and started the plans for my 2m Death ray. Thusly nicked named by a few parties that saw it referring back to old 60's Sci-fi Movies.

I started buying in lengths of 6mm aluminium tubing and decided to make it out of Octagon shaped elements and not square shapes. Reason behind is this, when signals hit bends it slows it down, therefore round elements are best offer least resistance and Octagon shaped also offer lesser resistance and look very cool. Plus it can even pick up as much as another dB of gain.

I had to work out how to mount the elements to the 25MM 3mm Box Ali boom using old chopping board and water pipe PVC and buy myself some hand pipe benders and work out the angle required to for the octagon loops and have a short bit of Ali to make sure got angles right as a guide. But the feeder point was a tad different still 50 ohms using a RG8X from the driver loop to the pickup point via a Ferrite ring forming the 1:1 Balun and then the main coax could be hooked up via a pick up box that contains the Balun and female coax connection..

Use a decent sized hard drawn coax as far as your mast of rotation point and then run some flexed type coax from there to the Pickup point of the antenna. One is using Force 1 hard drawn and then RG8X for the short bit to antenna ●

Karl Kruger 2E0FEH
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The Call from the Mountains

Hello, my name is Marten and I am writing to you from Bavaria, Germany. Originally born in Ireland, I left my hometown Greystones, Co. Wicklow to move to Germany in 1990. I am a CB operator as well as a SWL (shortwave listener) with the authorised German callsign DE2NMT. I also use the callsign 13EC39 which derives from my callsign 29EC39 that I got in Ireland from Jack (RIP) in Drogheda. I also have other collected callsigns like 13LR029, 13RCT12, 13IS268 and 13WWS268.

I became a CB operator in 1985, just after finishing my Leaving Certificate. In fact, I even bought my first CB, a WKS Model 100, from a teacher! The interest in CB was sparked by what I think some of us would remember, the film Convoy. I saw the movie and was determined to become a CB operator, but my wishes were quietened by my parents giving me a book on CB radio and telling me to finish the school firstly. This book got read so many times that I even knew the CB alphabet, Q Codes and CB phrases before I even was on air! And of course, I was chasing beavers without them knowing I was calling them that.

I originally moved to north Germany, close to Hamburg and started to operate on CB with a President Lincoln 1 which I still have and may have been seen by some Irish CB stations who I had contact with and when I made my videogate on the Facebook ICB site. I moved to Bavaria about 10 years ago, which opened a new way to get in contact with others on CB.

I could not immediately build an antenna on my Bavaria apartment, which caused a long-term break for CB radio. About five years ago, my house owner allowed me to install a mast on my balcony which I still have. The result with this antenna is an occasional interference of up to signal 9 of which I cannot trace its origins. Even if I find the cause, it is questionable if the owner was prepared to do anything about it. A CB operator may be the cause of increasing cancer in the area (this was the way of thinking of my house owner before I was allowed to put up an antenna. I told her to get rid of her mobile phone and her router because they are transmitting all the time!). It was this interference that made me go mobile and try to find contacts in my area.

Through the Covid we had an increase in activity from old and new operators in the CB world. I started to operate in Bayern just before this phrase started and had the problem that mountains (my daughter tells me that they are only hills in my area) blocked my signal and I had difficulties to receive any stations. My solution was to drive to higher locations to improve my range. Sure enough, I got to hear more stations but got to hear that with a mast the range was even better. It triggered a trial period of trying different combinations to get my signal even further out and finding out what was easy to transport and with what antenna to use depending on my surroundings and of course, what was a quick and simple mounting possibility.

THE FIRST ATTEMPTS

Going up to higher locations and using a mobile antenna is one of the easiest way to increase range. Depending on the antenna and the surrounding environment and even the position of the vehicle can influence the signal when you transmit. I recommend taking different antennas in your car and change them out to see if the reception or transmitted signal gets better or worse. Depending on the mounting position on a vehicle (more to the back or front but not a centre position) you can improve your reception by turning your vehicle in a different direction. You may lose the contact to other stations that are involved in your net and who also have a weak signal. I tended to stay where I was and did not move.

My first improvement to a mobile antenna was to try to use an antenna on a mast. I used an Antron 99 mounted on an aluminium 7m mast that I had bought second hand. With this mast I had also acquired a wheel mount. I still have it, but it was one of the first things that was placed in storage for two main reasons. The first one was the weight and the amount of space that this mounting took. The second reason was the problem I had on soft ground.

Depending on how my tire was placed on the base mounting plate, it tended to tilt and cause my antenna to be slanted and not vertical. even h a d a n experience that my antenna started tilting after a delayed



The Call from the Mountains



time that I had not noticed in darkness. By the time I had been 'on air' and wanting to depart, my antenna had an optimal position between horizontal and vertical transmitting. Even the guy wires had pulled itself free making it potentially dangerous. Because of this and just the extra weight made me rethink about using an aluminium mast with this mount.

My next action was changing the mount for a ground sleeve, that was lighter and did not take up much room in my Honda Civic boot. It worked great at the beginning of the summertime but as the ground got dryer, I ended up taking a hammer and a pointed metal-rod to hammer a hole in the hard ground as a guide for the ground sleeve. Winter had not come, and I was fighting with hardened earth, not to think of a frozen one.

Considering frozen ground, I got a tip from another mountain radio operator, he told me to pee on the ground before trying to get the ground sleeve installed. I never tried this, and I cannot recommend anybody trying this on a mountain. In practise please do think of wind direction and for men, what the cold has as a side effect for anybody to go for a pee, should be well known.

The store rack being a big one, had then the ground sleeve added. My final mounting solution was the use of my tow bar with a quick mount holder for racks or for bicycles. This solution was not heavy and made the possibility for me just



to park the car and quickly get my mast installed despite warm or cold weather. The only drawback, the holder is, I find, a bit clumsy but this easy installing makes up for this.

Going back to the aluminium mast and the reason why this also landed beside my store

rack, I had to guy the mast to make sure the wind did not cause the antenna to swing back and forth, causing the mast to bend. Guying the antenna took time and not to mention the same problem that I had with the ground sleeve. Also, the problem with taking two antennas with me to try getting better results in range, meant that my boot was getting full again. An Antron 99 with three segments was not a problem but a Sirio Blizzard with all its bits and pieces plus the required tools made me also rethink the antenna situation.

The solution was using a fiberglass telescopic mast with a wire antenna wound around it. Around? Yes, the antenna is mounted by fixing the tip with tape and turning the rod to wind the wire of the antenna around it. This technique I can recommend, as I have seen the damage caused to a fiberglass mast with hanging wire antennas often causing the thin upper section to break.



Even using tape is not a guarantee that it remains fixed, especially when it is cold. So, just turning the rod while hoisting the antenna is a simple action to ensure a longer life of your fiberglass rod.

My fibreglass mast did a great job. I built myself a T2LT wire antenna that I saw in You-Tube. This was my half-wave antenna, super light and easy to pack away. To get a different radiation pattern antenna, I decided to purchase a Hawkins Thunderbolt SSD 58. Again, a super lightweight and fitted with the T2LT together in a small case. Being a fan of 'do it yourself', I even made my own handmade copy of a Gainmaster 5/8 wave antenna and surprised myself

The Call from the Mountains

that it works. Equipped with these two antennas was all that I needed and is still my standard equipment that I use when I go to my 'hill'.

THE FINAL SOLUTION

The fibreglass telescopic mast was 14 meters long and was quite ideal for my T2LT antenna, but I knew that for an ideal radiation from an antenna at least 11m to the base of the antenna was needed. The timing was perfect as during the strong winter wind, my fibreglass telescopic mast bent over to 90 degrees and suddenly the base section literally ripped itself apart. Looking for a new mast, I got offered a 18-meter Spiderbeam that I still use. This mast has brought me so much joy and fun. I love the looks of people walking by and seeing this mast behind my car reaching in the sky. It is so high that I even get my antenna to radiate over many treetops. Combined with my quick holder for my towing bar, I can get my antenna up within 10 minutes.

The only drawbacks for me to mention concerning this mast is the weight of pulling up the mast. The last two sections get very heavy. The other point is that I recommend to use the screw clamps for fixing the sections in place. There is nothing more annoying as to having to put the mast up again. The mast will swing in wind and when not put up tightly the segments will fall causing the mast to collapse. There is nothing more horrible as hearing the mast collapsing and thinking 'fitness studio?'.

I take care of my mast by cleaning it with washing liquid and spraying it with silicon spray. It protects it from dirt and rain but has the side effect of being very slippery and causing the mast to collapse. That is why I

recommend these screw clamps and its rubber lining.

As a tip for using a fibreglass mast with a thin first segment, I use an electrical wire screw clamp to prevent the antenna from falling. Combined with electrical tape, I get the tip and eyelets of the antenna fixed in position. I can then turn the fibreglass segments to wind the antenna onto the mast. At the base of the antenna, I use again electrical tape to secure the feeding cable with antenna. To make sure that the weight of the feeding cable does not pull on the mast, I tape the cable at least two times more, even though I am not a fan of tape. Use electrical tape and no other super tapes. My mast has lost its outer coating through using duck band. The tape glue destroyed the coating so that I do not have the black surface as it should be.



CONCLUSION

I hope that my report on mountain operating has helped and maybe encouraged others to go out on high grounds and try their luck to receive stations they never normally hear. This is what makes me so happy being on air. Coming from Ireland, my father was a dutchman, my mother came from Indonesia and now living in Germany, I have many stations who recognise me through my accent and hear my joy of receiving new stations. Even this morning I was greeted by two stations who know me from others who spoke about me.

A small tip as to antenna options. If you are on a mountain and have a practically total free view, use a 5/8 wave or 7/8 wave antenna. If you are lower down a mountain slope or surrounded by trees, use a quarter wave or half wave antenna to get your signal out. To explain why, it has to do with the radiating pattern, a quarter wave or half wave have a round characteristic while a 5/8 or 7/8 wave antennas low angle radiation pattern that will project your signal out over a hill or reflecting objects. I hope it will help to get your set-up to work and give you the results of enjoying the moment when someone calls from the mountains.

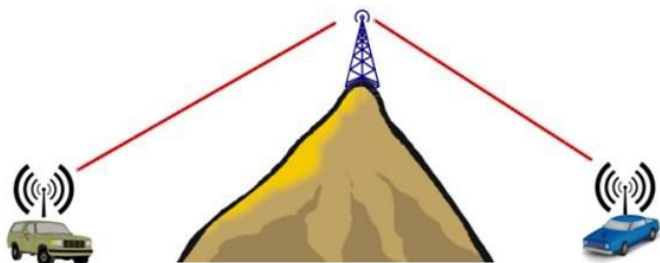
Marten Toonder, 13EC39, 13LR029, 13RCT12, 13IS268, 13WWS268 & DE2NMT from Bavaria, Germany ●



Marten Toonder
martentoonder67@gmail.com

Repeater Etiquette or The Pot Calling the Kettle Black

Intrigued? Grab a coffee and read on. Now... before I start, I am probably the last person that should write this... it reminds me of the saying: "Let he who is without sin cast the first stone."



I spend a lot of time working mobile on VHF and UHF and almost all over our wonderful repeater network. Tributes herewith to our colleagues who keep them all going.

During my many years of operating, I have come across a number of points where I myself have sinned and that explains the title of this short story. So... here goes: (note, these points are not in order of importance, so pls read the lot).

- 1) Starting to speak while pressing the PTT button at the same time. This usually results in the first letter, or letters, of the transmission being cut off. Like: This is EI7II ...becoming is Ei7II.....
- 2) Giving your callsign just once, and only your call sign, nothing else. While you might find that perfectly ok, have a second thought. I am listening to the radio and the transmitter volume is low. By the time I realise that you called a few seconds will have past. Yes, I know someone is there, but I do not know who.
- 3) Expecting an **instant** reply. Folks, while you might be the fastest gun on earth.... I am not. Perhaps I am on the phone, perhaps my passenger is talking to me, or many other reasons prevent me from coming back **immediately** to your call. If you QSY within seconds of that call, I just do not have a chance to get that QSO going.
- 4) Repeatedly calling and calling and calling, 10, 20 times or more. Please trust us, If we can, most of us will come back to you. Endlessly calling and calling will only annoy the hell out of us and make us less likely to answer you.
- 5) Not leaving a sufficient pause. To be brutally honest, If I got a euro for every time I have done this, I would be writing this from my lavish beach resort in the Seychelles! Don't say you have never done this.... I



do not know a single radio experimenter that has not committed this operating mistake. But... before you hack my head off, HERE IS THE WHY:

- 6) Without you leaving a pause when you come back to the person you are in QSO with. ... **I cannot break in.** Remember..... we are operating FM.

Heh.. you say, what the hell has that got to do with it? Let me give you a counter question. WHY do you think airplanes use AM? Have a listen to an AM aircraft transmission. The answer is simple and called the Capture effect.

Being Heard & Sounding Good

Follow this 5-step guide to avoid missing critical parts of the conversation.



FM grabs the strongest signal and locks in on it. AM does not. So... if you do not leave a pause, I cannot get in. Picture this scenario, (granted, it has only happened to me once in over 30 years of operating. I am seeing an accident... and, as is more and more happens to me, I forgot my mobile phone. I desperately want to get on the repeater to get someone to call 999....but I cannot get in !!!!

As you and your buddy are having a long conversation about that wonderful bar you both recently visited. I am next to a person who is bleeding to death and have to listen to you describing how marvellous that beer was. Get the picture? To this day... I do not know if the person I assisted survived, but to this day I am grateful that I was able to break in to the repeater !

In the very very unlikely event that this ever happens to you: break in with the word:

MAYDAY MAYDAY. Experienced operators know that you have crucial emergency traffic and will bend over backwards to assist you.

Folks, colleagues and friends. Yes there is more and this is certainly not an exhaustive list. Allow me to close with this sentiment:

We, you and I have been privileged by us being able to use our allocated frequencies.

We are the custodians of this privilege and to say that it is precious is an understatement.. To all of us: Courtesy, operating knowledge and helping others to become even better operators should be the goal of us all.

Remember this: It is better to aim for the stars and miss, than to aim for the ground and hit it •

Albert Kleyn
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How To Set Up on 11m CB Radio for the New User

Ok, so you've had it in your head for quite a while to do something on CB and have no clue where to start? Well, read on and I will guide you best as I can based on my experiences spanning a 40 plus year career on CB radio.

The Rig

There are two ways you can proceed here, a span-new radio or a classic radio. In my experience I deal with classics but have had quite a few of the newer radios across the bench too. The likes of the Grant II are ok, but the cheaper stuff like the Anytones or similar I was never that impressed with them. Don't like the receivers on them and newer radios tend to use SMT components and lead-free solder which can be prone to joint failures in a short space of time.

Radios like the Cobra 148 GTL-DX command a hefty price tag as they are sought after as many Ops had them in their youth and the rose-tinted glasses are very much on when it comes to these radios. But the Superstar 360FM and the President Richard are the EXACT same radio as the 148. Same board PB010 used in them all but you will pick up the other two for a lot less than the price of a Cobra. Other radios to consider are the likes of a President Lincoln, Stalker IX or a well set up Superstar 3900 are a good starter radio that won't break the bank.

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Stalker IX or a well set up Superstar 3900 are a good starter radio that won't break the bank.

You want a radio that at the very least will cover mid and high bands 26.965 to 27.855. Anything more than this is useless really as you will seldom move off the high band. Avoid CEPT FM radios and UKFM radios like the plague, they are as much use as a handbrake on a canoe if I am being brutally honest. We never used it here back in the day so you won't hear anyone locally on it whatsoever unless you live in the north of Ireland you might hear a few.

So that's the radios and the bands covered, let's talk about the modes you need. The main three will be AM USB and LSB. If the one you're looking at has FM and CW, great but you'll never use them. USB (Upper Side Band) is the mode you'll use the most as it's the most popular worldwide. On LSB (Lower Side Band) on 27.385 for example you'll hear loads of USA stations and Canadians on here once the 'skip is running' and can be quite entertaining to listen to the 'Big Gun' AM stations on 27.026 (CH6 AM).

Most of these radios I have mentioned will produce at least 15 watts on Sideband, and once conditions are right that's more than enough to get you across the Atlantic to the East Coast stations in as far as Ohio. Most of Mainland Europe and South America will be doable with this too. On a few rare occasions I have made it as far as Australia or New Zealand on rig power alone.

The Antenna

The selection of products here is enormous. In this article, I'm going to stick to just vertical type homebase antennas. In Ireland, with the type of weather we get and the frequent storms we get now I would recommend a fibreglass antenna. The likes of a Solarcon A99 or an Imax 200 would be the main two that



stick out in terms of their performance and longevity. Just kind of a put it up and forget about it type deal, they will both handle serious wind, and they perform very well too. Mount it as high up as you can safely and securely away from powerlines etc. There is a large selection of aluminium type antennas

and the Sirio 827 has long been hailed as the king of CB antennas. But to me there are a couple of problems worth considering

with them. They will bend and stay that shape. The 827 has a load of ground plane elements at the bottom of it and birds WILL perch upon them and destroy what ever is below. If a neighbour is going to start moaning over an antenna on your roof an 827 will be the one that will trigger them it versus the fibreglass stuff which is less of a visual eyesore.

The Coax Cable



**RG213 MIL SPEC 50 OHM COAX
SOLD PER METRE**

This is an important part of the setup. Skimp here and you will be on a hiding to nothing. Do NOT use RG58 or RG8X on a base setup. Why??? I hear you ask, well its just too lossy over a long run. Not many of your watts will make it to the antenna. When buying your coax cable at the very least as for decent quality RG213 Military Spec or

How To Set Up on 11m CB Radio for the New User



The PL259 Plugs



convert your 240-volt AC from the socket on the wall to 13.8v DC.



if you want the best LMR400. The LMR 400 is NOT cheap but is it the best.

The best way to explain what I mean by 'lossy' Imagine a 5 gallon bucket full of water. Using the RG58 or RG8X every time you key the mike a flap the size of your fist opens in the bottom of the bucket and closes when you unkey. With the RG213 the flap will be the diameter of your finger and with the LMR 400 it will be say like 3mm in diameter.

Not much else to say here but buy the best you can afford, a 100-euro radio with LMR 400 will run rings around a 500 euro radio using RG58 on transmit and receive. However, its acceptable practice to use very short lengths of RG58 or RG8X as patch leads between gear in the shack as the larger diameter stuff is far too unwieldy for this. But even at that I would be buying the best quality stuff you can get. Buy cheap, buy twice is my motto.

These plugs are used to terminate each end of your coaxial cable and have been around since our Lord wore short trousers. I reckon Noah had them on his marine antenna on the ark too lol. Look, you can buy them dirt cheap online, but they are crap. I always tend to go for the ones that use the Teflon insulators in them. Might cost you a fiver a plug, but you won't have any connection issues like you will with the cheaper plugs. Always make sure to ask for the best quality plugs from your coax provider when you are ordering the cable. The more expensive plugs the better made they are in terms of tolerances to fit the sockets they go into, hence the better the connection.

Power Supplies

Most of the radios I have mentioned will quite happily run on a 10-to-12-amp supply. As most mobile type sets are designed to be in vehicles, they need a DC power supply. To

I always like to have some 'headroom' when it comes to power supplies, so my best advice is to use a 30 Amp supply to 'future proof' yourself. As you progress to the stage where you get your license and get a HF radio, you already have the power supply to run it.

Where to get stuff

Of course, Amazon and eBay are there, but I would suggest using Ray Long in Long communications in Donegal. Ray is a lovely person to deal with and if there is a problem it will be sorted out no problems <https://longcom.ie/default.aspx>. eBay can be a minefield especially for buying radios and I would suggest giving it a wide berth. Since eBay came on the scene, I've bought 2 radios on it as they were odd ball sets you don't see much of. One was fine and the other was full of problems •

George Donaldson EI7KO
ei7kogeorge@gmail.com

DX Commander Venture Antenna for Portable Operation

The New DX Commander Venture Antenna is a lightweight rapidly deployable antenna needing no guys and the vertical pole is just 7m in length.

There are three vertical sections 40m/20m with loading coil, a quarter wave for 20 metres, and a quarter wave for 15 metres. 10 metres is achievable with an ATU which would tune the 20-metre section. There is a resonant point around 27.5 MHz and this can be tuned on 10 metres or 12 metres using an ATU. In fact, the 17-metre band is operable if an ATU is used. There is sufficient wire left over to cut several groups of four 2m radials. The 7m Fibre glass mast is slipped over a ground post that inserted into a picnic umbrella base filled with water or sand. No guys are required.

The Kit of parts comes with a comprehensive sheet of building instructions and should not take much over an

hour for the initial build. Once built, the antenna should not take more than 5 - 10 minutes to erect in the field.

The antenna currently retails in the UK for £199.00 but naturally EU tariffs/customs apply along with postal costs from the UK.

Official Release Video <https://www.youtube.com/watch?v=KWw6eXHp00w&t=2s>

Demonstration of the build <https://www.youtube.com/watch?v=1DcCYpsU4xg>

We will be reviewing this antenna in a future issue •



EJ6KP/p mini-DX-pedition to Arranmore Island, EU-121



Pete, M1PTR and Kieron, M5KJM/EI6KP are members of Stockport Radio Society and had a mini-DX-pedition to Dungloe and Arranmore Island with our station managers the weekend of 8th to 12th May. It was planned as a SSB daytime only operation.

Pete and I had been to Arranmore island before and operated as part of the SRS Contest Group (G50) activity in the IOTA Contest from 2016 to 2019. Covid intervened and put an end to that. However, when we booked into the Blue Ferry office in Dungloe, they remembered us as the 'radio guys' from our previous trips.

We departed Stockport at 07:00 on the 8th for Holyhead, caught the Swift and drove to the Waterside Hotel in Dungloe to save any worry about catching the last ferry to the island as it's a four-hour drive.

In glorious sunshine the next day, once on the island and after going to the accommodation, we took our XYL's on a tour of the island.

After lunch Pete and I started erecting a 40m inverted V dipole on the beach, the tent was on the grass above the beach. The promenade has had a great facelift since we were last there with a car park, children's playground and a small bandstand.

We did a couple of hours operating with EI4L first in



Beautiful Scenery during our tour

the log, working mostly EI's and the UK including some members of SRS. Also, in the log was EI3HRI. The weekend coincided with the Mills on the air of which a few worked us. We had a listen on 15m but couldn't hear any stations and tried a few CQ's.

Saturday saw us setting up the 20m VDA, which works brilliantly close to the sea, and apart from lunchtime, we were on the air till 17:00, occasionally getting a run into western Europe. Propagation was mixed with many varied signal reports from RS 44 to 20 over 9 with QSB, probably due to the tide and skip distance.

EJ6KP/p mini-DX-pedition to Arranmore Island, EU-121



Our Shack



Our antenna System

home on the 07:45 ferry back to Dungloe and then onto Dublin. We finally arrived home at 18:45. It's a 600 mile round trip.

We made 248 contacts over the weekend, and gave a new IOTA to several stations, which is one of the many reasons why we do it.

Our kit consisted of an FT897 running 100W using lipo's into the 40m inverted V dipole and 20m VDA. We took turns of about 30 mins operating and 30 mins logging.

Our only disappointment was that there was no music on in the evenings, however our wives loved the island so much that we're planning on returning next year, probably in June.

If anyone would like any further information about accommodation etc., please feel free to contact me QTHR. QSL cards will be available via ClubLog OQRS. SWL reports are also welcome.



73s from Pete and Kieron, and thanks to our XYL's for allowing us to indulge in the hobby ●

Kieron Murphy

kieronmurphy10@gmail.com

The evening's saw a few drinks in Phil Ban's before dining in Early's bar and then back to Phil Ban's for the 'one we came for' with some great craic with some locals. It was on the way back to the bungalow after all.

Sadly, on Sunday at 15:00 we had to start dismantling the station and getting ready for our journey



20 YEARS ANNIVERSARY

EURAO was established to promote and support the interests of amateur radio operators across Europe and around the world. For two decades, it has provided a strong voice for hams, encouraging cooperation, technical advancement, and friendship among radio amateurs globally. Whether you're chasing special event stations, participating in EURAO activities, or simply curious, thank you for stopping by. We appreciate your QSO and your interest in amateur radio! In a very short period of time, EURAO has managed to gather around itself many radio amateurs from all over the world in an exciting collective project that has received recognition from many international bodies.

Association, clubs, groups and individuals are part of this young, global and open ecosystem called European Radio Amateurs' Organization. Thanks to all for your support.

Special Event Stations

CS20EURAO - April 10 - December 31

YR2EURAO - April 10 - December 31

AO2EURAO - June 14 - July 13

ON20EURAO - June 15 - August 14

Road to the North - The Enniskillen Rally

We at EI3CC each year cover a large area of the country, two occasions take us across the border into Northern Ireland. Our first trip in 2025 across the border again brings us to the Lough Erne Radio Rally. This is our second visit to this rally and means a round trip on the road of 620km.



In my case, being the furthest away it was a 5am start and then heading to pick up two other members Alex EI1895 and Wayne EI7HKB some 60km away. We also had to pick up another member Dale EI7HDB in one of the motorway services on route. The journey time for us would be approx. three and a half hours with a couple of stops for coffee.

We arrived at 10:15 am and with the rally due to kick off at 11am we had made good time and could set up our table at a leisurely pace. Steve had left Galway at around 6:30am and arrived before us.

We would be sharing three tables EI3CC – Ham Radio Ireland Magazine Wayne EI7HKB. Wayne displaying his now famous 49:1 balun for the end-fed antenna and other homebrew projects.



These were very popular to the point that a trader has asked Wayne if he would consider making them for him and he would take them and sell on.

Beside Wayne was Steve EI5DD with a stand promoting the revived Ham Radio Ireland Magazine.



At the time of writing the two editions launched have now exceeded 10,300 downloads in 68 countries and has really taken off. Having a free global download has hit the right spot with operators in various parts of the globe and it has been discussed on various podcasts and forums with great results.



Steve had brought along a lovely LED scrolling display that can have various text displays by using an App on your phone, so one displayed the HRI – EURAO – RSGB etc and one he donated to the EI3CC Group displayed our club info.

That brings me to the EI3CC table again this year we had some club merchandise Mugs, Pens, Hats, and Car stickers etc. and rally goers were happy to purchase items and also pick up orders of embroidered polo shirts and coats.



The rally has a dedicated following so no big showstopper but rather a more friendly gathering, EI3CC have had a great welcome from the organisers, and they have no hang-ups about what we display at the rally and no such nonsense as you can't display that here they are from the other side.

We as a group don't discriminate against any club,



Road to the North - The Enniskillen Rally

group or organization and it was great to see this applies to the Lough Erne rally and in fact should apply at all events. Items for sale were many and there was a great variety of items on display from new to old and just depended how deep your pockets were.



PD radio always has a great display of new out-of-the-box equipment so it is a great opportunity to see the radios in the flesh.

Raymond Long again with many items from antenna to coax and a mixture of connectors laid out as usual in impeccable style as were many of the tables.



Rallies also are a social gathering so for many it is a chance to catch up with friends and talk about the rare DX.



We would be leaving the rally with a bit more cargo than we arrived with as some of the guys had purchased some items and the talking topic around the table would be how to get it in the house without it being spotted.

In what seemed like no time the 2025 rally had come to an end and we had had a great day with great friends and good laughs from every table again. We look forward to 2026 and we are looking at a weekend in this wonderful part of the country.

After we had loaded, we decided we would get some lunch. Not knowing the route that well, Steve was trying to locate somewhere to dine. While the GPS was displaying the symbols, most of the spots seem to be marking Deli counters in garages. Finally, we drove into a small town and saw a hotel advertising food served all day. But, as we parked, there was a restaurant in front of us



A great spot was found - Nikki's restaurant in a village called Granard, Co. Longford. We were treated like kings with fine food and seeing as it was 24°C outside free jugs of orange to keep us cool. We were offered the roasts of the day and good portions no less. Nikki's definitely deserves the **"EI3CC *** Star Award"** for tasty food.



Steve headed west to Galway while we were on a southern route with some deviation on route (lost in other words) but with great laughs of where the heck are we and ending up at the curragh army base.

On the way back we tried out the POC radio system using the Zello platform. These worked out well and the audio was strong and clear. At this stage we were travelling in opposite directions and yet there were no breaks in the signal. The bottom line is one could be driving around Tramore or the world and yet have perfect communications with a station driving around Galway.

So get yourself out to your rallies even if its just to meet up and have a natter with friends and to the organisers, please refrain from discriminating against groups more so if the result is promoting our hobby if one goes left and one goes right it's no big deal as long as we both end up on the same road. The common interest is the hobby and Radio.

The true spirit of amateur radio is through friendship and inclusivity. The Lough Erne Radio Club's Rally certainly ticks all the boxes in this respect. **We'll be back!**

Video link: <https://www.youtube.com/watch?v=e0FIHWpLsGc>

International Dog Day Special Event 26th August

I am Caryn, KD2GUT, an operator on an international team that will be activating a global special event that has grown over the years, carrying the message of kindness and humane treatment of pets needing rescue from abuse and neglect.



Many of us in the ham radio community treasure our own animals so much, often as companions in our shacks and on our adventurous activations. Now it is time to advocate for others.

Our annual special event will be throughout August, first for cats and then for dogs, in connection with the respective national/international days of observance designated for both animals.

The global efforts of amateur radio operators are calling attention to the urgent needs of abandoned, abused, neglected and homeless dogs by operating special event stations in Europe and the US to mark International Dog Day.



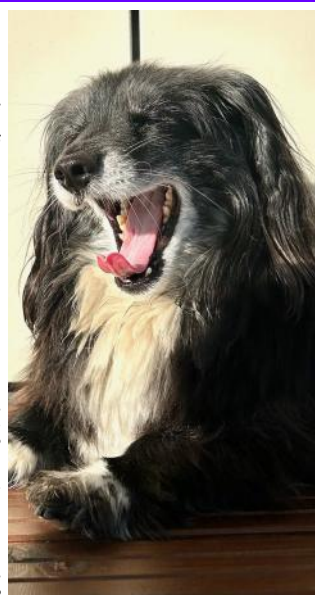
When a group of radio operators begin calling “CQ International Dog Day” in August, they’re not just looking for QSOs.

They are in search of people who have room in their hearts to help the abandoned, abused and homeless dogs around the world in whatever way they can. This dozen or so special event operators know the power of rescue because they’ve been deeply involved in it themselves : Hanz, YL3JD, and his wife opened their home – first in Holland, later in Latvia – and have given needy dogs a second chance at a new family. In Australia, and later in Germany, Ed, DD5LP, and his wife discovered – several times – that their household was incomplete without canine company. Many of the other operators’ rescued dogs were adopted after hard lives on the street; others were at the pound, hours away from being euthanized.

International Dog Day (and in the US, National Dog

Day) is August 26 every year. The tradition was created by US pet advocate Colleen Paige as a day to recognise the needs of society’s unwanted and cast-off dogs and affirm the commitment to adopt, donate or raise awareness of their special needs.

Hanz amplified the original message by adding an amateur radio component in 2022, taking the special-event callsign YL1DOG and operating as a single station. The following year he was joined by Chris, G5VZ, and David, G4YVM, in the UK. By 2024, a team of eight US rescue-dog advocates, operating as K2D, had come on board. This year is the biggest yet, as hams in Germany and other countries run with the pack. All operators will be looking to hear from dog-lovers and supporters in either CW or SSB on HF, on VHF/UHF simplex, or via DMR and Echolink.



The international team has added incentive certificates, including special endorsements such as “Full Kennel,” the equivalent of a clean sweep. Their website, <https://dogdayradio.org/> is updated regularly with the operators’ special-event callsigns, their operating schedules, a chance to meet the dogs who inspired them and hear their stories.

In case you are wondering where the cats are – well, they’re running ahead of the dogs! International Cat Day will be operating as a separate event, two weeks before

the Dog Day operators get on the air – and they will be carrying a similar message for cat-rescue awareness.



See <https://catdayradio.org/> for details.

For live updates of both events, to search for the different callsigns, to see the operators’ schedules or to apply for and download award certificates visit these links when they become available:

For international Cat Day QSOs <https://hamlog.online/icd>
For International Dog Day QSOs <https://hamlog.online/idd>

Meanwhile, be aware that all special-event operators will be working like dogs – and why not? – because they want to hear and share as many rescue stories as they can •

Caryn Eve Murray KD2GUT
squirrelmama@gmail.com



Irish Built Telescopic Mast
086 870 9265

CUSTOM BUILT

MAST CONVERSIONS

DRIVE ON SUPPORT

CUSTOM T-K BRACKET



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facebook



EI3CC And RNLI Tramore



helping to raise
funds for our
lifeboat



One of the most important items needed on coastal country's is a good lifeboat, and if you have a good lifeboat, you need a good crew too.

The RNLI is the charity that saves lives at sea through lifeboat search and rescue, lifeguards, water safety education and flood rescue.

Each year, we at EI3CC operate a station and radio and electronics display here on our seafront in Tramore, the aim is to help raise funds which will go towards equipment needed to keep the service running.

The boats are crewed by local male/female crew so it's great to be able to give something back and it's good for exposure to our hobby.

The crew bring along one of the inshore lifeboats and some of their own badges / stickers / flags etc. and of course the collection buckets and card swipe device.

We plan our activation on the same weekend as our annual bike gathering concert at the lower end of the promenade.



This means we have great footfall and plenty of people wanting to support a worthy cause. As usual we bring along our RCU (radio communication unit) and this makes setting up very easy as it has all onboard that we need for outdoor operations, it has full solar panel system which keeps the batteries in tip top condition so no need for generators.



EI3CC Operating RNLI SOS Radio

We also have coffee / tea making equipment on board for our visitors, we always have plenty call in for the tea/coffee and we never turn anyone away even while on duty.



On the day we run our group call EI3CC and try and contact other stations that are activating RNLI SOS stations.

Being in a seaside resort it's a great excuse to get the XYL's out for the day so we tend to have a good social gathering and plenty of ice cream cones if the weather is warm.



At the front of the RCU we have a number of tables that comprise of electronic kits that the younger passer-by may want to play with and in most cases the parents get involved to the point that we can get rivalry competitions between parents and the kids.

Another favourite, is the CW key, as soon as the public hear the sound of SOS, they make tracks to the tables

and want to have a go at sending some CW while explaining to there kids that this was communication long before mobile phones.



The loop as we call it also brings out the competition too with groups and families.

These are so simple games or kits and it's amazing with all the tech today that they still draw in people to your table.



Some of the operators on the day travel a good distance to be with us because of the RNLI and Eddie EI3FFB being one of those all the way from Bansha, also George EI5033 and Dale EI7HDB to name a few.

We end up having a que for operators and they are only too happy to that they are supporting the SOS - RNLI week. And then as quick as it was to start the activation in the morning it was all over for 2025, again we did what we could to help support our local crew even though the bands were not great we did manage good few stations so roll on 2026 SOS week for our volunteer life savers.

Check out our YouTube Channel for a video of the activation, and also other activations we operate through the year •

<https://www.youtube.com/@CollectiveCommunicationEI3CC>



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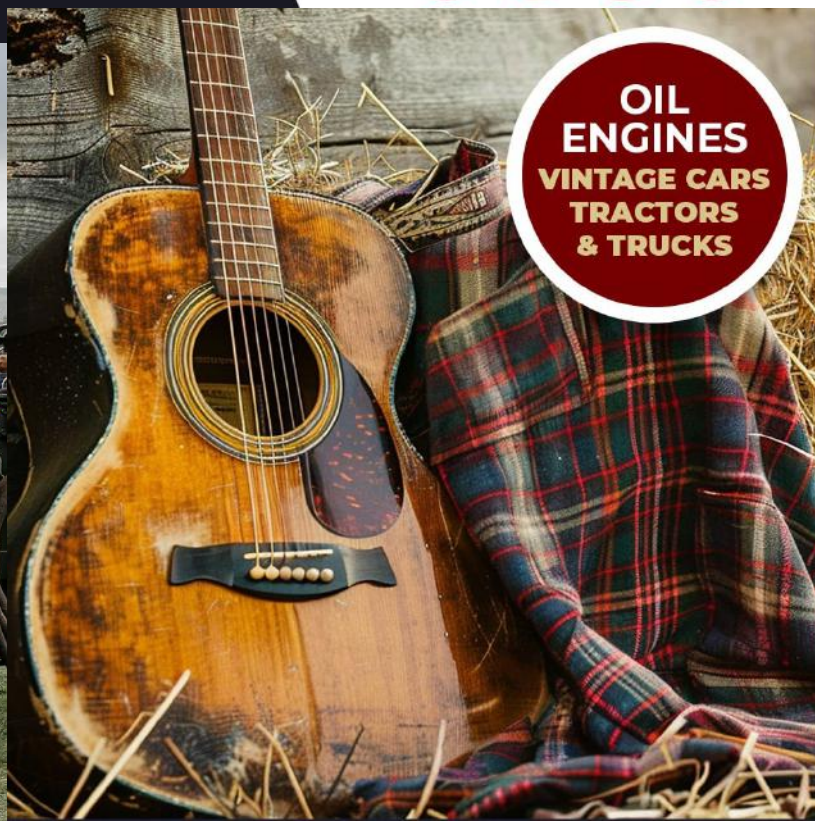
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CONTACT US
01444 870333



My name is Adam Sweeney, and in 2026 I plan to be the youngest Irish person to summit Mount Everest, the tallest mountain in the world at the age of 22, with the current youngest being 26.

In February of this year I completed my first big mountain - the highest mountain in South America, Aconcagua standing at 6961m in The Andes. With a success rate of only 30% I was delighted to make it to the summit with no problems with fitness, skill, or altitude sickness. As far as I am aware, at 20 years of age, I am the youngest Irish person to summit Aconcagua, but I could be proved wrong with that fact!!

Summitting Aconcagua in the Argentinian Andes, my first 7 summit, has given me the confidence to move on with my dream.

In November 2024 I plan to climb Ama Dablam with an Irish Team in Nepal. At 6,812 meters which is slightly lower than Aconcagua but it is a step up in technicality and a natural training ground for Everest.

In May 2025, I'll be going to Alaska to tackle Denali, the highest mountain in North America. The approach to Denali is a challenge in itself, where I will have to haul my expedition gear on a sled to Base Camp, taking 3-4 days. The summit attempt itself will take 21 days, with time taken acclimatising to the mountain altitude, before an assault to the top which stands at 6190m. This is a fully self-sufficient trip and a great mental test before Everest.

With your support, we can create human history and be the youngest Irish person ever to summit Everest, the worlds highest mountain.

Thank you ,
Adam Sweeney

You can help by clicking on the link below or by copy and pasting the link into your browser and donating to my Go Fund Me page

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DAW Electronics

My business is a comprehensive repair facility now based for the last 6 years in South Wales. I have a country wide client base and special thanks to all my customers so far for that. In the last 6 years I have repaired and serviced somewhere in the region of 2000 radios varying from military Clansman to some of the latest Amateur radio and CB equipment. As a time served engineer for the last 40 years, I have a good knowledge base from VLF to microwave equipment solid state and valved. To new and old clients, I would like to thank you for your support and trust in my service.

Email: dave.g4tiw@hotmail.co.uk

Mobile: 0044 7785294926

(Monday to Friday Business Hours: 9 - 6pm)



Summits on the Air is an amateur radio awards scheme. To participate in this scheme you do not become a "member", there are no dues to be paid or membership cards to be issued. You can join in straight away! Just go to SOTAwatch to see what is happening right now in SOTA. To post to SOTA facilities you will

need to [register an account](#) and then you will be able to add alerts and spots on SOTAwatch (which will likely help a lot, if you plan to activate) and upload your chases or activations to the SOTA database. There is no charge for registering. The [SOTA Reflector](#) uses a separate user account system; so to join in with discussions there simply click on the "Sign Up" button. We recommend that you save a copy of your passwords in a safe place - every week

we have to help people who have forgotten their passwords!

You can then Chase or Activate when you feel like it - SOTA is global, activations can take place throughout the 24 hours of the day. Once you transfer your log to the database there is a permanent record and you can check your entries against those of the stations that you contacted, and keep track of your progress towards awards. Later you might wish to purchase awards, trophies or goods from our on-line shop. These purchases and the occasional donation are the means of financing the SOTA facilities.

More information:

<https://www.irts.ie/dnloads/sota.pdf>

<https://www.sota.org.uk/>

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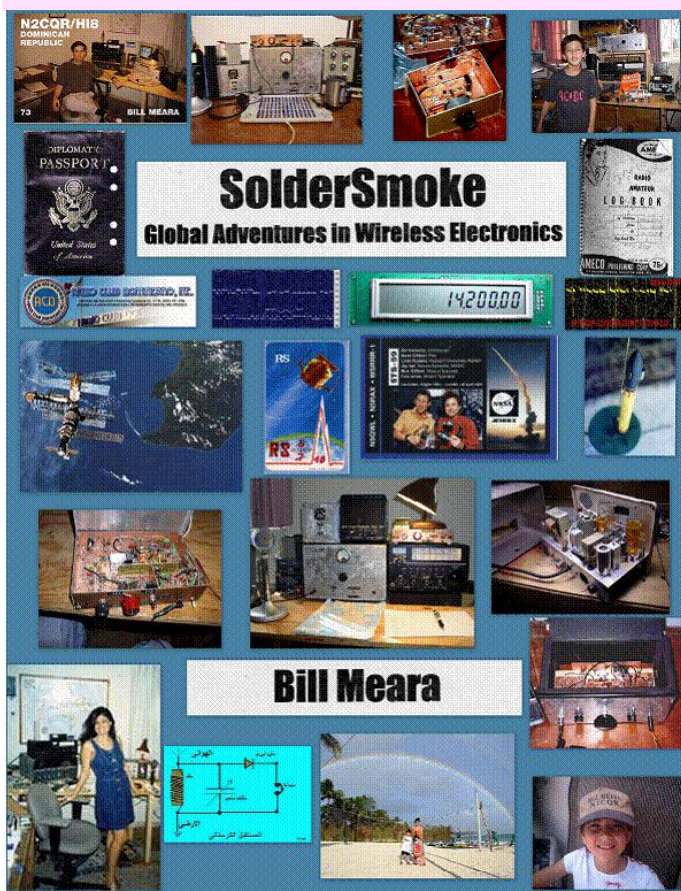
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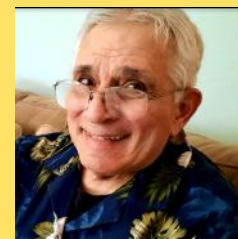
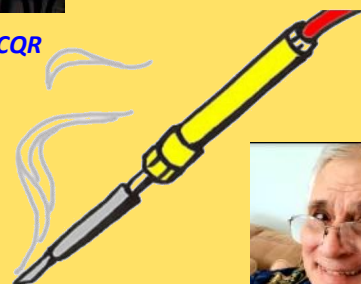
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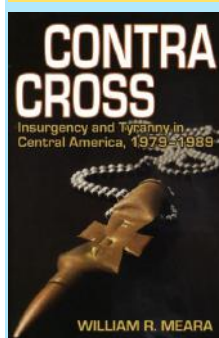
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Host - Bill N2CQR



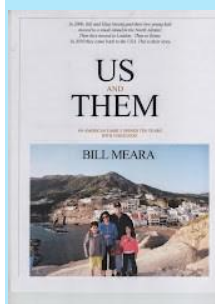
Co Host - Pete N6QW

<https://soldersmoke.blogspot.com/>



A journey through the Central American wars of the 1980s as seen through the eyes of a young American officer who worked on both sides of insurgency in the region: In El Salvador Bill Meara supported efforts to defeat insurgents; with Nicaraguans he worked to keep an insurgency alive. One of very few Americans to see both sides up close, he takes readers into his world as an advisor struggling with cultural differences and human rights

violations while trying to stay alive in murderous El Salvador. We join him on dangerous helicopter rides into contra base camps on the Honduran-Nicaraguan border and into a U.S. Embassy under attack. From Special Forces school at Ft. Bragg to Joan Baez's back-stage party in Managua to a contra POW camp deep in the jungle, we get a taste of Meara's world up close.



What happens if you take an American family and send them to Europe for ten years? In the summer of 2000, Bill and Elisa Meara, accompanied by 2 year-old Billy and 4 month-old Maria, left their home in the suburbs of Washington, D.C. and moved to the Azores. There they experienced the highs and lows of diplomatic life on a small distant island. After three years in the Azores, they spent four years

London and three years in Rome. Overseas they lived in two houses and two apartments, went to five schools, used four different health care systems, experienced one earthquake, 9-11, the terrorist attack on London, tea with the Queen, the election of Barack Obama... and all the ordinary things that families go through. They lived mostly with the locals, learned Portuguese, Italian, and a bit of Cockney, and made many friends (foreign friends!) They returned to the United States in 2010 with a changed view of the world. This is their story

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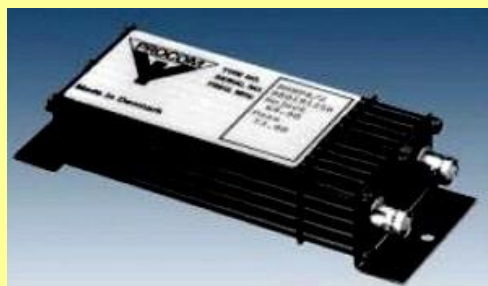
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