Ham Radio Ireland

Ag freastal ar thraidisiún agus ar spiorad an raidió amaitéarach

Editor: *Steve Wright - EI5DD* *wright14@gmail.com* **Vol. 4 Issue 02** **April 2026**

In This Issue

HAM RADIO IRELAND

Ham Radio Ireland has been well supported and we have achieved over 40,000 downloads from our links in over 68 countries over the last year.

It is a fact that 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 wail endeavour to print any radio orientated articles submitted to us.

We ensure interesting and vibrant articles and we endeavour not to appear like a parish newsletter.

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.

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

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News and Events

Features

Submitting Items for This Magazine

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

Cover Image

Dave Dickford, VK2JDD, taken at the 2023 Glow Worm Tunnel Marathon in the Blue Mountains

Want to become Member

Contact us and we can give you info on the options available.
this year we can now offer public liability insurance per individual.
Standard membership €10.00
Membership with cover €15.00

you can pay via Paypal:
collei3cc@gmail.com
or Revolut: @john83mj6

News and Forthcoming Events Planning 2025

Freedom of association: a right in danger in amateur radio

Some IARU R1 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, 2026
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 17 –18, 2026

Spring - 3rd Full Weekend of April. April 18 –19, 2026

Summer - 3rd Full Weekend of July. July 18 –19, 2026

Autumn - 3rd Full Weekend of October. October 17-18, 2026

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

We Have a Facebook Page

Ham Radio Ireland

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

European Radio Amateurs' Organization

the open global radio amateurs community

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.

EURAO Public Liability Insurance

The purpose of this insurance, with a coverage of 9.000.000 EUR, is to guarantee the pecuniary consequences of the civil liability incumbent on the insured due to consequential bodily, material and immaterial damage caused to third parties as a result of their radio amateur activities, including travel, and events organized by the subscriber, including assembly and disassembly operations.
This means, translated to our activity, a plus of relief when we do radio outside our QTH, either on the beach, in the countryside, in a park or in the mountains, as in the case of field days or SOTA.
EURAO also provides coverage in an urban environment, such as in a square, in a schoolyard or inside a classroom in a workshop with students, or with scouts in their venue or campground.
In addition to covering contingencies, this insurance is useful to obtain authorization to carry out activities in the public space, which is mandatory in some countries.
The coverage of this insurance is worldwide, with some limitations for the USA and Canada. More Info: https://www.eurao.org/en/node/1130

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.

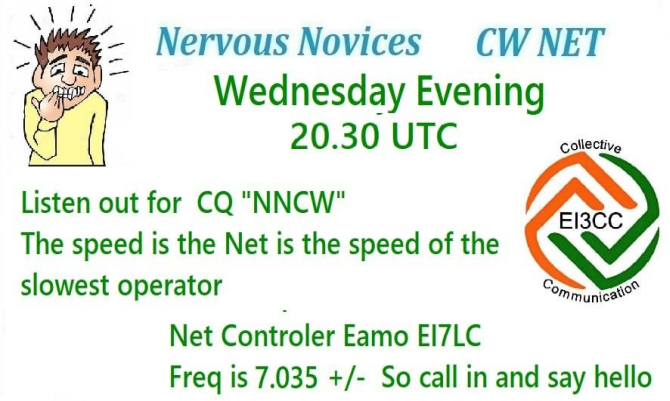
Irish Net

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 Tucson 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

Ham Radio Ireland Now in Two Formats

Ham Radio Ireland now comes in two formats. Recently we introduced the new Flip book format which is similar to the ARRL and RSGB digital format. Apart from reading this on line it is possible to download the PDF File by clicking on the cloud icon. We retain the traditional " Docdroid" download page where the magazine can be read page by page. Current and back issues may be downloaded in both formats and maybe accessed from:
https://galwayvhfgroup.blogspot.com/2022/06/connacht-regional-radio-newsletter.html



Pubs and Clubs on the Air

Pubs and Clubs on the Air 2026 will take place over the weekend 8th - 10th May 2026.tations are expected to be on air on VHF/UHF and HF bands. Please see "Hints and Tips" for information and help on putting on a station.

https://www.g6tw.co.uk/pubs-and-clubs-on-the-air-pacota/

Get in touch by emailing pacota@g6tw.co.uk

YOTA Summer Camp 2026

The IARU Region 1 Youth Committee, together with ÖVSV (Österreichische Versuchssenderverband), are pleased to announce the 14th annual YOTA (Youngsters On The Air) Summer Camp, which will take place in Wagrain, Austria, from 25 July to 1 August 2026. Following the announcement made during the closing ceremony of the 13th YOTA Summer Camp in Jambville, France, preparations are now underway for another exciting week of international friendship, learning, and amateur radio activities. The camp will once again bring together motivated young radio amateurs from across IARU Region 1, together with guest teams from Regions 2 and 3. Besides being a unique opportunity to meet other young people, discover new cultures, and enjoy amateur radio in an international environment, the camp is also designed to help participants grow as ambassadors for youth activities in their home countries.

https://www.iaru-r1.org/2026/yota-summer-camp-2026-to-take-place-in-wagrain-austria/

International Marconi Day 25th April 2026

International Marconi Day celebrates the huge part Guglielmo Marconi played in the invention of radio. IMD is a 24 hour amateur radio event that is held annually to celebrate the birth of Marconi on 25 April 1874. The event is usually held on the Saturday closest to Marconi's birthday and in 2026 it will be held on 25th April, his birthday. To be registered as an official station you MUST operate from a site which has a connection with Guglielmo Marconi himself, not a business etc created after his work. This must be somewhere Guglielmo Marconi has personally operated from, lived or set up experimental stations.

There are now only 2 categories:

1. TRANSMITTING AMATEUR AWARD: To establish direct two-way communication with 10 different official Award Stations, reduced this year due to quite a few not able to operate, mixed modes are permitted in the log (mixed modes cw, voice, data)

SHORTWAVE LISTENERS AWARD: To log two-way communications made by 10 different official Award Stations, mixed modes are permitted in the log (mixed modes cw, voice, data)

Please use this email to register: crac.imd@gmail.com

News and Forthcoming Events Planning 2025

Over 300 Editions of RadCom Available in RSGB Web App

The RSGB recently announced that they have added more RadCom editions to their web app. RSGB members are now able to browse through over 300 editions of RadCom magazines dating back to January 2000. Go to the web app via https://rsgb.org/ to explore the content. You will need RSGB membership to access this content. The RSGB Book shop offers reductions on all books purchased by RSGB members

Ham Radio Ireland 1st Anniversary After Relaunch

Ham Radio Ireland was relaunched by the Collective Communications on the 24th of January 2025. To date the Free Magazine has been downloaded over 40,000 times and its readership spans over 68 countries. To Commemorate our anniversary we will be activating the Magazine's Callsign **EI3HRI** at regular intervals throughout the year. Do give us a call if you her us on the airwaves. We thank all of our authors for their support and interesting articles , We thank all of our readers for their support also,

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

Lough Erne Amateur Radio Club
Co FERMANAGH NORTHERN IRELAND
GNØLEC MNØRCF GB3CP

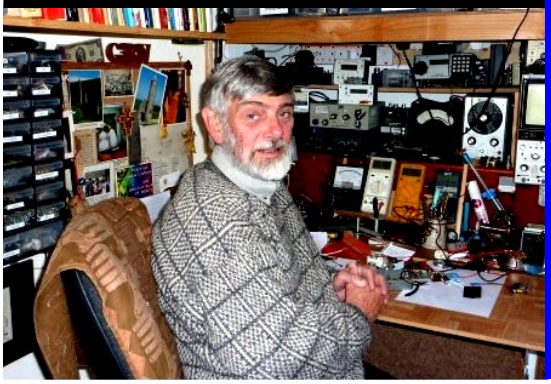
42nd Annual Rally

Sunday 17th May 2026

Share Discovery Village, Lisnaskea, BT92 0JZ

Usual facilities for Food, Bar open (Lunch 12:00 to 13:30 Hrs)
Bring & Buy (at your risk, no charge)
Traders as follows initially, Peter Bell, Long Communications, Jim-Bob Trainor, John Gillyland, Alan Weise, Brian McMahon
We have numerous independent sellers with all sorts of interesting things.
RSGB QSL Bureau/Book Stand
IRTS Stand
WAB Stand
Mayo Radio Experimenters
Collective Communication
Draw for several prizes at approximately 13:00 Hrs
Admission £/€5 to include draw ticket.
No charge for tables however everyone pays Entry Fee
Come and meet up with old friends!
Doors open 11:00Hrs (Traders 09:00 Hrs)
(For details and table booking contact Alan argault91@gmail.com)

G QRP CLUB



The G-QRP club was formed by Rev. George Dobbs G3RJV in 1974 to cater for those interested in low power communications after a group used to meet around 3.560MHz. In the year 2000, the club celebrated its 25th birthday and we continue growing year by year.

The club has a quarterly magazine called SPRAT, so called for Small Powered Radio Amateur Transmissions. This magazine is 2/3 full of circuit ideas and 1/3 editorial. Until his passing in 2019 it was edited by George.

It was in September 1974 that George Dobbs G3RJV started the wheels turning to make the G-QRP Club a reality. Fifty years later, the Club is going strong and we have had around four thousand paid up members for over a decade.

Membership is handled by Daphne, G7ENA, GQRP Club, 33 Swallow Drive, Louth, LN11 0DN. Subscription currently stands at €15.00 for EU members.

News and Forthcoming Events Planning 2025

Friedricshafen International Ham Radio Exhibition

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 Friedricshafen International Ham Radio Exhibition

MRD Maritime Radio Day is being held annually 14th to 15th of April to remember almost one hundred years of wireless service for seafarers. Since its beginning in 1900 it was the most important communication service until the end of 1998. The date of MRD should be a reminder of the Titanic disaster in 1912. Former Wireless operators of the merchant marine, fisheries and coast stations are requested to register.

Date: 14th April 1200 UTC 15th April 2200 UTC

Bands: 160m, 80m, 40m, 20m, 15 & 10m plus WARC – Calling Frequencies +/- for QRM – 1824, 3520, 7020, 10118, 14052-55, 21052 and 28052 KHz

Mode: CW only Output power: not limited

QSO-Exchange QRK, name, call sign of last or favourite ship / coast station / aircraft / maintenance company and additional: travel report, msg and/or QTC if you like.

Deadline of registering: 1st of April at midnight, deadline of logs: 1st of May Certificate of participation (CoP) – SWL must send a complete log to be able to verify QSO data by selection. Licensed operators send either a log as Word .doc/.docx or .pdf, or an e-mail with number of ships, coast, special and hams contacted.

Online Registration:
https://radioofficers.com/mrd-home/registrations/

World Amateur Radio Day

Every April 18, radio amateurs worldwide take to the airwaves in celebration of World Amateur Radio Day. It was on this day in 1925 that the International Amateur Radio Union was formed in Paris. Amateur Radio experimenters were the first to discover that the short wave spectrum — far from being a wasteland — could support worldwide propagation. In the rush to use these shorter wavelengths, Amateur Radio was "in grave danger of being pushed aside," the IARU's history has noted. Amateur Radio pioneers met in Paris in 1925 and created the IARU to support Amateur Radio worldwide. Today, Amateur Radio is more popular than ever, with more than 3,000,000 licensed operators! World Amateur Radio Day is the day when IARU Member-Societies can show our capabilities to the public and enjoy global friendship with other Amateurs worldwide.

Amateur Radio is more popular than ever, with more than 3,000,000 licensed operators!

2026 Events & Activities Planner

Maritime Radio Day	14th - 15th April
IARU World Amateur Radio Day	18th April
International Marconi Day	25th April
Mills on the Air	9th - 10th May
Lough Erne Rally	17th May
SOS Radio Week	1st - 31st May
International Bunkerfest	24th –26th July
Friedrichshafen Ham Radio Exhibition	26th - 28th June
Museums on the Air	20th - 21st June
Museums on the Air	27th - 28th June
Stradbally Steam Rally	2nd - 3rd August
ILLW Lighthouses on the Air	15th - 16th August
British Inland Waterways on the Air	29th - 31st August
G QRP Convention/Telford Ham Fest	30th - 31st August
Newark Ham Fest	25th - 26th Sept
Railways on the air	26th - 27th Sept
JOTA Scouts on the Air	16th - 18th 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://loughernerradioclub.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 Ballycraigy 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 a 8pm in the Shorts Recreation Club, Aircraft Park, Hollywood Road, Belfast BT4 1SL. Contact Paul Irwin GI6FEN for more information E-mail: paulirwin@btinteret.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.

White Mountain Amateur Radio Club

The White Mountain Amateur Radio club meets at 7a, Sheepwalk Road, Castlerobin, Lisburn on Friday nights for the Amateur Radio Exam Courses, Sundays at 12pm Wednesday nights at 7pm for general radio topics, practical and social evenings. Whether interested in Amateur Radio, CB, PMR 446 or electronics all are welcomed to come along to our meetings. More information from https://wmarc.co.uk/

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

Lough Erne Amateur Radio Club

Co FERMANAGH NORTHERN IRELAND

GNØLEC MNØRCF GB3CP

42nd Annual Rally

Sunday 17th May 2026

Share Discovery Village, Lisnaskea,

BT92 0JZ

Usual facilities for Food, Bar open (Lunch 12:00 to 13:30 Hrs)

Bring & Buy (at your risk, no charge)

Traders as follows initially, Peter Bell, Long Communications,

Jim-Bob Trainor, John Gillyland, Alan Weise, Brian McMahon

We have numerous independent sellers with all sorts of interesting things.

RSGB QSL Bureau/Book Stand

IRTS Stand

WAB Stand

Mayo Radio Experimenters

Collective Communication

Draw for several prizes at approximately 13:00 Hrs

Admission £/€5 to include draw ticket.

No charge for tables however everyone pays Entry Fee

Come and meet up with old friends!

Doors open 11:00Hrs (Traders 09:00 Hrs)

(For details and table booking contact Alan argault91@gmail.com)

Choose ML&S for the 'Big 3' and so much more!

YAESU

ML&S Officially the only Direct Factory Appointed Distributor & Repair Workshop for Yaesu Musen Products

This month's STAR PERFORMER
Yaesu FTX-1F
ALL BAND ALL MODE PORTABLE

Another Dream Radio from Yaesu.
Taking over from where the best-selling FT-818 left off.

FTX-1F (Field version): £1459.00
Comes with free SPG-1 protection guard & SCF-1 fan.

- 6W/10W on any band
- 160-70cm incl 4m
- Twin RX with any mode on either receiver
- SDR Technology and 3DSS
- 5670mAh high-capacity Li-ion battery pack
- Dual Loudspeakers
- USB ports support CAT operation, audio input/output and TX control

Yaesu FTX-1 Optima. 100W HF/6M 50W 4M/2M/70cm SDR Transceiver. £1950.00. Comes with a free backpack.

HamRadio.co.uk/FTX1F

NEW Yaesu FTM-510DE ASP Dual Band Mobile Transceiver
C4FM Digital/FM 55W Dual-Band Mobile Transceiver

The New Flagship Mobile with Super-DX & ASP for Enhanced Coverage
Latest high-performance C4FM Digital/FM Dual-Band Mobile Transceiver, offering 55W VHF / 50W UHF output power and packed with cutting-edge features for superior communication. Designed to replace upon the successful FTM-500DE. **£569.95**

Yaesu FTM-150 ASP 55/50W 144/430MHz FM Dual Band Mobile Transceiver. Versatile dual-band mobile transceiver offering 55W on VHF and 50W on UHF. **£349.99**

Yaesu FT-3185 ASP 85W 144MHz VHF FM Mobile Transceiver.
Powerful 2m mobile transceiver, delivering an impressive 85W of reliable transmit power, selectable at 85W, 50W, 20W or 5W **£189.95**

Yaesu FT-3165 ASP - 65W 144MHz FM Mobile Transceiver. Robust, compact 2m mobile transceiver designed to deliver powerful performance and reliability for ham radio enthusiasts. With a 65W output, users can select from three power levels (65W/30W/5W) to suit various needs. ..... **Limited Offer £156.00**

Yaesu FTM-310DE ASP
(Without ASP) 144/430MHz 55W/50W C4FM Digital / FM Mobile Transceiver
Now in Stock..... **£375.00**

ONE OF OUR BEST SELLING UNITS
FT-710 AESS HF/6/4m All Mode Compact Transceiver. Perfectly sized & simple to use **£999.95**
FT-710 Field (no speaker) **£949.00**
Both with a FREE Yaesu hat!

FTdx101D
100W HF/6m Transceiver **£3099.95**
FTdx101MP **£4099.99**
Yaesu FTdx10 Narrow band SDR and Direct Sampling **£1299.00**
Yaesu FT-891 HF/6m Base/Mobile **£649.00**
20% Discount off FC-50 when bought together
Yaesu FT-991A All-Mode Transceiver **£1249.00**
Yaesu FT-5DE IPX7 Dual C4FM RX Handie **£379.00**
Yaesu FT-70DE
C4FM/FM 144-430MHz Dual Band Handie **£167.95**
Yaesu DR-2XE C4FM Repeater..... **£1279.00**
Yaesu FT-65E VHF/UHF 2m/70cm Dual Band FM Handie **£84.95**

Yaesu FT-4XE
5W VHF/UHF FM Portable Transceiver..... **£64.99**

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

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KENWOOD

ML&S Officially Appointed UK Sole Distributor & Repair Workshop for Kenwood's Ham Radio Products

This month's Featured Kenwood
Kenwood TS-890SE2
HF/6m Transceiver

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 FREE MC-43 microphone. MLS Price: £4049.95**

New! Dual Band remote TM-D750E. First shown at Tokyo Ham Fair 2024. Coming Soon!

Kenwood TH-D75e 144/430MHz Handie
Priced at £778.99 with FREE UK mainland shipping, use code RC75.

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, APRS, Wide-band all mode receive, IF Shift function, USB-C charging port & IP54/55 approved.

ICOM

ML&S Stock the Full Range of New Icom Products

This month's Featured Icom
Icom IC-7300Mk2

You asked and Icom Japan listened!

An upgraded Mk2 version of the best-selling radio.
Final price £1359.60 – Now in stock.
See HamRadio.co.uk/IC7300mk2

IC-R9500
High-end professional communications receiver for wideband monitoring. Special build direct from Icom Japan. The only available NEW units in the world! ..... **Last one remaining! £12999**

Icom IC-7300 Best selling 100 Watt - HF/50/70MHz Transceiver with SSB / CW / RTTY / AM / FM ..... **with free PSU £975.00**

Icom ID-5100
Latest 2/70 D-Star Touch Screen Transceiver..... **£639.95**

Icom ID-5200 144/430MHz Dual-Band Transceiver.
Versatile dual-band transceiver supporting both FM and DV (Digital Voice) modes, with the ability to perform simultaneous dual reception of FM-FM, FM-DV and DV-DV signals. **Price and Delivery Date TBC. Place a £50 Deposit to secure yours NOW.**

Icom IC-7760 200W HF/6m 50MHz Remote head transceiver **£5074.99**
RC-7760 Remote head accessory for the Icom IC-7760..... **£1679.00**

Icom IC-718..... **£730.00**
100W HF/6W Base Transceiver.

IC-PW2 HF/50MHz 1kW Linear 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-7760)..... **£5069.95**

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. **£2949.95 or CALL for bundle deal!**
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 Transceiver ..... **SPECIAL PRICE £539.95**
Icom IC-7100 HF/6m/4m/2m/70cm Base & Mobile Transceiver including D-Star with remote control head unit **NEW LOW PRICE £975.00 and Free PS-30 Power Supply**
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 SM-30 Mic & Free SP-41 Speaker**.... **£3199.99**
Icom IC-705 The worlds best selling All-Band All Mode Transportable 160m-70cm. **PRICE REDUCTION £1194.95**
Icom AH-705 Automatic antenna tuner for IC-705. **£284.95**
PTRX-7300 High quality RF interface module for the IC-7300 ..... **£220.00**
PTRX-9700..... **£309.95**
Icom IC-9700 With FREE SP-38 speaker worth £156 Base Station 2/70/23 all mode including D-Star . **£1899.95**
Icom IC-R8600 New 100kHz-3GHz Receiver with SDR technology from IC-7300 ..... **SPECIAL PRICE £2449.99**
Icom AH-730 100W Remote Auto-ATU **£525.00**

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We are now the UK Distributor for VGC

VGC VR-N76 APRS Handheld Radio 2m/70cm
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Solid-State 1.8-54MHz Linear Amplifier £3339.95
State-of-the-art amplifier covering all amateur bands from 1.8 to 54MHz. It comes with a new compact Touch-Screen Remote Control Unit. The proven ACOM 06AT tuner is the optimal option for use with ACOM 1400S. Both devices share the same front panel design and will look magnificent in your shack. ACOM 1400S amplifier is based on the latest LDMOS transistor technology. The final PA stage uses a rugged 65 V LDMOS transistor for heavy operation modes. The amplifier as standard is equipped with an Ethernet interface and thus can be remotely controlled via the Internet through the integrated Web interface.

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500W 160m-4m 500W Linear Amplifier IN STOCK
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Automatic linear amplifier for all short wave amateur bands from 1.8 to 29MHz (including WARC) + 50MHz and all modes. ..**£5294.00**

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Digital Display SWR/Power Meter.This digital SWR & Watt meter is highly accurate for measuring Forward Power,Reflected Power, & VSWR **£129.95**

DG-503Max Digital Power Meter..... **Only £139.00**
DG-503 Digital Power Meter ..... **Only £99.00**
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RS-50: £65.95. RS-70: £69.00 The RS-50 (120W 2m & 70cm) & 70 (200W 160m-6m) are compact in-line meters that present power and SWR on a digital backlit LCD display.

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3 Element Wire Beam For 3785 KHz

This design is a full-size, three-element Yagi-beam antenna for the 80-meter band, centered in this example at 3785 kHz. All elements are half-wave resonators made of 2 mm copper wire, with no loading coils. The antenna provides forward gain and front-to-back ratio typical of a three-element Yagi.

This design is a full-size, three-element Yagi- beam antenna for the 80-meter band, centered in this example at 3785 kHz. All elements are half-wave resonators made of 2 mm copper wire, with no loading coils. The antenna provides forward gain and front-to-back ratio typical of a three-element Yagi.

Initial Basic Dimensions before adjustment

(*always cut wire adding sufficient for adjustment-trim later*)

Frequency: 3.785 MHz

Wavelength (λ): divide speed of light in meters by frequency = 300 / 3.785 ≈ 79.26 m

Element lengths (physical, using standard dipole formula for 2 mm wire): consider RF velocity in wire.

Reflector: 0.495 λ = 39.24 m

Driven element: 0.475 λ = 37.65 m

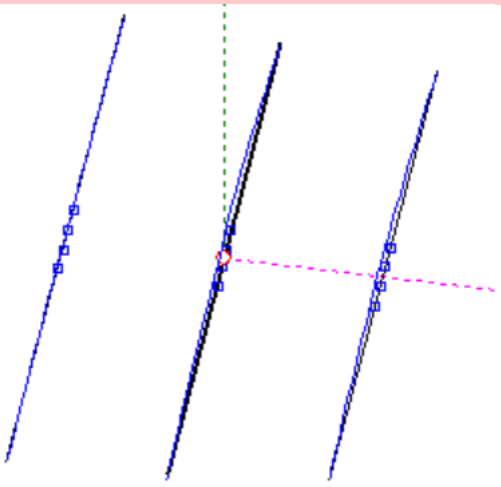
Director: 0.455 λ = 36.06 m

Spacing (centre-to-centre between elements) pre RF velocity in wire, from accepted RF theory. in practice, you will need to test and adjust, especially for a better F/B ratio

Reflector to driven: 15.85 m (0.2 λ)

Driven to director: 15.85 m (0.2 λ)

Overall boom length: 31.70 m



MMANA-Gal Model of antenna

Please note: For improved front-to-back ratio, the driven-to-director spacing can be reduced to as close as 0.15 λ (11.89 m), giving a boom length of 27.74 m. The dimensions above use equal spacing for simplicity.

Boom-: I use 10 mm Yacht Kevlar - stretched between two towers that are 420 feet apart, with a centre support to help take out the cantilever behind the East tower I run another 10 mm Kevlar which passed over a fibreglass telescopic stayed pole on the workshop roof and this goes further back to a tree 45 meters away keeping the reflector boom horizontal.

Element Construction

Wire: use 2 mm bare copper wire – I use transformer copper wire just because I have it.

Reflector and Director: Continuous wires of the specified total length. The ends must be insulated from their supports.

Driven Element: This is a half-wave dipole, centre-fed. Using my own 1:1 Balun, Each leg measures 18.825 m from the feed point to the end for a start.

This Balun is hung from a 1-meter stand standoff on the east tower in my case, a pulley and Kevlar rope allows this to be lowered as needed. The Driven elements are connected and approximately resonated, leave plenty of adjustment available at this stage, just pull the wire through the insulators, and wrap it back on itself, don't trim yet.

The elements are strung horizontally between supports (trees, towers, or masts) with the feed point at the centre. Or hung as an inverted Vee, note if using as a Vee, you will find the measurements will alter slightly.

Feed System

The driven element is a standard dipole, presenting an impedance of approximately 50 at resonance in a Yagi configuration. To match 50 Ω coax (e.g., RG-213 or ½" Heliax), A Use a good quality power handling Balun, B. by adjusting the spacing of the elements You will achieve resonance at 50 Ω appx. I find it very important when using a Balun (choke) it is important to keep the elements equal, preferably within a 1/2" of each other offset measurements may make it very difficult to adjust the final antenna system -so keep then equal

Placement and Ground Effects

Height: For good low-angle radiation, the antenna should be installed as high as possible—preferably > 0.3 λ (≈24 m) above ground. In practice, heights of 15 - 20 m are often used, though pattern and impedance will be modified by ground reflections.

Orientation: The director points toward the desired direction of communication.

Ground System: No radial system is required for a horizontal beam, but a good RF ground at the feed point (e.g., a counterpoise) may help if the antenna is low.

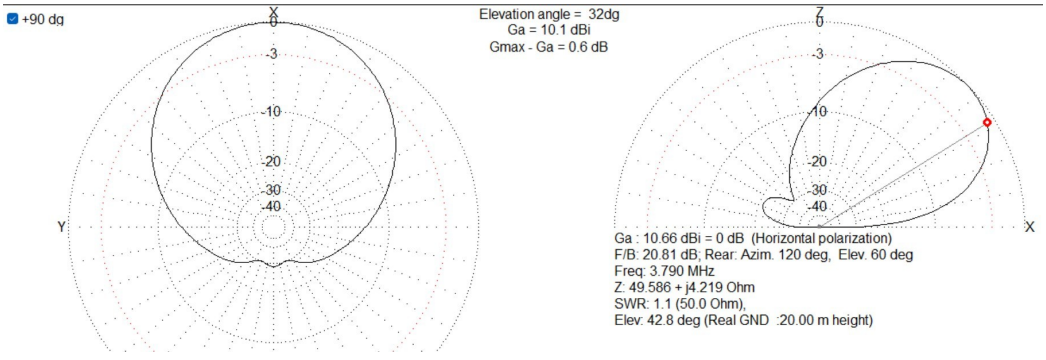
Tuning and Adjustment, Patience is required

Resonate the driven element first, Note the exact VSWR. Using a Field Strength meter, I use my mobile IC-7100. Establish a distance of about 30 wavelengths to the rear

3 Element Wire Beam For 3785 KHz

and to the front of the driven element.

Now set your TX in RTTY mode 10 watts or less, continuous, make a signal strength measurement at both locations and compare—they should be approximately equal, Note these measurements.



MMANA Gal Far Field Plots

Install the Reflector:

Establish the desired spacing distance from the above table, mark this spot, green earth tape is a good visible mark, mark the exact centre rf the element with a visible marker, I used a clothesline plastic peg , raise the reflector boom, and get it parallel and horizontal to the DR. make a new VSWR measurement, expect some considerable difference,

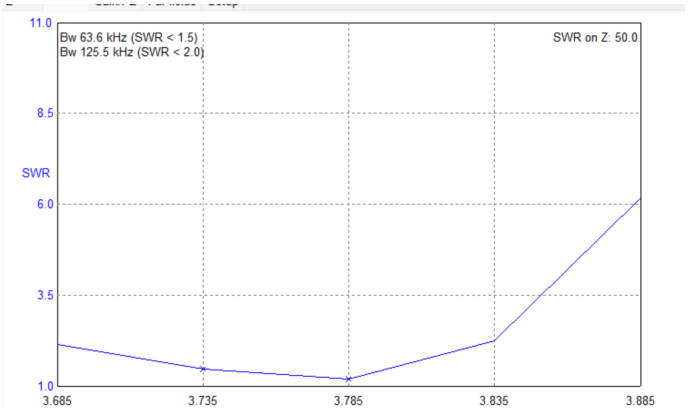
Lower the reflector move the reflector say 0.5 meters further away from the DR, repeat the VSWR measurement, if it is improving move again until you get the best reading (the spacing changes the impedance), Now shorten the element by say 15 mm equally at both ends. Do not cut, recheck VSWR, if you're going in the right direction continue to adjust for best VSWR, if not however go in the opposite direction by lengthening until you achieve best result.

Now go out again with your field strength meter and make a measurement and carefully note the results. Once happy remove the clothes peg and markers and bind the element to the Kevlar using about 20 cm of copper wire, trim off unwanted at the ends or fold back.

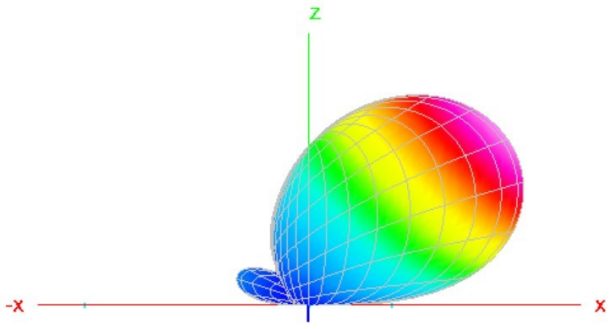
Next deal with the parasitic or forward element in the same manner as the reflector and after spacing as per table be prepared to move outward in small increments to best point. Then shorten or lengthen the element for best result. Carry out VSWR checks.

Finally use the field strength meter, you will see quite a difference front to back , you can continue to adjust for optimum situation or accept a very reasonable directional antenna you should easily achieve approximately 5 dB gain and up to 15 dB front to back ratio. Bind off in the centre and trim or fold back surplus at the ends

All dimensions are approximate and should be verified during installation. This full-size wire beam offers a cost-effective way to achieve directional gain on 80 meters without loading coils.



MMANA Gal SWR Plot of initial design



MMANA Gal 3D FF Radiation plot of initial design

Example of scaling—let's say you want a beam for 7160 KHz what ratio does that represent of the 3785 KHz antenna -remember the speed of light is a constant and the only thing that will change is the wavelength when the frequency is changed.

Simple Initial Design Table

Element	Length (m)	Length (ft)	Spacing from Driven (m)	ft
			0.2 λ	
Reflector	39.24 m	128.7ft	15.85m (rear)	52ft
Driven	37.65m	123.5ft (Centre)		
			0.2 λ	0.15 λ
Director	36.06m	118.3 ft	15.85 m 52ft	11.89(front)39 ft

Obtain Ratio 3785/7160 = 0.52863 /0.95 for VR correction = 5564 this is the required ratio

Take the above DR Driven Element for 80 meters 3795 KHz divide by 0.5564 = 67.66 and adjust

Take all other measurements and spacings and use the same ratio—for a good start point

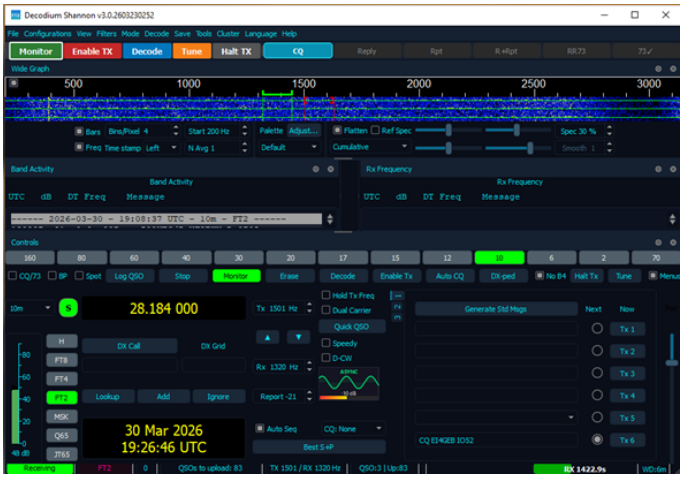
Mike Higgins - EI0CL

wescomradio@gmail.com

FT2 - A Fresh New Pace in Digital Amateur Radio

Over the last few weeks I have been using the new digital mode FT2, and I have to say it has made a real impression on me. Like many radio experimenters, I have spent plenty of time operating FT8, and while FT8 has undoubtedly transformed weak-signal digital operating, FT2 feels like a real step forward in terms of pace and operating flow.

What strikes me most is just how much faster and more responsive it feels on the air. The official FT2 project website describes a transmit/receive cycle of around 2.47 seconds with asynchronous transmit, and that immediately changes the whole operating experience. The mode is presented there as "FT2 – The fastest digital mode ever created", with the software identified as DECODIUM 3.0.



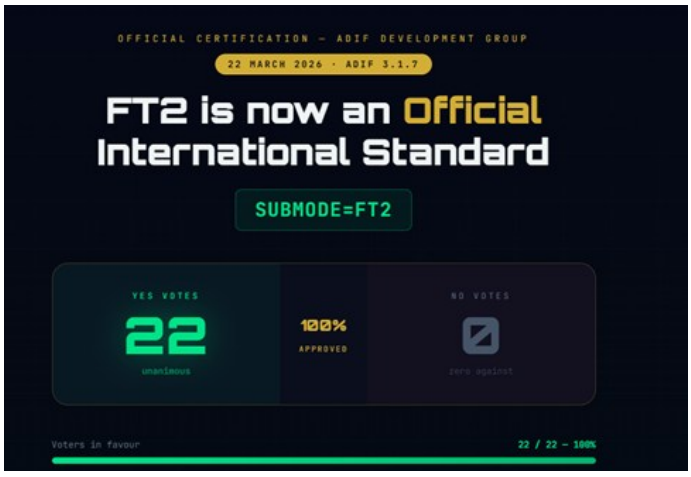
DECODIUM 3.0 (open source, GPLv3)

From my own use, FT2 feels sharper, more efficient, and, quite frankly, more enjoyable when conditions are good. FT8 remains a superb weak-signal mode and has earned its place in amateur radio history, but FT2 brings a new level of speed that many operators will find very attractive. The FT2 site says a full QSO can be completed in about 6 seconds under ideal conditions, which is a remarkable pace for amateur radio digital working.

What makes FT2 especially interesting is that it does not abandon the proven structure behind the popular FT(x) family of modes. According to the official FT2 site, the mode uses LDPC (174,91) coding while retaining the familiar compact message structure and dramatically shortening the timing. In simple terms, it takes a strong technical foundation and pushes it toward much higher speed.

The story behind FT2 is also an excellent example of the innovative spirit that still thrives in amateur radio. The official FT2 website identifies Martino Merola, IU8LMC, as the creator, and the site links the project with ARI Caserta in Italy. That matters, because amateur radio has always advanced through experimentation, practical testing, and the willingness of radio amateurs to push beyond existing limits. FT2 appears to have come directly from that same tradition.

FT2 site also shows that the software platform behind the mode is called DECODIUM 3.0, with the March 2026 release carrying the Raptor Engine designation. The website highlights improved sensitivity to −23 dB SNR, faster decode-to-transmit latency of around 200 ms, and a much higher quoted QSO completion rate than earlier builds. That gives FT2 not only a mode identity, but also a distinct software identity that operators can associate with it.



Announcement by the DECODIUM Team

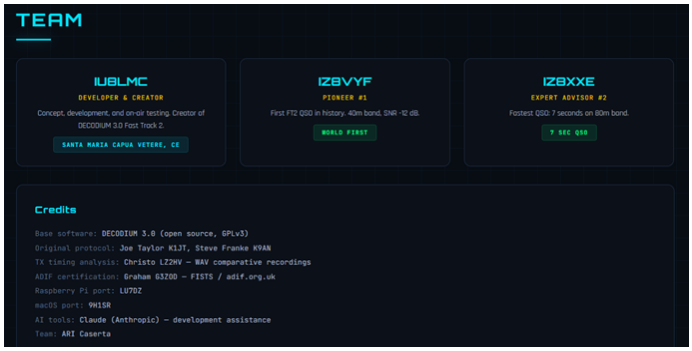
A number of other contributors are also recognised by the project. The FT2 site credits LZ2HV for transmission timing analysis, G3ZOD for ADIF-related guidance, LU7DZ for a Raspberry Pi port, and 9H1SR for a macOS port. Those acknowledgements are worth noting because they remind us that amateur radio innovation is rarely the work of one person alone; it usually develops through a wider network of experimenters, testers, and supporters.

Another sign that FT2 is moving beyond simple experimentation is its formal recognition in logging. The official FT2 site states that FT2 was approved as SUBMODE=FT2 in ADIF 3.1.7 on 22 March 2026, following a 22–0 unanimous vote. That gives FT2 a degree of formal recognition that many experimental modes never achieve.

Of course, speed is not the only measure of a digital mode. FT8 still has clear strengths, especially in very weak-signal conditions, and FT2 is probably best seen as a complement rather than a total replacement. Where FT8 is steady, patient, and highly tolerant of weak signals, FT2 is about fast exchanges, quicker completions, and a more

FT2 – A Fresh New Pace in Digital Amateur Radio

dynamic rhythm on the bands. That is exactly where I believe its appeal lies.



Many thanks to the FT2 team

For me, that is where FT2 really shines. After using it for the last few weeks, I can honestly say it feels like a better operating experience than FT8 when band conditions are suitable. It is faster, more immediate, and more exciting to use. It gives digital operating a stronger sense of momentum, and that alone will win it many supporters. Of course, as with any new development in amateur radio, FT2 will always have its detractors, usually people who have never actually used it for themselves. That is nothing new in this hobby. New ideas often attract criticism before they are properly understood, but the best judgment is always made on real operating experience rather than assumption.

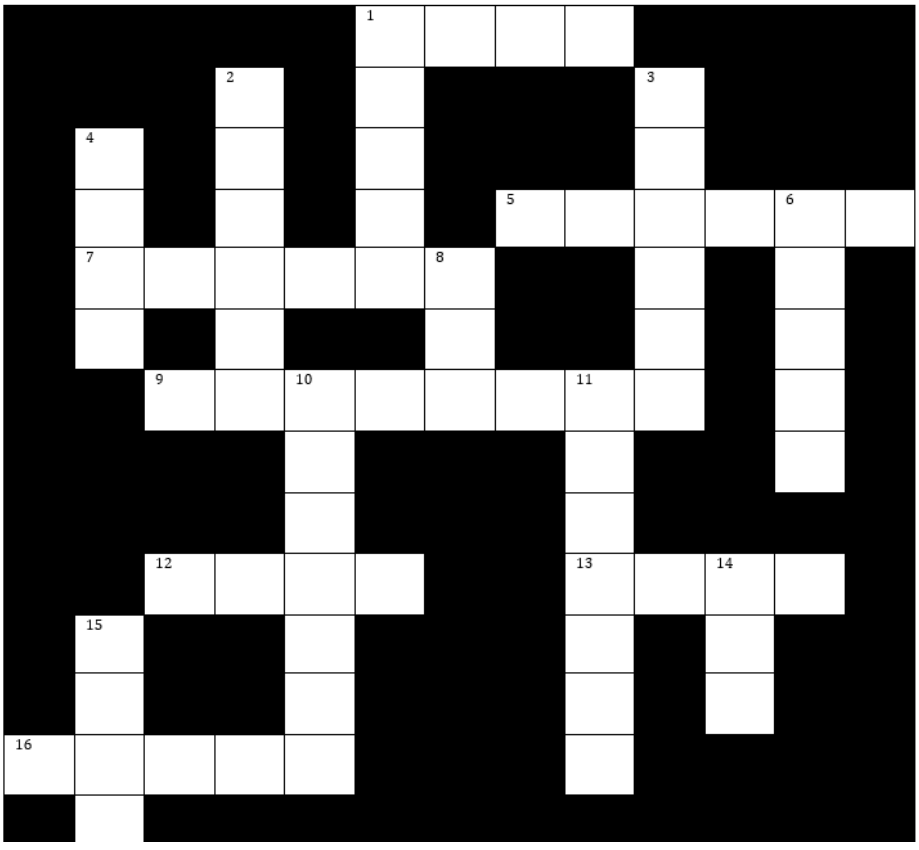
Whether FT2 becomes a widely adopted mainstream mode or remains a specialist favourite, it already deserves attention. It shows that amateur radio is still alive with ideas, still capable of technical creativity, and still driven by operators who want to improve the tools we use on the air. Credit is due to Martino Merola, IU8LMC, ARI Caserta, and the wider circle of amateurs whose ideas and work helped bring FT2 into being. They have added something genuinely fresh to the digital side of our hobby.

Lez Ferguson - EI4GEB

ei4geb01@gmail.com

EI4GEB's Krazy Radio Krossword

All Answers Rate to Amateur Radio Antennas



Clues

Across

1. Common name for a directional antenna (4)

5. Portable wire antenna fed at one end (6)

7. Connection to earth for antenna systems (6)

9. Antenna standing upright from the ground (8)

12. Cable used to feed RF to an antenna (4)

13. Vertical support pole for an antenna (4)

16. Structure used to support antennas (5

Clues

Down

1. Device used to match balanced and unbalanced lines (5)

2. Half-wave antenna commonly used on HF (6)

3. One wire extending from a vertical antenna base (6)

4. Directional antenna with multiple elements (4)

6. Another word for station ground (5)

8. Unit often used to express antenna gain (3)

10. Device used to turn a directional antenna (7)

11. Direction an antenna points relative to north (7)

14. Ratio describing reflected power on a feedline (3)

15. Circular or square wire antenna (4)

Coolmine Rally

Collective Communications were honored to attend the Coolmine Radio rally in Dublin, this event is the first rally in Ireland every year and it's run by the Phoenix Amateur Radio Club. The Coolmine rally is an old school type rally that has many surprises you could be there on the right day at the right time and walk away with a bit of treasure.

We headed of from Tramore at 7am with a journey of approx. 100 to the rally venue and on route picked up some passengers on the way we arrived about 9.30 and prepared to set up our tables

We had plenty of EI3CC merchandise and copies of the Ham Radio Ireland magazines too. Also, we brought some project pieces we are working on and they proved to be a great crowd puller.

Our new LED scrolling signs were a great eye catcher too and as usual our flags draw your eyes to our stand.

This is always a busy rally being the first and as in most rally's a great social gathering and a catch up on what opps are planning for the year ahead.

Ham radio Ireland magazine was also proving to be a big attraction with various copy's printed of and on display.

Lots of items were on offer and I was hoping to have a wander about but sadly we were so busy on the stand I never got time.

Little did we realise that

Coolmine Rally 2026

Raymond Long and his wife would make this the last rally he would attend as Long Communication as he had decided to retire after 37 years of great service to the hobby so we wish them both a happy resting time into the future.

Some of our friends from the Skywave Radio Club in Cork also came to join us on the stand and this was a great help and meant I had time at least to have a coffee and meet a few old friends.

In no time the day was coming to an end our voices were going as was our legs from being on our feet all day so enjoy the other images I have here and hopefully we will see you all again in Coolmine 2027

John Tubritt- EI3HQB

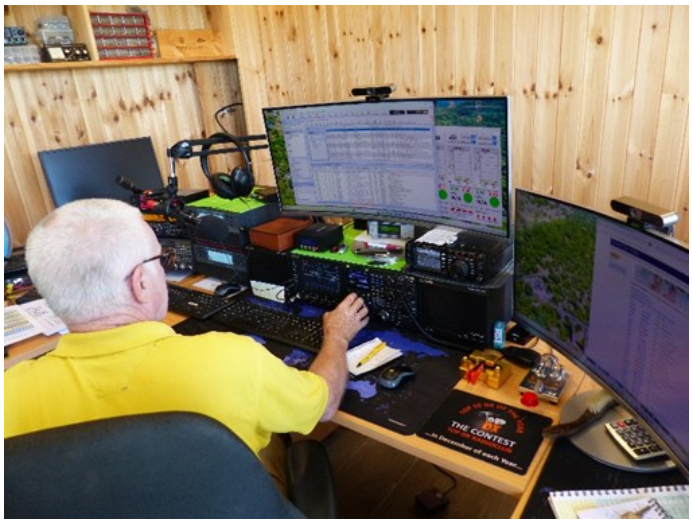
ei3hqb@gmail.com

Operating Split

I noticed recently while listening to some recent Dxpeditions that they were operating split, which is quite normal, but they were also operating with very large (wide) splits, not only on voice but also on CW. If you are relatively new to the hobby this can be confusing, because the DX station usually calls "J51A listening up", often without adding 'up where?'. I only mention J51A because it was a recent and a very professional expedition, which may still be fresh in our minds.

People may have different opinions on the etiquette of the 'wide splits' – some consider that it takes up too much space on the bands, but the objective is always to enable as many of us as possible to get them in the log before conditions drop out or the DXpedition ends, and operating 'split' facilitates this. A classic example of this being necessary is when I am calling CQ from my ZP QTH. I often try to target EI, MI and G stations so they can get Paraguay in the log, and get LOTW confirmations.

What can happen though is that someone 'spots' me, and suddenly all of Northern Europe starts to reply at the same time . The classic "pile-up" is born. So, I decide to operate split. What does 'split' actually mean? Well basically, it means transmitting on one frequency while listening on another. Usually (but not always) I would be listening 5 Khz above the frequency I am transmitting on (ssb). That way, when I reply to a call, everyone can easily hear to whom I am specifically replying and they can also clearly hear their own confirmations, because I am the only one on that particular frequency.



On my end of the operation, I can hear everyone calling back and I usually reply to the strongest first to clear them out and try to get on to the less powerful signals as quickly as possible. This all works very well - until a few more people 'spot' you and suddenly you find it hard to separate them one from another once again, because there are simply too many calling back at the same time.

This is where you get creative and change your call to "CQ CQ ZP5BVK listening up 5 to 10". What happens now is that you use the 'A' and 'B' sides of your VFO (by pressing your split button on the radio) where 'A' is still set as your Tx frequency and now you scroll up and down on 'B', between 5 and 10 Khz 'up'. You will find that the calling stations have now all spread out, some 5 up, some 6 up and so on up to 10 up. Better for everyone.

By way of example, when a typical DXpedition transmits on say

Operating Split

14.200 MHz and specify that they are listening “5 to 10 up”, (hence 14.205 to 14.210) – then somewhere in there is where you call them. Their transmit VFO (and your Rx VFO) will still be set to 14.200 MHz but they will be moving their ‘receive VFO’ up and down between 14.205 to 14.210 and hopefully they will stumble on your call quickly.

Most transceivers have a “SPLIT” button, or a menu item that alternates between the two VFO’s on receive and transmit. It doesn’t really make any difference whether you use A for Tx and B for receive, or visa versa. The

transceiver manual will have instructions on how to do this.

On CW (Morse code) and RTTY (radioteletype), the typical shift in frequency is “up 2 to 5” or “up 10” kHz respectively. The DX station will send “UP” or something like “UP 2”. In recent times though, I have noticed some DX stations have used very wide spreads – “up 10 to 40” on voice and up “5 to 15” on CW. This is usually only where there is a massive demand though and not so common.

Can your radio do split? Yes, and certain (bigger) rigs have independent dual receivers, making it even more convenient to listen to both sides of a DX station running a split. There is a good DX Commander video on how to work a split operation at https://youtu.be/4ERkAoqgYM8?si=cjSVAgYhmi2rzJTC that is worth a look – Calum is very knowledgeable and entertaining to listen to.

Finally, one word of warning – occasionally you will set your VFO’s correctly when listening to a DX station calling CQ, and you will forget to press your ‘Split’ button before you make the call. Now you have accidentally called on the DX station’s calling frequency. Don’t worry, this is a common mistake to make when you are just starting to learn split operations.

However, this is also when you will get to meet the dreaded self-appointed ‘band police’. There are operators out there, that simply sit on the side of split operations like sharks in the shadows, waiting for someone to make that mistake, so they can immediately jump in and shout “SPLIT! SPLIT!” … and sometimes even add a rude remark. Don’t worry about that , we’ve all done it. Press your split button and carry on.

Garrett Kenedy - EI4IZB / ZP5BVK

EI4IZB@PoBox.com

Amateur radio and CB call sign stands.

If you are looking for a Personalised call sign stand, then I can 3d print them from £15.00 (5 letter call sign) plus £2.50 P&P.

These were mentioned in PW June 2025 edition on page 7

If you would like to see what your call sign stand would look like then send me a PM on Facebook or email me at g5eco@hamradio3dprinting.co.uk and I'll show you what it will look like printed on my 3D printer.

I can also create drink mats with your call sign, as well as a range of other 3d printed items for our hobby.

Have a look at my Facebook page to see what I have created for other people.

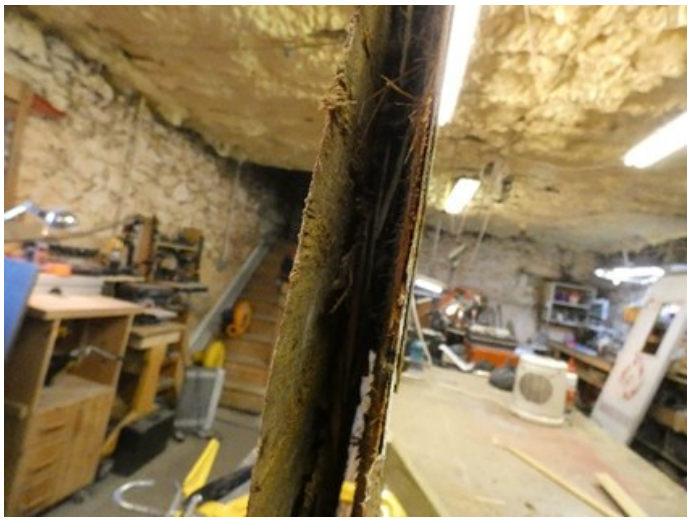
https://www.facebook.com/ham.radio.3d.printing
Siggi G5ECO (Find me in QRZ.COM).

Contact John EI3HQB

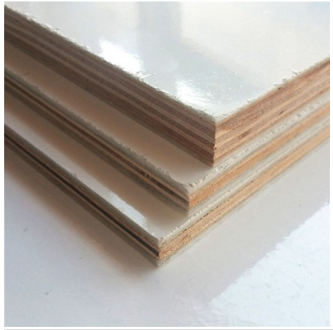
The Radio Control Unit (RCU) Part II

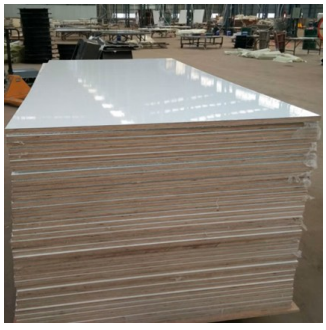
When we left you last, we had repaired the floors and fitted a new celling and repaired the chassis and sealed it with automotive under seal. Now we turn our attention to the rear of the unit where we had a number of issues with rot as a result of leaks, one of the main issues was with the right-hand door where its internals had turned to pulp and the door was deemed dead.

We removed the door for further investigation and after removing the rotten timber inside it was like looking into a cave.



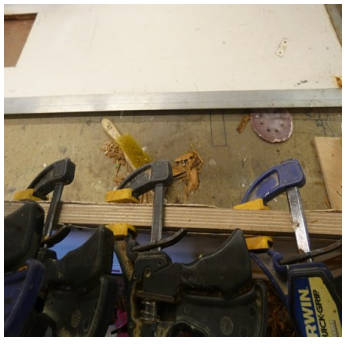
The whole unit is constructed of FRP plywood, its external coat is fibreglass with a plywood core this is used in many types of box trailers and has a great life span as long as water dose not get into it as it is working its evil of rotting unseen.

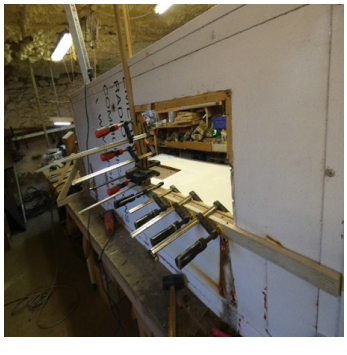




Our doors had windows and these had failed so the water over the years had seeped in between the fiberglass and had rotted most of the wood from the window down, replacement sheet is very expensive and as a club just getting started the money was not in the club funds.

I am not one to turn down a challenge so I attacked the door and cut out all of the rotten timber and as you can see it was in a poor state.





The Radio Control Unit (RCU) Part II

Once cleaned myself and Sue EI1826 set about creating a frame inside the fiberglass ie around the windows and along the door edges also bridging sections inside to give the door a rigid frame this frame was bonded to the external fiberglass and left to set.

Once all glues and bonding were complete, I could then make the door solid internally, I had been asked why I had left holes in certain places as I built up the frames.
Now was the time to show our group how I intended to make the door live again, I had left the holes (some complete with tubes) to allow me to pump the internal voids with expanding foam which in turn would bond to the panels and make the door rigid again.

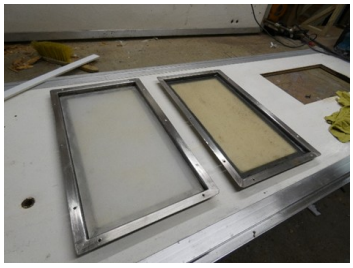
Now as the name suggests the foam expands into any hole gap left anywhere but it will also swell the door panels too so the door prior to having the foam pumped in had to be clamped to the bench and braced to prevent this.

The cans come with a tube (thanks to Wurth Ireland for supplying all screws sealants used in the project free of charge) which was inserted onto the various holes as far is as possible and once the trigger is pulled slowly withdraw the tube.
More weight was applied to the door on the bench and it was fingers crossed that it would work.

A few days later and clamps removed and success the doors were excellent time to hand over to Sue EI1826 and Alex EI1895 to work their magic on sanding and painting and I have to say they did some job a credit to them.

Stripping old paint from this fiberglass proved to be a nightmare but in fairness they stuck with it and filling and prepping is an art in its self.

Next we had to sort out the issue of why the water had got in past the glass and then make sure it did not happen again.
The doors had a stainless steel frame and over the years the sealant on these had perished so they were cleaned up and the original perspex thrown in the bin I had some off cuts that we used as replacements and to avoid anyone looking into the unit Sam EI3IUB gave them a buzz with an orbital sander to give them a look of privacy glass.



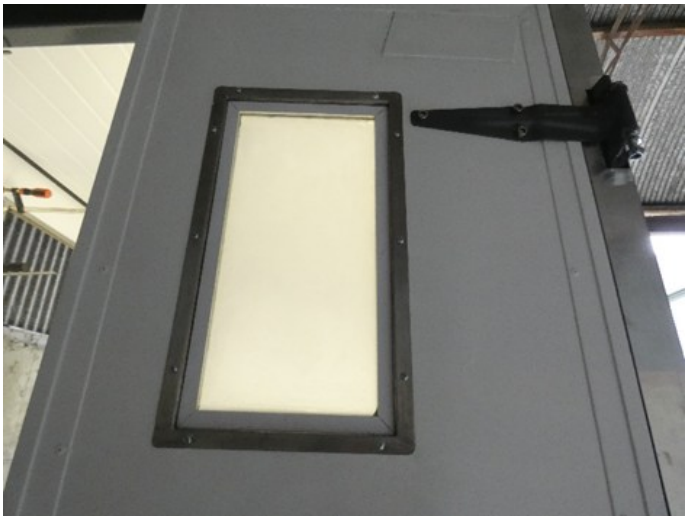
The old and new can be seen here, the yellowing in the old is age and ultraviolet the new ones will also let in lighter when the doors are closed also.

Next issue with leaks on the doors was the hinges, water was seeping in thru the bolts and no matter how tight they were eventually they would get slightly loose and then leak.

To reduce this, I came up with the idea of plated on the inside where the old bolts had crushed into the doors, these would spread the pressure over the area instead of a single point.

The Radio Control Unit (RCU) Part II

Every nut and bolt were replaced with stainless steel as all the original ones had rusted and stained the surface so we did not want any further ugly rusty runs in the future, sealant was applied in the bolt holes and on the hinge and plates again to fully waterproof the repaired doors.



And now we could turn to the rear corners these are an angular steel section of 4x4 inches or 100mmx100mm the leading edges had corroded and it was deemed we should repair and treat any rust and then cover them in aluminum corner pieces and then paint them to match the rest of the unit frame.

Damaged Corners

New corner section

Once the corners had been made good we could fit the repaired doors and at least have a somewhat sucure trailor box.

We wanted to get the RCU externally repaired to the point that it seemed that we were getting somewhere, always with a project like these repitiveness jobs seeem to be getting you no where so as the doors were installed it did bring a smile to the teams face.

Every single nut and bolt was emoved and replaced by the equivalent in stainless steel all the old ones had rusted and they also left rust streaks all over the unit so we did not want to se that again once we had a final paint coat on it.

Time then to return to the wheels and chassis and trims this area would need alsp need treating and undersealing against the elements, so plenty of wire brushing and grinding rust away back to bare metal and then a top coat of underseal applied with a shultz gun.
Mudguards were also stripped and then primed and a coat of hammerite gloss black applied they would be fitted later on in the project as the exterior would need a full paint and seal first.

At this point we had also serviced the brakes and replaced the handbrake cables which only work on the front axle, after a full clean new bearings were fitted and

The Radio Control Unit (RCU) Part II

then new shoes and caps ..

Another area externally we worked on was where the spare wheel was fitted, we wanted the wheel to be stored internally for security reasons but also to make way for the battery storage box we would make up later.

The batteries would be charged with a solar system on the roof of the RCU and also inside the box we would have access to cable connectors for our antenna but that is further down the line for now.

Sue EI1826 Alex EI1895 Sam EI8IUB and Keith EI5KJ all worked in prepping the exterior and painting to a finish where they could, again most of the members could only attend at weekends and offer some help myself EI3HQB and Sue EI1826 worked on the project most days in between work we had on the bench for other customers.

Sue gave many days and hours on the painting a pure perfectionist and was head of quality control hi hi nothing got past her and it paid off on the finished unit.

So join us next time when we make the biggest change to the unit but also the best idea of all that would pay off in a big way once the RCU was up and running.

So take care and we will catch you on part 3

John Tubritt- EI3HQB

ei3hqb@gmail.com

Our national day in Ireland is Saint Patrick's Day each of the major towns have parades as do some of the smaller towns too. The Collective Communication Radio Group are based in the South East of the country our city Waterford holds a large parade for the event but we have been involved in the Tramore one for a number of years, Tramore a seaside resort town 10 miles from the city with a population bordering around 12,000 has a great buzz each year for the parade.

As usual we prepare our RCU (radio control unit) at my workshop as we want to present a good image for any potential visitors to the unit after the parade.

We only have a small drive to Tramore and get into our position, then we adorn our vehicle and RCU with flags etc. to be in keeping with the parade fun, we also bring our wo dogs who are Irish red setters and they too have a celebratory green and shamrock bandana.

The parade gets underway around 1pm but we arrive up about 11.30 and this gives us time to meet people we know and also talk to people with an interest in radio.

We are fortunate in Tramore to have 7 licensed operators in the town so there is a knowledge of what Amature radio is about some of the operators are involved in RNLI and Cliff rescue who themselves have radio comms and it is this too that gets people using radios to look outside the services at hobby radio.

The parade this year was larger than ever from moving off it took two and a half hours to complete the route.my son Joe was driving while I took the images he takes to the part well.

Why get involved in a parade? As we know most of the time our hobby is looked upon a group of weird people in sheds turning dials and talking to others with similar equipment and setup.

EI3CC Joins St Patrick's Day Parade

We have benefited by getting out into the community and letting people know we exist as a club and that you are more than welcome to come along to any activation and see what we do and maybe go and get a licence as has been the case now four times. We also get involved in other community activities from marine festivals and even the Halloween scarecrow competition where we got local kidsto help build the scarecrow and install the electronics into him that made his eyes flash and a roar as a sensor was activated.

Get your club/group involved in your community, let them know you exist if not as has been the case with many your club will no longer exist.
The variety of groups from karate to ballet to gymnastics/ scouts/guides is fantastic and also the selection of local business and car clubs, so its good to be seen and involved.

So get out and about and show people you exist and most of all make it a fun day out.

Head Above The Rest

We all want to be able to get our antenna up as high as we can, so the obvious choice is a mast or pole of some description to which we usualy fit a rotator. The device that enables us to turn a beam in the direction of another station.

There are various types of rotators out on the market but they all do the same job to turn an antenna in the direction of a possible contact, one item that can and is overlooked with some installations is a support cage and if not fitted the result can be devastation and serious injury. Can you imagine the antenna in the image above coming of the mast and descending to the ground at the wrong time when a human may be passing under it?

The human cost is a worst-case scenario but your antenna will come to no good and will be expensive scrap.

Sadly, a Hex Beam and rotator has suffered here as a result of no support for the rotator, most people don't realize that everything above the rotator is only held on by four M8 bolts and an aluminium ring

Everything you put above the rotator relies on these four small bolts, so imagine when this is under load in strong winds.

What is the answer (***A head unit)*** So what is a head unit simple it is a cage around the rotator and in some cases a support bearing at the top to take the load of the rotator, the cage in turn is bolted to the mast/ pole and thus transfer the load down the mast / pole.

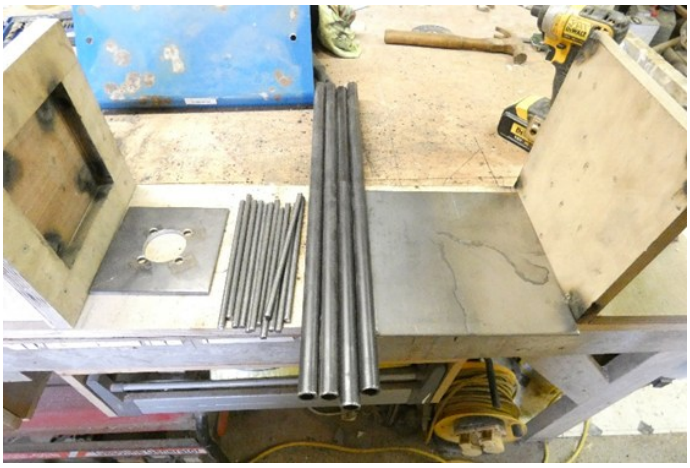
You can see with the second image how the rotator is inside a cage and the support bearing above that where the load is taken and reduces the strain on your rotator.

Head units can be bought commercially but they usually are made for a specific mast, the other option is to build one. Oon that note lets get our hands dirty and a few burns on the way too.

Head Above The Rest

The rotator we will build here is from Airmast and this unit can be made to suit all types of supporting mast and tubes. As long as you have some welding skills the unit is fairly straight forward.

Here is a layout of the components of the Airmast head unit.



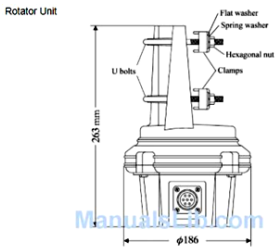
Four tubes 20 x 600mm in length then we have twelve 6x 150mm solid bar then we have a base plate 240x240mm and a top plate 145 x 14mm.

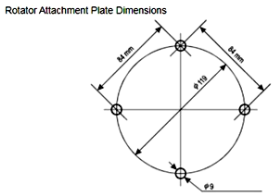
These are the main pieces to form the top section of the cage. You can also see I made a jig to suit both plates this also would control the angle of the tubes and if measurements are correct keep it all inline.

The top plate 145x145 is drilled to suit the head bearing you wish to use in this case a Yaesu GS50.

All measurements are in the instructions and once a centre point is found its only a case if transferring to the plates.

The base plate is drilled to the required rotator to be fitted and these hones run at 90 degrees to the sides. As we will fit a web support later and this would conflict with the head design.





Now the plates can be put in the jig in my case 18mm plywood and when you are happy you can tack all the tubes into place.

The support I have on the lower plate is screwed at a defined measurement so as once the plate is in place and tubes up against it then it's a snug fit and wont move under tacking in place once tacked, I remove the screws and the upper plate slots out of the pocket.

Now to check all the angles are correct place the tacked head on a flat surface and if you have an angle finder place it on one corner and then check it reads the same on all the others., providing you have made the jig up correct it should be spot on.

The welds can now be completed and any cleaning on the tubed completed at this stage as its easier to get inside the head unit.

Once you are happy with the tubes we then fit the 6mm solid bar this adds strength and transfers any stress down the tubes, three are welded per side and this leaves sufficient gap for the rotator to be installed as and when the head unit is fitted.

At this stage we need to drill holes in both top and bottom plates where the tubes are welded, this is needed if you are going to get the unit galvanized if you fail to do this the galv company may refuse to plate the unit. The reason for this is when being plated the temps in the tanks is enormous and this could case it to explode with trapped air inside, also drill out the hole for your tube in the upper section where the mast will pass through.

We are now on the final leg so to speak, the tube you wish to mount the head on can be either internal mount or external mount by that I mean the tube can slide into an existing tube or visa versa in the case of this head unit it will be installed internally.

As mentioned before when we talked about the holes to be drilled for your rotator now you see why the holes are not to be drilled on the diagonal lines from corner to corner.

We centre the tube on the underside of the base plate again a single tack just to hold in place and we then use a 90 deg square to check the tube is good with the base plate.

Once happy then some more tacks just to secure it until fuller welding later.

We now add a web to the underside this transfers any stress down to the lower tube and into the mast and makes the head unit extremely strong.

Head Above The Rest

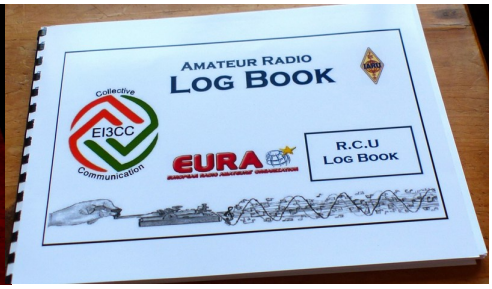
Again tack everything and once you are happy then you can full weld the tube and webs this is the head unit now complete and ready to galvanize or paint that's your choice.

Our head units are overbuild and we stick with that from the point of view we know it's the best out there no matter what.

Hope this helps with a head unit you may have had in mind

John Tubritt- EI3HQB

ei3hqb@gmail.com



Flying a Kite Antenna

Portable activity in the west of Ireland, Connemara or Burren areas is often limited by the antenna one chooses for the operation. Portable HF operation thrives on ingenuity. When trees are scarce and masts unwelcome, a kite□borne antenna offers stunning height and rapid deployment. The use of 10 metre fibre-glass poles seldom holds the antenna high enough above ground. An antenna carried aloft and vertical by a kite would give way better results than shortened loaded verticals or antennas located close to the ground. Kites supplied by toy shops are generally not large enough to be of use for lifting antennas also a single line kite is the only suitable kite for supporting long wires.

My initial experimentation with Kites was in 2012 following many a chat with G4ROJ regularly heard operating on 40 metres. Roger took kite antennas very seriously by stringing a dipole between two kites and even a horizontal loop between four kites.

Of all kites tested the Sled kite was the most stable in flight and flies in light breeze conditions. The Sled 24 kite has a surface area of 242 x 113cms and has a drogue at the rear which ensures that the kite is held into the wind thereby making it very stable. The Sled 36 has an area of 323 x 150cms and is capable of lifting even heavier loads. It would be a lot more difficult to manage in stronger winds. Special kite line is used with a specific breaking strain according to the size of the kite. Check the specifications of the kite before ordering kite line.

The kite size 230x 110cm

The next consideration is the type of antenna to be carried by the kite.

The End Fed Halfwave

- Single support: only one tie-point needed - the kite line.
- Multiband resonance: a half-wave on 80 m is naturally resonant on its harmonics: 40, 30, 20, 17, 15, 12 and 10 m.
- Compact feed system: a small 49:1 transformer matches the high wire impedance down to 50 Ω.
- Light weight: fine gauge copper-clad wire keeps mass low for stable flight.
- With the feed point at ground level, the operator controls tuning, safety, and feedline routing without climbing or re-launching.

Flying a Kite Antenna

A radial system would be required for the Top Band quarter wave vertical but unnecessary for the half wave or multiple of half waves on the other bands.

The antenna wire cannot be too heavy otherwise the kite will not carry it plus its line aloft under mild breeze conditions.

The choice of wire was 1 x 0.75mm PVC coated multi-core copper wire. There are actually 5 strands of copper inside the PVC coating, and it is about as light as one can get. There have been suggestions that electric fence wire could be used but this has very fine wire intertwined with light polypropylene “string”. This is not suitable as the fine wire can break very easily if stretched under tension. The sudden pull in a gust of wind would undoubtedly break this wire.

A length of wire is cut to 135.56 ft and insulators fixed to each end. A short length of bungee cord is tied to the insulator and then tied to the point at which the flying line is attached to the kite. It Is important to note that one does not fly the kite with the antenna wire as the breaking strain may not be sufficient to cope with the load of the kite. The wire should be allowed to hang vertically from the kite towards the ground.

The bottom end of the wire is connected via an anti-static box to an ATU. Located on the side of the box is a small wander socket where the box is connected to earth. The earth system used in our case was a copper clad earth rod, roughly 3 feet long, driven into the bog. Radials may be connected to this if necessary. In the case of rocky terrain, it is best to get as much earth rod into the ground and then add radials where necessary. The antistatic box is connected to earth, and its purpose is to bleed off any static electricity from the antenna to earth thus preventing it from damaging the rig or electrocuting the operator. The Antistatic box is similar to one used by the South Bristol Amateur Radio Club.

Fig 1 Antistatic Box

It should be noted that the anti-static precautions should be in place before the antenna is carried aloft as the action of grabbing the antenna could prove painful if not fatal should a large charge have built up on the antenna wire.

The damage to the rig could also prove more than it is worth to be complacent about the necessity to take steps to bleed off the static charge. It should be borne in mind that there is a potential difference between the ground and the air above it.

This potential difference rises exponentially with height above ground. The movement of air and even charged water droplets can produce a charge sufficientto jump across the gap of a spark plug. It has even been noted that bringing an 80 metre mobile whip from the horizontal position to vertical in rainy conditions may result in a nasty shock.

The construction of the anti-static box is shown in **Fig 1** The resistors are large 5 watt 1 Meg Ohm which will be more than adequate at power levels up to 200 watts. Do not use wire wound resistors as the inductance may cause problems.

A bungee cord is tied to the insulator at the bottom of the antenna wire and this is tied to the ringbolt on the anti-static box. The anti-static box is secured to a dog tether which is screwed into the ground. A small length of wire is taken from the bottom end of the antenna wire and plugged into the centre of the SO239 and a connection is made from the other side of the anti-static box to the ATU. The anti-static box is connected to the earth.

Once the kite is airborne it is manoeuvred allow the antenna wire to hang down vertically. The purpose of the bungee cord at each end is to take the shock of any sudden movement of the kite thereby preventing the antenna wire from breaking.

It should be noted that the kite is flown by the kite line and not the antenna wire. At this point the kite line can be tied off to the roof rack of the car. The only thing that remains is to tune the wire to the desired frequency and operate.

The results from this antenna have been impressive with many contacts made both inside and outside of Europe.

Both 80 and 40 metres have yielded good contacts into the UK with the beacon on 3.747 MHz being audible during daylight hours. Top band has tuned well on the antenna although at the time of day there was little to no activity heard although at night this band would come into its own. This is an easy solution to the problem in an area without trees.

Apart from the EFHW antenna one could just hoist a random long wire and use a 9:1 Un Un in line. A sloping dipole would be a possibility.

The kite antenna, operated in a good remote area or close to the coastline will provide excellent results and opens a myriad of possibilities. The only downer is that a nice sunny day may not be breezy enough to hoist the kite!

R.F. Byrnes

Special Event CB Weekend in Bavaria Germany

This past weekend, 28th and 29th March, was for our Uwe (Prepper 14) a weekend full of success. With his Zepelin military container he left his home in Hassfurt to head to a 360m MSL location called Zeiler Käpperla. His aim was for Uwe a first, to take part in the Mountain DX event representing his CB Funkfreude Hassberge as a head station.

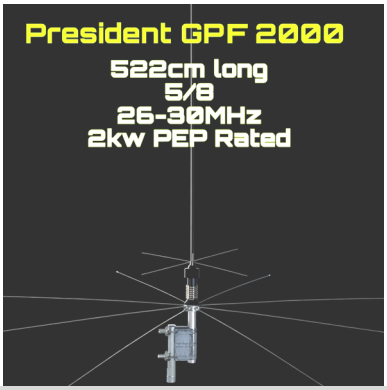
To make the weekend complete to sleep overnight and be back up early to check-in in the Bavaria network control which had a double birthday. It was not only the 6-year anniversary of the network but also the birthday of Thomas, Bonanza, who organises this weekly event every Sunday between 10.00 and 12.00AM on channel 8 USB.

The Mountain DX event is organised by Jochim, the Schwarzwalder, every year. This was the first event for this year and had 19 head stations taking part. The aim is that each head station occupies a designated channel in USB and stations from all around Germany try to reach these head stations. Jochim starts his event at 10.00PM on channel 2 USB with a music intro from Jerry Rafferty's Baker Street and proceeds to announce the head stations and their channel where they can be reached. This process takes about a half hour. From 10.30 till 00.00PM the head stations work as many stations they can hear and then return to channel 2 USB to finalise the event.

Mountain DX Season Kicks Off in Style

At last, the wait was over. On Saturday, 28th March 2026, the first Mountain DX event of the year officially got underway and for me, it marked a special milestone. For the first time, I took on the role of head station for our local summit operation, with one clear objective: to put my mobile shack through its paces under real contest conditions.

The destination was the Zeiler Käpperla, a modest but well-positioned hill in Franconia. However, the weather had other ideas. Just as setup began, sleet swept across the summit, turning what should have been a straightforward deployment into a test of endurance. Still, in true radio spirit, no conditions are too harsh when there are contacts to be made.



The chosen antenna, a President GPX 2000 with a silver loading coil, proved ideal for the task. Designed with portability in mind, it can be assembled quickly using double

clamps, while the radials screw in with ease. Within 20 minutes, the antenna was securely mounted atop an 18-metre telescopic mast. After connecting the Messi & Paoloni coaxial cable and raising the mast, the station was ready for action.

Despite the efficiency, the weather had taken its toll. I was thoroughly soaked. Fortunately, the insulated shelter provided immediate relief. Thanks to the built-in diesel heater, the interior had already reached a comfortable 24° C, allowing me to dry off quickly. A quick SWR check showed a perfect 1.0, and the first QSOs were soon underway.

At 21:00, Snoopy05 arrived on site, taking charge of logging duties; an essential role that would soon prove to be more demanding than expected.

Special Event CB Weekend in Bavaria

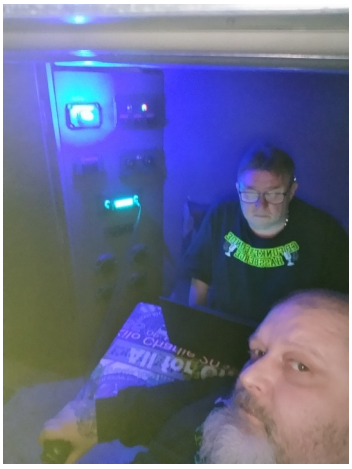
At precisely 22:00, the event was officially launched by Joachim, callsign Schwarzwälder. One by one, he introduced the 19 participating mountain stations, spread across Germany, detailing their locations, elevations, and assigned operating channels. After the 30-minute introduction phase, operators were released to their frequencies, with a scheduled regrouping at midnight on Channel 2 USB.

The moment we switched to our assigned frequency, Channel 34 (27.345 MHz), the home channel of the CB Funkfreunde Hassberge. The airwaves erupted. Stations from across the country called in simultaneously, creating a brief but intense period of radio chaos. Logging became a serious challenge, with Snoopy05 working hard to keep pace.

Order was eventually restored, and over the next 90 minutes, we logged an impressive 68 stations from all corners of Germany. The standout contact came from Bad Bergzabern, near the French border, an impressive 208.4 kilometres away. Given the relatively modest elevation of the Zeiler Käpperla at just 360 metres above sea level, this was a remarkable achievement.

At midnight, all head stations reconvened on Channel 2 USB for the official debrief. Each station reported their results and shared experiences from the evening. With that, the first German Mountain DX event of the year was formally concluded.

Yet for many operators, the night was far from over. Several stations regrouped on Channel 37 USB, continuing operations well into the early hours. For my part, I finally called it a night at 05:00 aware that another highlight awaited just a few hours later.



Sunday morning brought the 6th anniversary of the Bayernrunde on Channel 8 USB. Despite the short rest, I was back on air by 09:00. The frequency quickly filled with operators offering congratulations not only to the round itself, but also to its long-time moderator, Thomas (callsign Bonanza), who was celebrating his birthday as well.

By the end of the session, more than 120 operators from across Bavaria had checked in—a fitting tribute and a testament to the strength of the community.

With the event concluded, it was time to pack up. Under clear skies and bright sunshine, dismantling the station took just 25 minutes and far more pleasant than the previous day's setup.

And so, an outstanding radio weekend came to an end. A successful debut as head station, challenging conditions, strong contacts, and a vibrant community spirit—all the ingredients of a perfect start to the Mountain DX season.

Marten, 13EC39, 13LR029
Uwe, Prepper14 / 13UG14

Mills On The Air 2026

Celebrating 30 Years

Saturday 9th to Sunday 10th May

CALLING ALL RADIO AMATEURS!!

The 30th anniversary of Mills on the Air in conjunction with National Mills Weekend (run by S.P.A.B.)

This year we are inviting Mills and Radio Amateurs from around the World to take part in this unique event. Bringing Amateur Radio to locations that are typically seen only by Mill enthusiasts and Walkers!

Mills on the Air began back in 1996, when our founder happened to spot a call out on the RSGB Newsfeed for a few Amateurs to set up at a select few Mills around the country to operate on the National Mills Day.

This turned into a decades long event that now had more than 300 operators and clubs taking part from the UK, The Netherlands, Finland, Australia, South Africa and many more locations!

It is free to take part, but we do encourage you to give a donation to your local Mill to help them with their fundraising efforts. Many are run by volunteers and every penny helps!

We are open to all Amateur Radio Bands and Modes and this year, there are DMR groups set up specifically for us!
(more details can be found on our facebook page)

If you would like to take part, please visit our website to sign up!

www.nharg.org.uk/mota

We have regular updates on our Facebook page, including interesting histories of the Mills taking part!

www.facebook.com/MillsontheAir

Photograph by Jack Dwarswaard - Kinderdijk Polder Mill

Frequency Generation Systems

When we talk about how a radio generates its operating frequency, we're really talking about the heart of the transceiver. Every signal you hear or transmit begins with a stable reference. In amateur radio equipment, past and present, three main approaches have been used: crystal oscillators, PLL synthesizers, and DDS systems. Each one reflects a different stage in the evolution of radio technology.

Let's start with the crystal oscillator, the classic solution. A quartz crystal behaves like an extremely precise mechanical resonator. When placed in an oscillator circuit, it vibrates at a very specific frequency. Because quartz has a very high Q factor, the resulting signal is remarkably stable and clean. That's why crystal oscillators are known for excellent spectral purity and very low phase noise. For decades they were the gold standard in transmitters and receivers. The downside? They are essentially fixed-frequency devices. If you want another frequency, you usually need another crystal. Early amateur radios often had a row of crystals for different bands or channels.

As radios became more sophisticated, engineers needed flexibility. That's where the Phase-Locked Loop (PLL) came in. A PLL uses a stable reference oscillator—often still a crystal—and locks a Voltage Controlled Oscillator (VCO) to it through a feedback loop. By dividing and comparing frequencies inside the loop, the system can generate many different frequencies from a single reference. This made modern synthesized radios possible. Suddenly you could tune smoothly across an entire band instead of jumping from crystal to crystal. The trade-off is that phase noise tends to increase as frequencies are multiplied, so careful design of the loop filter and VCO becomes critical.

Then came Direct Digital Synthesis (DDS), which took a completely different approach. Instead of relying purely on analog oscillators, DDS generates signals digitally. A high-speed clock drives a digital phase accumulator and waveform lookup process, and the result is converted to analog through a DAC. The advantages are impressive: extremely fine frequency resolution, very fast tuning, and complete programmability. That's why DDS is widely used in modern signal generators and some SDR-based systems. However, because the signal is digitally created, it can produce spurious components, which means careful filtering and good DAC design are essential.

So which one is best? In practice, each technology excels in a different area. Crystal oscillators deliver outstanding stability and purity. PLL systems provide the tuning flexibility required in modern transceivers.

DDS offers incredible frequency control and agility. In fact, many high-performance radios today combine these techniques—for example, a crystal reference feeding a PLL, sometimes with DDS used for fine tuning.

Next time you turn the dial or click the VFO on your rig, it's worth thinking about what's happening behind the scenes. The signal you're chasing on the band might be thousands of kilometers away—but it all starts with a tiny reference source inside your radio, keeping everything exactly where it should be.

João Grisi - PY6CJ

The ZL Special Antenna

The ZL Special antenna is a 2-element horizontal phased array developed in 1949 by New Zealand radio amateur George Pritchard, ZL3MH (later ZL2OQ), primarily for improved HF, VHF, and UHF performance. It utilizes two folded dipoles fed 135-180 degrees out of phase, often using twin-lead or coaxial stubs for feeding and phasing, offering gain 6dBi – 9dBi. The name "ZL Special" was coined by Fred C. Judd (G2BCX) in 1950 in an article for Shortwave Magazine after he experimented with and refined Pritchard's design.

One can be lured into purchasing antennas with fancy names but are they really worth the money. I wanted to experiment with a directional antenna in a small back garden where there is no room for a tower or mast. The cheapest 2 element beam for 20 metres was around £400.00.

I cite some vertical antennas on the marked which are nothing more than a conductor either 5.4 metres or 7.1 metres in length claiming to have a low SWR on all bands. These are fed via a 9:1 UnUn or similar value which reduce the high SWR for a given band to something that the built in Auto Tuner on the average HF rig can tune out.

Undoubtedly these will give a performance of a couple of S points below that of an antenna resonant on the band of choice. It would be more practical use a ¼ λ vertical instead. This is practical where the frequency is between 10 and 20 metres but then becomes impractical from 40 metres and above where the ¼ λ would be in the order of 33ft or 66 ft in the case of 80 metres.

One can load the vertical with a tapped coil thereby shortening the overall length. This will decrease the bandwidth of the antenna and reduce the efficiency due to ohmic losses.

Whilst the vertical solves a problem by taking up very little room consider one major disadvantage - It is onmi-directional and so if you apply 100 watts to the antenna consider dividing the power by 360 which will give you the power radiated in any one specific direction!

Then we come onto compromise beam antennas such as the HexBeam. Here the physical dimensions of the antenna is reduced by bending it.

The HexBeam is a compromise designed for users who cannot support a large, heavy, full-sized Yagi. The trade-off for its small footprint, low weight, and 5-band capability (6-20m) is that it is less durable in severe weather and offers lower overall gain than a larger, more robust directional array. The gain of the HexBeam is roughly 5 dBi to 6 dBi (roughly 3-4 dBd) in free space.

The ZL Special offers a solution offering a good forward gain with an excellent front to back ratio. A Gain of up to 7dBd is possible with the Zl Special and it costs a fraction of the price of the HexBeam. Granted this is a beam which is fixed or can be flipped to work in the opposite direction. Undoubtedly, there is little inconvenience once the orientation is correct.

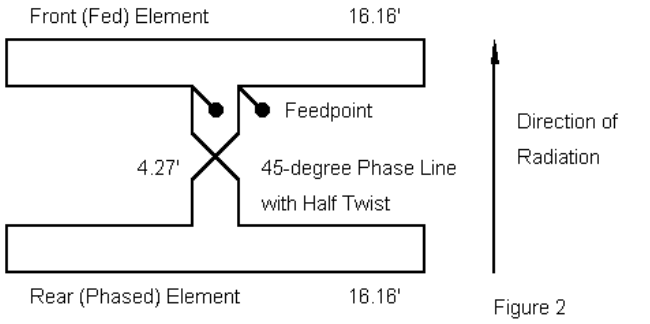
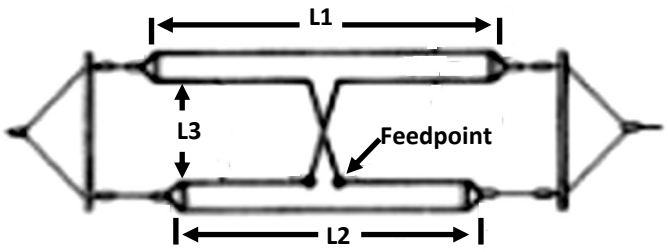


Figure 2



The Build

The antenna is simple to built using 300 ribbon cable for the elements and the phasing section in the middle of the antenna. The reason for the phasing section is for front to back ration and not gain.

The elements are supported on wooden dowels or fibreglass rods. An insulator is placed at each end of the elements and tied off to the supports. The feed point is as shown in the diagram above.

Dimensions

Frequency	L1	L2	L3
28 Mhz	5.39m	5.09m	1.29m
21 MHz	7.24m	6.85m	1.72m
14MHz	10.85m	10.30m	2.58m

The antenna can be fed with 50Ω coax via a 1:1 Balun..

The ZL Special is a high-gain, compact, two-element directional beam antenna designed for amateur radio, featuring two folded dipoles spaced about 0.1 to 0.15 wavelengths apart and fed 135-180 degrees out of phase. It offers 4–6 dB gain (similar to a 2-element Yagi or better) with excellent front-to-back ratios.

The ZL Special is prized for being easy to build, lightweight, and effective for DXing and contesting, especially when space is limited

Performance: The design provides a substantially unidirectional pattern with a good front-to-back ratio. It offers more gain than a standard 2-element Yagi of similar size.

The ZL Special Antenna

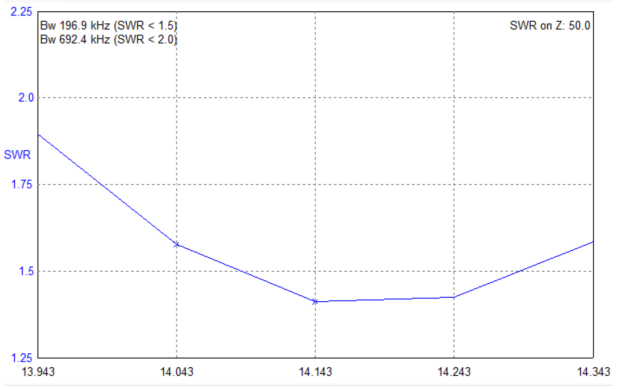
Performance: While initially claimed to have a gain similar to a three-element Yagi, modern tests show the forward gain is closer to 4-4.5 dBd (decibels over a dipole), which is comparable to a two-element Yagi, but it is highly valued for its excellent front-to-back ratio

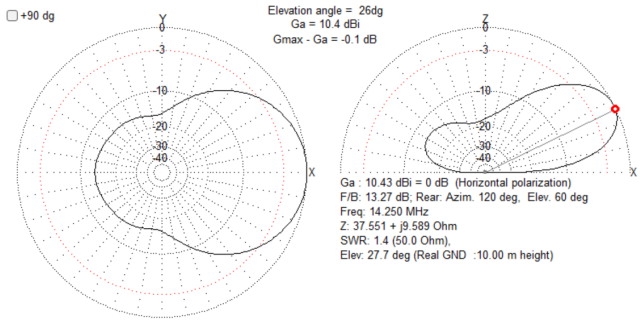
Design & Function: It consists of two driven elements (typically folded dipoles) spaced roughly 0.1 to 0.15 wavelengths apart. It is known for being a "compact" beam antenna, often with a high front-to-back ratio.

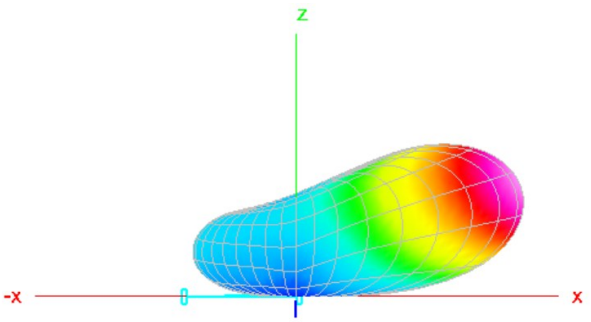
Feeding: The elements are typically fed out of phase, often using 300-ohm twin-lead for the phasing harness, resulting in an impedance easily matched to 50/72-ohm coaxial cable

The Antenna is a compact size: and the design requires a shorter boom length than traditional Yagi antennas with similar gain, making it a practical option for amateurs with limited space or for portable operations.

The antenna was modelled using MMANA-Gal and when all calculations were scaled and complete the SWR with a feed impedance of 50 Ω was approximately 1.44.







There is little doubt that this antenna would prove its worth n a portable operation and is way more attractive than spending small fortunes on small compromised beam antennas.

Our first event of 2026 kicked off with a SOTA bring in the new year on Croagh Patrick EI/IW-005. Contacts were made with 11 stations across 70mhz, 145mhz, 433mhz & 1296mhz + two contacts using 145mhz DV (DMR).

Even with the poor weather conditions since January Group members have activated 57 different SOTA summits using VHF/UHF & DV (DMR & C4FM)

Our weekly UHF Net on 433.525mhz continues every Wednesday night starting at 2100hrs local.

Once the weather picks up it's hoped to activate a number of the EIRE WW2 signs around the County, further information on these historic markers can be found at

https://eiremarkings.org/

Other plans include:

Activating some of the offshore islands will take place during the summer months using HF, VHF & microwave bands.

Microwave point to point testing using 1296mhz, 2320mhz, 5760mhz & 10368mhz.

Digital Voice simplex experiments using DMR, C4FM & DSTAR.

Getting a Group website up and running.

ATV experiments on 1.3ghz & 5.6ghz

The Group uses its Whatsapp group ***"Mayo Radioactivity"*** to announce up coming SOTA activations and experiments. The "Mayo VHF Group" Zello room is for general chat.

Mills on the Air

9th and 10th May 2026

The Mills on the Air event is celebrating a milestone year this year. 30 years!

Started back in 1996 by Jasmine (G4KFP) and Bill (G4IOD) Marshall of the Denby Dale Amateur Radio Society (Now the Denby Dale Amateur Radio Club), the event has had an illustrious past, boasting not only Famous Landmarks but also Famous Actors taking part!

In 2025, the baton for event was passed to Lyndsay (M6YMB) and Stefan (M0OSL) Latimer of the Nunsfield House Amateur Radio Club and they are hoping to take the event from strength to strength. 2025 was a brilliant event and this year is already shaping up to be an absolute corker!

With stations registered already from around the UK, Germany, The Netherlands and Canada. This is looking like its going to be one of the biggest spreads of Windmills, Watermills, Tidal Mills and Steam Mills that have ever taken part!

If you would like to take part, please visit either the social media page for Mill updates (Every Mill that takes part has a mini history written up by Lyndsay, just so you don't have to!) or visit the NHARG Website to register.

If you would like help locating your local Mill site, please do get in touch!

OH! and just a note... Watermills are also valid activation sites for British Inland Waterways on the Air! Just so you know...

Website: https://nharg.org.uk/content/about-mills-air-mota

Social Media: https://www.facebook.com/millsontheair

Lyndsay Latimer
m6ymb2019@gmail.com

International Museums Weekends

20th - 21st & 27th - 28th June 2026

This year is the 25th Anniversary of the events conception, way back in 2001.

Created as a response to the Foot and Mouth Epidemic which shut down most of the countryside, and subsequently, access to Windmills and Watermills for the MOTA weekend, It was found that Museums were exempt from the restrictions.

And so, International Museums Weekends were born.

Of course, it was not quite so simple as just that, but that is a story for another day!

What is the purpose of activating at a Museum?

* Visibility. Radio Amateurs do tend to be seen by the public as a bit of a weird bunch (and yes, some of us (I refer to myself) absolutely are!). By setting up at these very public facing events, we can show the public some of the different facets of the hobby we love so much.

* Novelty. It is often that the Museums themselves could do with a little something different to draw the public in. And we fit the bill!

*The Challenge! There are awards on offer for contacts, and why not set up a mini challenge within your club on just who can make the most contacts on the day?

There are museums across the world already registered and, if you are taking part in Mills on the Air this year, all of the Mills that are taking part are valid sites for the Museums event as well!

If you would like more information about the event please visit us at www.radio-amateur-events.org


International Museums Weekend
International Museums Weekends
takes place over the weekends of
20th - 21st & 27th - 28th
June 2026
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.
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.
For those clubs, individuals and museums wishing to take part, please register at the following web address below:-
www.radio-amateur-events.org/IMW/Registration.htm
We also run a award scheme for the amateurs that like to chase the special event calls,
Please see our website for more details
www.radio-amateur-events.org

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- It's simple and it's FREE. You spend money with us via our website and we give you money back to spend on our website on a purchases.

FlexRadio

Aurora AU-510M & AU-520M. Due early 2026

FlexRadio Aurora AU-510M 500W Integrated SDR Transceiver (With Screen). The World's First Fully Integrated 500W SDR Transceiver.

Introducing the Aurora AU-510M from FlexRadio – a revolutionary SDR transceiver delivering a true 500W of RF output in a compact, all-in-one design. Built for modern amateur radio operators, the AU-510 redefines station architecture by integrating the transceiver, amplifier, automatic tuner, and power supply into a single chassis..... **£7349.00**

FlexRadio Aurora AU-510 (Without Screen) **£6199.00**

FlexRadio AU-520M Dual SCU 500W Integrated SDR Transceiver (With Screen) The Next Evolution in High-Power SDR.

The AU-520M is part of FlexRadio's revolutionary Aurora™ Series—a new class of HF/6m transceivers that combines the transceiver, 500W amplifier, automatic tuner, and power supply into a single, compact system. Designed for operators who demand high performance and modern convenience, the AU-520 offers unmatched efficiency, integration, and flexibility..... **£9599.00**

FlexRadio AU-520 (Without Screen) **£8599.00**

Flex Maestro Control Console

The Maestro™ is an intuitive, plug-and-play control console that directs the operation of any Flex-6000 or 8000 Signature Series transceiver without the need for a traditional PC. Connect Maestro directly or through your local area network (LAN) to any Flex-6000 or 8000 series transceiver and you are ready to operate..... **£1599.00**

FlexRadio 8000 Series

The FLEX 8000 Series revolutionise your view of the bands with up to two 7MHz spectrum waterfall displays and independent receivers. These dual receivers can simultaneously operate on any band and mode with instant QSY between VFOs, perfect for digital mode and remote operations.

Flex-8600M With screen Free Shackmaster PSU **£5599.99**
Flex-8600 Without screen Free FlexControl **£4599.00**
Flex-8400M With screen Free FlexControl..... **£3599.99**
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Elad TM-2

Console for SDR Radio for only £269.95

TMate2 allows the control of main functions of SDR software as FDM-SW2, PowerSDR and Perseus. Intended mainly to allow the use of SDR software without the need to watch the screen of the PC, or when the screen of the PC is crowded by various programs such as LOG or software for DIGITAL operations or CONTEST.

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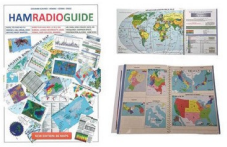

Topbytes Morse Trainer

New Version 2 with Battery Indicator & USB Cable.

EXCLUSIVE TO ML&S! Only £99.95

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See: www.HamRadio.co.uk/topbytes

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The TopBytes DXSpotter is a compact, WiFi enabled DX cluster display that brings real time spot information straight into your shack – without needing a PC, laptop or tablet running all day.

See: www.hamradio.co.uk/dxspotter

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Testimonial - Mr. B Hiley
"The DESKTOP speaker is great, audio is crisp and clear, brilliant!"

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 lates 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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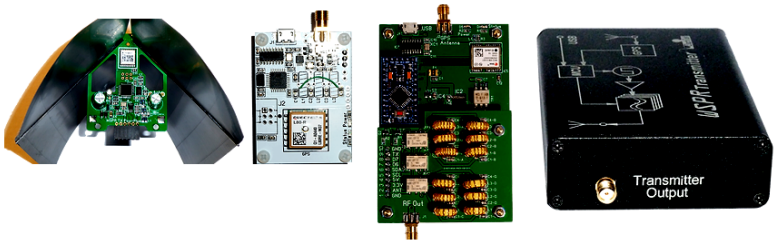

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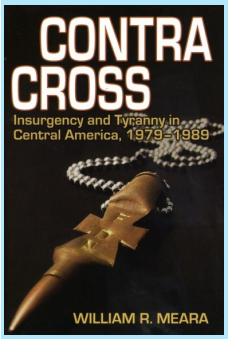
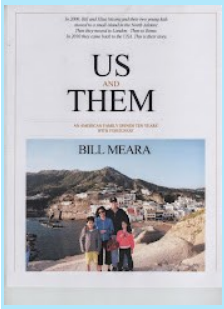


A journey through the Central American wars of the 1980s as seen through the eyes of a young American officer who worked on both sides of insurgency in the region: In El Salvador Bill Meara supported efforts to defeat insurgents; with Nicaraguans he worked to keep an insurgency alive. One of very few 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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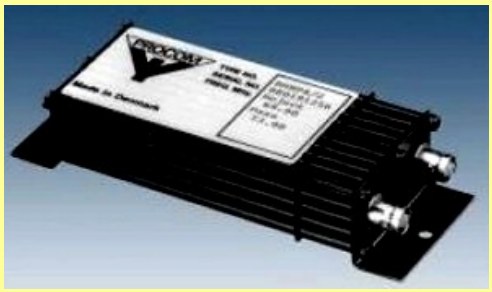

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Photo courtesy of Thames Valley Contest Group

"Martin Lynch and his team are steadfast supporters of Contesters and DXpeditioners. From the UK's Five Star DXpedition group's activities, which included the world record breaking T32C DXpedition, to their support for CDXC and its members they have always been there. Thanks Martin."

Chris, G3SVL, Chairman CDXC: The UK DX Foundation.

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