Ham Radio Ireland

Ag freastal ar thraidisiúin agus ar spiorad an raidió amaitéarach

Editor: *Steve Wright - EI5DD* *wright14@gmail.com* **Vol. 3 Issue 04** **August 2025**

HAM RADIO IRELAND

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

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

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

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

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

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

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

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

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

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

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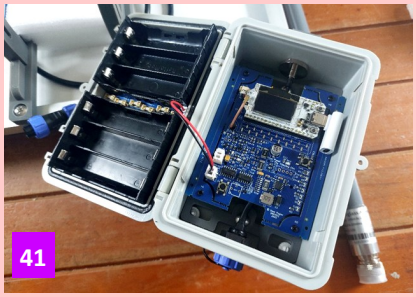
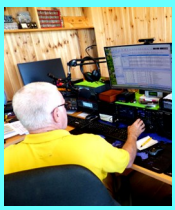
Submitting Items for This Magazine

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





Cover Image

Garrett Kennedy EI4IZB / ZP4BVK relaxing in the shack

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

EURA
EUROPEAN RADIO AMATEURS' ORGANIZATION

News and Forthcoming Events Planning 2025

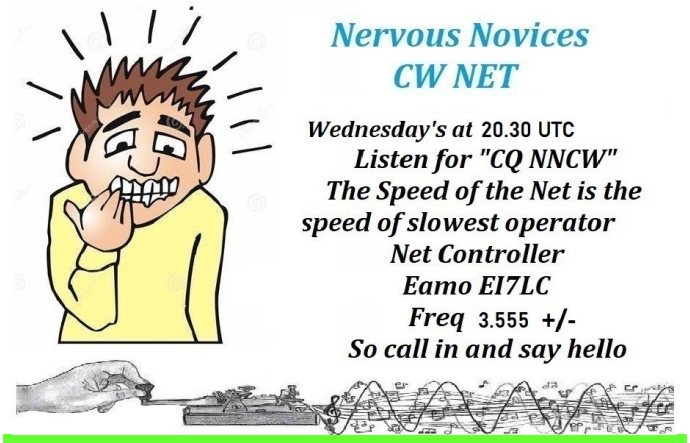
The ILLW takes place over the 3rd weekend of August commencing from **00:00 16th to 24:00 on the 17th of August 2025**. August seems to have become the international weekend for lighthouses. Countries all over the world have become involved in one for or another of lighthouse activity.
Some years ago the United States Congress declared August 7th as their National Lighthouse Day and during that first week in August amateur radio operators in America set up portable stations at lighthouses and endeavour to make contact with each other. This event is known as the US National Lighthouse Week. In Britain the Association of Lighthouse Keepers, ALK, conducts International Lighthouse Heritage Weekend on the same weekend as the ILLW in August.
Their objective is to encourage Lighthouse managers, keepers and owners to open their lighthouse or light station and related visitors' centres to the public with a view to raising the profile of lighthouses, lightvessels and other navigational aids, and preserving our maritime heritage.
The ILLW usually takes place on the 3rd full weekend in August each year and attracts over 500 lighthouse entries located in over 40 countries. It is one of the most popular international amateur radio events in existence probably because there are very few rules and it is not the usual contest type event.

GB2RS 70th Anniversary Celebrations Continue

Celebrations continue for the 70th anniversary of the RSGB's weekly news broadcast GB2RS. A special callsign GB70RS will be active throughout the year operated by the radio amateurs who deliver the GB2RS new each week and RSGB Headquarters staff. Operation will be on all modes and all bands. More info from https://rsgb.org/main/gb2rs/gb2rs-70th-anniversary/

British Railways Amateur Radio Society

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



Irish Net

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

News and Forthcoming Events Planning 2025

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, 2025
Casual contacts to help ring in the new year!

Support Your Parks

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

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

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

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

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

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

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.

National Ham Fest - UK's Premier Radio Rally

NH National Hamfest 2025

5th and 6th September

George Stephenson's Hall, Newark Showground, NG24 2NY

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.

Events & Activities Planner

Vintage Rally (Stradbally)	1st - 4th August
ILLW Lighthouses on the Air	16th - 17th August
British Inland Waterways on the Air	23rd - 25th August
International Dog Day	26th August
G-QRP Convention	30th - 31st August
Newark Ham Fest	5th - 6th September
Churches on the Air	13th September
Railways on the Air	27th-28th Sept
JOTA Scouts on the Air	17th - 19th October

News and Forthcoming Events Planning 2025

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

GQRP Convention 30 - 31st August 2025

The 2025 Convention will be held at the Harper Adams University Campus, near Telford, TF10 8NB. Saturday afternoon/evening will be the Buildathon, followed by a social gathering with a buffet supper.

The Buildathon will commence at 3pm and will take place in one of the seminar rooms on the first floor of the main building (same as last year for those returning).

Sunday will be running in parallel with the Telford Hamfest. Further info >> here<<:

The following talks are booked:

1) Something about Homebrew by Nick 'the Vic' Wood, M0NTV
2) The Parker 1 Portable HF Transmitter by Damion, G4USI
3) (TBC) A Q& A Session with Drew Diamond, VK3XU

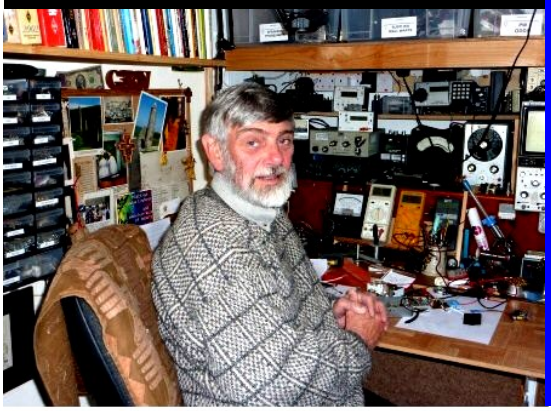
Over 300 Editions of RadCom Available in RSGB Web App

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

Hamshack Hotline to Close Down

Ham shack Hotline, an idea conceived by John, K1WIZ, in 2018, will close down its global VOIP communications service on the 29th of August. Whilst this network was a major success, the scale of the operation became to large to manage and maintain the reliability and high standards on a voluntary basis. Not an easy decision, but ample notice has been given to enable users to transition to other services.

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

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

The International Short Wave League (ISWL) was formed in 1946 and for 79 years, has provided facilities enabling members around the world to enjoy their hobby, to the great advantage to themselves and fellow enthusiasts. Unlike most radio societies, the League effectively caters for members interested in both the Amateur and Broadcast Bands, membership being equally open to licensed amateurs and Short Wave Listeners world-wide. The International Short Wave League is a non profit making organisation, run by volunteers who are elected by the Leagues members.

The League publishes a monthly journal called "Monitor", which is issued to members. It contains sections concerning Contests, HF operations, Airband, DX news, Short Wave Broadcast schedules, as well as occasional articles written by League members, relating to QRP, VHF Operation, Antennas and much more. Members own articles are always welcomed by Lindsay the Editor.

The ISWL holds regular nets throughout the week at various times and on various frequencies and ALL are welcome to participate whether ISWL members or not. All current Nets are very active. Please look at the Net page to see the net times and also, to see the new 24/7 calling frequencies, for members around the world to meet up at non net times.

More information from https://www.iswl.org.uk/

Ham Radio Ireland

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

Scout's Jamboree on the Air

The JOTA is an annual World Organisation of the Scout Movement event in which Scouts and Guides all over the world make contacts with each other by means of amateur radio. Short-wave radio signals carry their voices to virtually any corner of the world. It is the sheer excitement of having a live conversation with a fellow Scout or Guide at some other place in the world that attracts so many youngsters to this event. JOTA is a real Jamboree during which Scouting experiences are exchanged and ideas are shared. The use of amateur-radio techniques offers an extra educational dimension for Scouts. Many grasp the opportunity to discover the world of wireless radio techniques and electronics. Thousands of volunteer radio amateurs assist the Scouts over the JOTA weekend with their knowledge, equipment and enthusiasm.

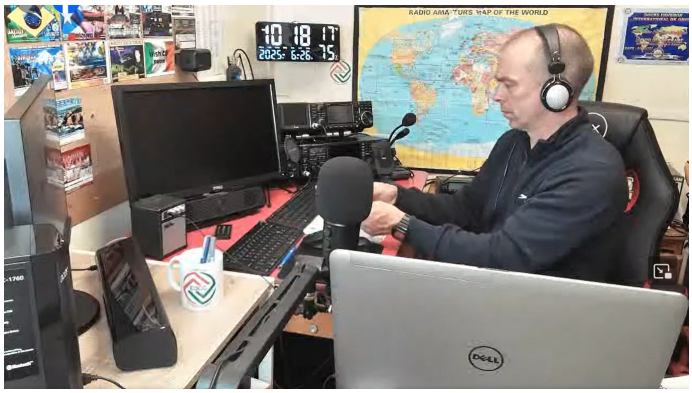
The JOTA 2025 starts at **00:00** local time on **October 17th** and runs up to **23:59** local time on **October 19th**. Note that details for use of special radio licences, operating times and allowance for Scouts to use radio transmitters may vary per country.

JOTA is the ideal opportunity to introduce the younger generation to amateur radio and it is surprising how many scouts continue their interest. If you are a station for the local scout group.

Apart from operating a station, one could organise a treasure hunt using PMR 446 radio gear to teach radio operating procedure. Other side interests might include building and testing an antenna, sending and receiving morse code and a display of homebrewed equipment.

World CB and Ham Radio News Service

Dave, AKA Delta Mike runs a live video show on the ***"World CB and Ham Radio Updates***" Facebook Page every ***Sunday at 9pm.*** The program is also broadcast live via the Zello "***Southern Ireland Radio Room".*** The first part of the show is dedicated to a Buy and Sell" slot where both Amateur and CB radio equipment may be advertised. This is followed by news concerning forthcoming radio rallies, and forthcoming events in Ireland and the UK. Following this section, there is an open invitation to anyone who wishes to discuss activities and topics of radio related interest. It is surprising how many participate from around the world. There are regular callers from the USA, UK, Germany and Ireland. We thank Dave for his promotion of Ham Radio Ireland. Each week he places the links in the comments box and also seeks authors for articles covering CB and Amateur Radio. Apart from the contributions from EI3CC and EI5DD International groups and individuals often call in. More information from: https://www.facebook.com/groups/869974417498137



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Mugs And our

well traveled

EI3CC Sticker.

Contact Sue, on messenger or WhatsApp for all orders

Carrickfergus Amateur Radio Group

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

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

Bush Valley Amateur Radio Club

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

West Tyrone Amateur Radio Club

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

Lough Erne Amateur Radio Club

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

Mid Ulster Amateur Radio Club

The Mid Ulster Amateur Radio Club (MUARC) has been active since 1965, our Club call sign is MN0VFW. Please take time to look through our FB page where you will find information on our club, activities, events and members as well as a great gallery full of images of our latest activities. Mid-Ulster Amateur Radio Club meets on the second Sunday of the month except July/ August in Tandragee Golf Club at 3pm.. We organise field days for St Patricks day, Marconi weekend, 145 Alive, Sota weekend and other events. If you're in the region, and would like to take part, the club secretary can be contacted on the following email address:
Email address: muarc.secretary@yahoo.co.uk

Antrim and District Amateur Radio Society

The Antrim and District Amateur Radio Society meets on the 2nd Friday of each month in the Greystone Community on the 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 RecreationClun, Aircraft Park, Holywood 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.

Bangor and District Amateur Radio Society is now on its summer break. Meetings will resume on the second Tuesday of each month, beginning on 9 September. The Society meets from 7.30pm in the Marquis Hall, Abbey Street, Bangor, BT20 4JE. For more information visit the Society's Facebook page.

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

Looking for the latest releases at ML&S?
Click: www.HamRadio.co.uk/new-release

Hiberling Ultra-premium HF/VHF Transceiver

Hilberling PT-8000A HF/VHF Transceiver handcrafted in Germany to the highest engineering standards **£13249.00**

Hilberling HPA-8000B
1kW Power Amplifier. 160/80/40/30/20 0/17/15/12/10/6/4m bands. All-mode: AM/FM/SSB/CW. Internal power supply: 200-260V **£5800.00**

HackRF Pro SDR Platform: A Next-Gen Open-Source Transceiver

The latest offering from Great Scott Gadgets, the **HackRF Pro**, delivers impressive performance in a compact package. Covering **100kHz to 6GHz** with transmit and receive capability, it is a versatile and open-source platform designed for serious radio experimentation.

Available from early September 2025 for only £312.00
Pre-order on our website, see HamRadio.co.uk/hackrfpro

Anytone AT-588
4m Transceiver
70MHz.

£149.99

Anytone AT-6666Pro
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ParaPro EQ20 Audio processing unit **£249.95**
ParaPro EQ20B Audio processing unit (Bluetooth version)..... **£220.00**
BHi NCH Active noise cancelling headphones..... **£29.95**
BHi HP-1 BHi Wired stereo communications headphones..... **£19.99**

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A minimalistic version of Digirig with the same audio code as regular model of the interface but without serial port.

- Combines audio codec and PTT switch
- Supports PTT by GPIO3 of CM108 audio codec
- Supports VOX PTT by the tone on the unused right channel (experimental)
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- Uses a single TRRS connector compatible with existing Digirig audio cables
- Growing collection of pre-made cables including popular Icom, Yaesu, Elecraft, Baofeng, Xiegu transceivers
- Isolation can be easily added using a USB isolator dongle..... **£47.95**

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Single band UHF Modem, Raspberry Pi Zero 2 depending on availability), 2 part ZUMcase, SD Card loaded with Pi-Star ready for you to configure, use with your compatible digital radio. **£178.00**

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3.5 LCD small and efficient Multi-Mode Digital Hotspot High performance 32-bit ARM processor. Fully assembled and tested in exclusive custom injection molded case. Includes a Raspberry Pi 4. Supports DMR, P-25, D-Star, YSF, NXDN, POCSAG and M17. Onboard LEDs to show status (Tx, Rx, Status and Mode). Up to 10mW RF transmit power. SMA antenna connector, UHF antenna included. Includes pre-programmed and pre-configured SD card with Pi-Star. The open source firmware (MMDVM) is pre-loaded. Built-in 3.5" LCD screen. Includes 3A USB-C power supply. 1 year warranty..... **£255.95**

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£3495.00

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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.

Acom 500S
500W 160m-4m 500W Linear Amplifier IN STOCK

The ACOM 500S is a state-of-the art linear power amplifier that covers all amateur bands from 1.8 through 70.5MHz and provides 500W rated output power (PEP or digital) **£2199.00**

New Acom 1003 HF + 6m Linear Amplifier **£2700.00**
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Acom 2020S 1.5kW 160m-6m Solid-state..... **£6779.00**
Acom 1010 160-10m Linear Amplifier **£1985.00**
Acom 1000 1kW 1kW PEP/CW 1.8-55MHz..... **£2449.00**
Acom 2000A 1500-2kW output auto with 2x4CX800A **£5295.00**
Acom 700S 700 Watts PEP or Carrier output **£2399.00**
Acom 1200S Same as 700S but with 1kW output **£2799.00**
Acom 1500 HF+6m Linear Amplifier **£3049.00**
Acom 06AT Automatic Antenna Tuner & Switch **£999.95**

SPE Expert 1.5K-FA Taurus
Solid-state linear amplifier at the forefront of RF engineering. It provides a solid 1.5kW of output with exceptional linearity, efficiency, and robustness. Integrated with a built-in power supply and a highly capable automatic antenna tuner..... **£4399.99**

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Digital Display SWR/Power Meter.This digital SWR & Watt meter is highly accurate for measuring Forward Power,Reflected Power, & VSWR **£149.99**

DG-103 Digital Display SWR/Power Meter..... **£131.95**
DG-503Max Digital Power Meter..... **Only £159.95**
DG-503 Digital Power Meter ..... **Only £109.95**
NS-2230D 30Amp PSU, Front Power Pole Connectors..... **£84.95**

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RS-50: £65.95. RS-70: £76.95 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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Auto ATU for Icom IC-705 with Internal Li-Ion battery **£169.96**
mAT M-200 High Speed Auto Tuner for Icom & Kenwood **£229.99**
mAT Y-200 160-6m High Speed Auto Tuner for Yaesu **£214.96**
mAT-10 Automatic Tuner For QRP Transceivers..... **£179.00**
mAT-30 Automatic Tuner For YAESU Transceivers..... **£139.95**
mAT-180H Automatic Tuner For ICOM Transceivers **£139.95**
mAT-705Plus Micro automatic ATU for IC-705..... **£169.95**
mAT-K100 Automatic Tuner for KENWOOD & ICOM **£136.96**
mAT-125E General Automatic Antenna Tuner **£139.95**
mAT-40 Automatic Antenna Tuner..... **£229.95**

Power Supplies

Samlex SEC-1235P-M Desktop Switching Power Supply
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The KSOB Remote Rotation Homebrew

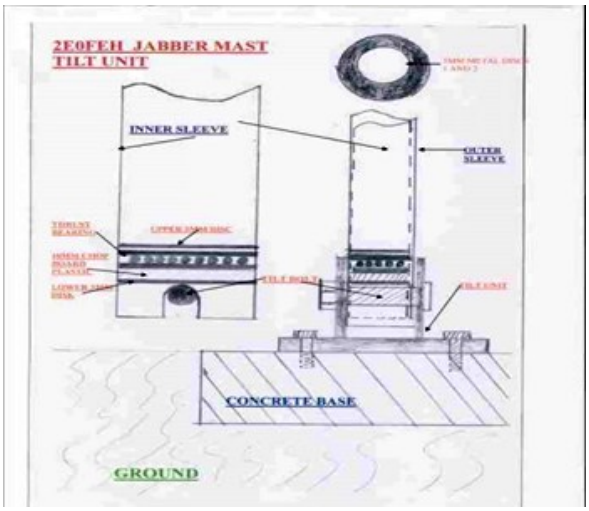
Today is the story of the Home Brewed antenna remote rotation build. Back in many moons ago, For one who did buy a nice jabber pole 12m and built the 6 El Yagi beam. But the rotation of beam at the time was run down stairs and into garden and reposition the beam direction by hand.

After learning about the COPD this was slowly not going to happen as running up back forth up down the stairs was getting harder. So I had to find a solution to this pending problem.

First thing I found was a nice wiper motor off a military truck but note its 24v and made sure it would go backwards if reversed power was applied. Then the making of the mounting board to hold the motor was built out of catering chopping board and worked out a way of mounting a sprocket onto the jabber pole and onto the wiper motor with chain drive and fit to the fixtures I had holding up the telescopic pole. But also not this wiper motor has a gear box attached and an outlet to fit a nice homebrewed drive shaft for the small sprocket to drive onto the bigger one on the jabber pole itself via Chain.

As you can see works well with holes in one board to allow the tensioning of the chain. Now note this is at a least 6ft above the ground and requires a little engineering to have the jabber telescopic pole to sit into a socket on the ground with a horizontal thrust bearing system it sits on allowing smooth rotation of the jabber mast bearing system.

The upper section on where the jabber pole was attached to the grounded scaffold pole I used a sleeve slightly bigger than the jabber pole as it allowed support and rotation of the jabber pole at that point. Thus the start of the rotation of the antenna had begun but still more to this of course the remote controlled controller in the shack.



This I built out of chopping board again and added various electrical parts such as a rocker switch to reverse the polarity and a 12v to 24v Inverter to up the incoming 12v to 24V as well inside fuses Spaded of course on both sides of the 12v and 24V as well A PWR controller. This allows change of speed the rotation unit spins the antenna at, BUT do NOTE :- put it in the 24V side of the box NOT the 12v side with XT 60amp female sockets to allow 12v in and on back of box to allow the 24V out . Handy thing is if thunderstorms arrive you can pull out the 24v side of it.`

Then I upgraded the mounts at the jabber pole from a Chopping board to a much stronger steel one. By the way I could see what direction I was pointing by looking out of window at the antenna.

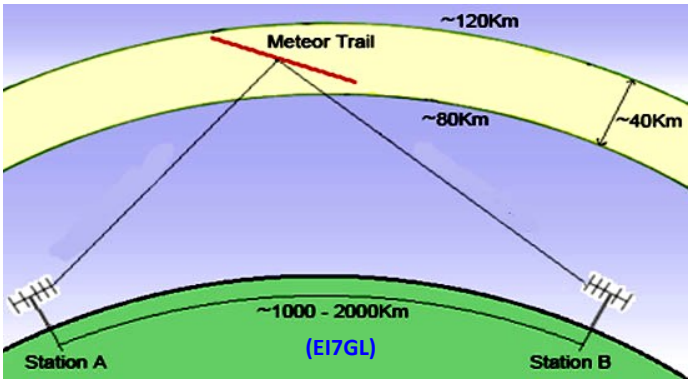
But even this has been made redundant as brought nice 12M telescopic tilt mast and a nice Yaesu rotation unit. But the old rotation system will be set up again, when I get me Mag loops up and running on their own place in garden. .

Note I also set up a small set of scaffolding under the lower section of the jabber pole to bring my height up with decking and allow to me to interchange antennas and the main support pole is a scaffold pole that 16ft long driven into ground one 1 square meter concrete to hold it all up and support the jabber pole to allow my rotation system to work.●

Karl Kruger 2E0FEH
freebirds658@aol.com

Meteor Scatter Communication

Meteor scatter propagation relies on the vast numbers of meteors that enter the earth's atmosphere each day. Most are very small, often the size of a pebble or even a grain sand. At times the numbers of meteors increase when there is a meteor shower – these occur at specific times during the year. During these showers, amateur radio meteor scatter enthusiasts can make many contacts over vast distances by bouncing their signals off the resulting trails of ionisation as the meteor burns up in the atmosphere.



Meteor scatter or meteor burst radio communications can be used on a wide variety of frequencies. For ham radio most of the communications take place on the two-metre band, although there are some contacts made on the 70 centimetres ham radio band, but this is very close to the absolute top limit for this form of radio propagation. Some meteor scatter operation takes place on the 50 and 70 MHz ham radio band. The lower frequencies here mean that the reflections are more effective and longer lasting.

A variety of transmission modes can be used with meteor scatter. For ham radio users in Europe the use of high-speed Morse was popular. Using Morse transmissions speeds up to 800 words a minute were used. Originally the Morse was pre-prepared and speeded up using tape recorders, the reverse process being used to enable it to be deciphered later. It is possible to use SSB if there is a dense meteor shower.

The use of computers nowadays means that they can be used to provide much greater levels of flexibility. Not only can they be used for the generation and reception of high-speed Morse, but they have also enabled the creation of specialised transmission modes developed especially for meteor scatter operation. One popular form of transmission for use in ham radio with its associated computer programme known as WSJT.

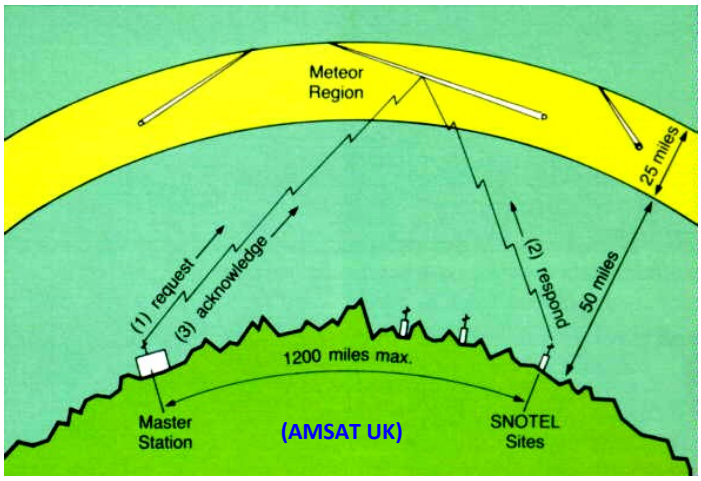
WSJT includes several "sub-modes" that can be used. The first mode, and the one that is most widely used is known as FSK441. It employs multi-frequency shift keying with four tones and a data rate of 441 baud. The system is also self-synchronising, because of the character codes used in the protocol and this has the advantage that it does not require an explicit synchronization tone. FSK441 is generally used on the 2 metre and 70-centimetre amateur radio bands.

Ideally, a TX power of 100 Watts is suitable. The antenna gain should be in the order of 10 - 15dB. Most of today's amateur radio meteor scatter communication is driven by computers. Accordingly, a computer with the relevant software and interfaces is necessary to support the modes and operation.

The Perseids Meteor Shower Coming Soon

The Perseids shower produces about 60 meteors per hour, but rates have climbed as high as 120. Its performance is consistent from year to year. Usually green, red or orange, these shooting stars appear to radiate from the constellation Perseus. They hit our upper atmosphere at about 134,222 miles per hour. This shower takes place between the **17th of July to the 14th of August** with a peak around the **12th of August**.

Apart from peak times, meteors randomly enter and burn up in the earth's atmosphere and wide use was made of this effect by the US dept of Agriculture (SNOTEL) where over 900 snow water content gauging stations in the Western States were equipped with transmitters that relied on meteor scatter to send measurements to a data centre although discontinued since 2023.



Many amateur astronomers are using the signal from the Graves Radar, located in Dijon France, which operates on 143.050 MHz to listen to meteor pings. This system runs multiples of 10KW transmitters into 4 separate phased array systems that are tilted and pointing south. This serves as an excellent beacon to highlight increased propagation on the 2 metre band.

With sensitive receiving equipment it is possible to receive meteor pings from this transmission and aircraft scatter. Some have actually received signals reflected from the moon on basic yagi antennas under the right conditions●

Meteor Scatter frequencies:

50.260MHz and 50.265MHz
70.100 - 70.250 MHZ
144.*150MMHz*

References

AMSA UK, Rob Hardenberg, PE1ITR, J. Desmon EI7GL, European Space Agency

Max Power

ELARC Joins the April RaDAR Rally

RaDAR stands for 'Rapid Deployment Amateur Radio'. It was concieved by Eddie Leighton, ZS6BNE. It encourages outdoor operating and has a set of unique challenges:

- **Set up station;**
- **Make five contacts;**
- **Redeploy fast to your next location;**
- **cover as much ground as possible in four hours**

Group 1, their Delta Loop antenna and the New ELARC Flag

How you choose to move from point to point and the distance between points depends on your method of conveyance: foot, bike, car, or canoe; the choice is yours. All the rules are laid out at. https://radarops.co.za/radar_rally/evaluate_rally.html

Points are awarded depending on your method of conveyance, the number of waypoints reached, and the type and quantity of QSOs recorded.

Johnnie EI8IPB suggested the East Leinster Amateur Radio Club (ELARC) try its hand at RaDAR and join the first 2025 international RaDAR Rally on 5-6 April, operating from 11:00 UTC to 15:00 UTC on 6 April 2025. Thanks to a friend of Johnnie's, ELARC got access to a large swathe of farmland in north County Dublin, the teams then mapped out a route to deploy along. ELARC had set five waypoints along field boundaries, each waypoint being one kilometre apart.

The Deployment Route and Waypoint Plan

RaDAR is all about deployment, operation and contact; it is all about movement. ELARC deployed two teams of two, operating phone on SSB using the club callsign EI0EL, and moving on foot. Each team, following RaDAR rules, walked a distance of one kilometre, halted, set up and deployed their portable station, made their five contacts, then broke down the station and moved to the next waypoint where they repeated the process.

That was the plan as informed by the rules. In the words of a military saying: "No plan survives contact with the enemy".

'Group one' – Tom EI5IEB and Johnnie EI8IPB deployed with a Yeasu FT857D (100 watts) and a Chameleon Delta Loop. 'Group two' - Michael EI6IRB and Michael (SWL) set off with an ex-Bundeswehr PRC2200 (20

Michael EI6IRB Operating the PRC-2200

watts) fitted with a 5.6 metre whip and counterpoise.

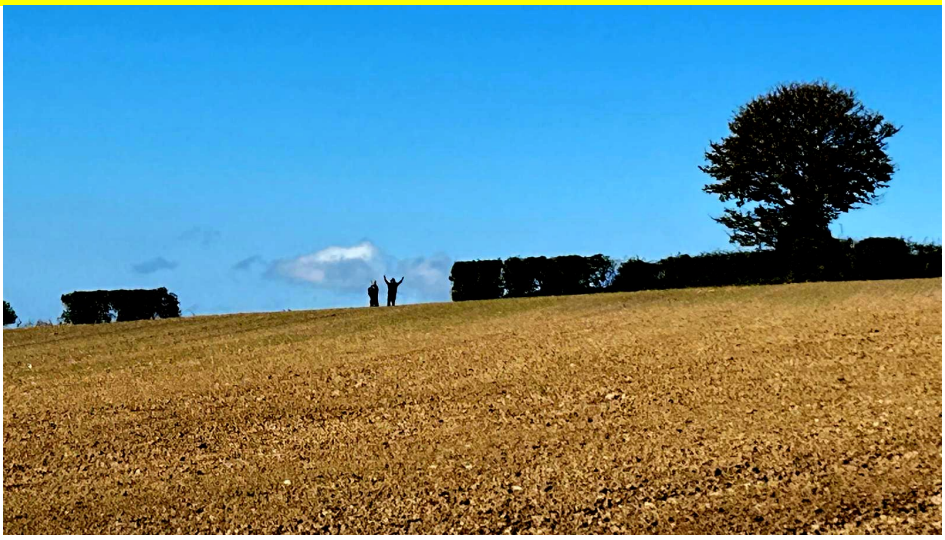
Each group had a variety of bands to work, neither

ELARC Joins the April RaDAR Rally

group operated on the same band. Conditions on the day saw them mainly using 40 metres, 20 metres and 17 metres. Groups kept in touch using a discrete 2m frequency.

An initial issue for both groups was poor propagation. The K index was 4 to 5, and bands had not been good over the previous 24 hours. Then 20 metres and 40 metres were jammed with contesters, and 17 metres, 12 metres and 10 metres were in poor shape, though 17 was promising to start with.

With propagation against both groups, already, finding a clear frequency and being heard were now the key problems.



Tom EI5IPB and Johnnie EI8IPB as seen by Michael EI6IRB

ELARC concentrates on mobile and portable operations, particularly SOTA and POTA. We found RaDAR to be completely different. POTA and SOTA are, comparatively, relaxed undertakings: go to a location and operate to make your assigned number of QSOs. RaDAR has an edge to it as there is the need to keep moving, and in the background, the four-hour clock is relentlessly counting down.

Neither group heard other RaDAR participants, so the elusive higher points available for a RaDAR to RaDAR QSO never came ELARC's way. A transatlantic QSO by 'Group one' was not completed as conditions were poor. Both groups relied on contacting POTA and SOTA stations, identified via spotting apps, and making QSO calls on clear frequencies. This worked, but slowly.

'Group One' bounced ahead of 'Group Two' after about half an hour and remained one waypoint ahead throughout. Now separated, the two groups called each other on 2 metres for progress reports: 'Trying for QSO number four'; 'On the move to waypoint three', or 'No joy so far on 17 metres'.

Both groups thereafter only saw each other in the distance, either set up in operation or moving to the next waypoint.

The PRC 22000 transceiver

The weather was with us on 6 April, and we called and moved in glorious spring sunshine around the borders of freshly tilled fields from point to point.

'Group Two' had early success at each of their waypoints. Almost immediately, they got their first QSO. Then followed long periods of fruitless calling out. Both groups thought it would be a case of, "call and scoot", covering waypoint after waypoint. However, the necessary five QSOs were hard come by.

The pressure began to build after three QSOs. Getting the fifth and final QSO seemed to take an eternity. Joining a SOTA pileup and waiting to see if we were heard, then cursing that the 20w set was a bad idea, despite its military portability and quick set up time and wondering were you getting out at all, were common thoughts. And with a 20w set, 'Group Two' heard and called high-powered stations, but they could not always hear 'Group Two'. 'Group Two' were hearing 5/8 and 5/9 stations, but being received by them 5/2 and 5/3.

As 15:00 UTC got ever closer, 'Group Two' found 17 metres closed and tried the 5.6 metre whip on 40 metres. With the whip down close to horizontal, it worked NVIS-style and got 'Group Two' their final QSO on their third waypoint, thanks to Tom EI5JZB out portable near Saggart Hill, Dublin.

'Group One' completed four waypoints and 'Group two' completed three, with twenty and fifteen QSOs, respectively.

Both groups returned to the Start Waypoint and compared notes. Output and antenna seemed to matter little as both groups were, on average, getting QSOs up to 1,800 kilometres away on 20 metres and 17 metres. Southern and Central Europe and the Baltic states were amongst locations contacted by 'Group two'.

Thanks to RaDAR, we had more ELARC outdoor fun, practiced our /P skills, and operated well outside our established amateur radio comfort zones. You can check our score here ●

https://radarops.co.za/radar_rally/evaluate_rally.html

Michael Kennedy EI6IRB
michael.j.kennedy.70@gmail.com

Building a Portable 9 Element 144MHz DK7ZB Long Yagi

As I was planning to resume 144MHz contesting but this time full backpacking style I wanted a decent beam that was suited for repeatedly assembling and disassembling. I have a Cushcraft Boomer and also a pair of homebrew DJ9BV yagis but neither are ideal for the job. After nearly two decades away from radio yagis have moved on and research showed the DK7ZB yagis were very popular. His designs seemed ideal for my purpose.

I settled on the 9-element long yagi as it is not too long but with decent gain and also has a good flat SWR curve. The RSGB Backpackers section we wanted to participate in only allows one antenna so stacking shorter yagis was out.

The dimensions are available on Martin DK7ZB's site.

I went for the 10mm elements as a compromise between size and weight and best performance. I was also able to find 10mm clips to suit my intended design.

You can buy some of the DK7ZB yagis readymade and also in kit form, but I didn't really think the parasitic element mounting methods were ideal for repeated building especially in cold weather. Also, the driven element was a problem as it is not ideal at all for disassembly. There was one example of a driven element designed for taking apart on DK7ZB's site, but I couldn't find any parts like they were using. I was already building my own lightweight portable mast so I decided I may as well design the yagi from scratch too. So I modelled the full antenna down to every nut and bolt in 3D CAD software. This enables me to know exactly what materials I need and predict pretty accurately the weight, bearing in mind I plan to backpack this up hills.

To source the main raw materials, I found that it was cheaper to buy from https://shop.nuxcom.de/ in Germany than anywhere I could find in the UK! I went for the 20mm square boom and 10mm elements. My 3D CAD model told me I wanted two sections of boom 1.72m long and one section 1.62m long. (After ordering I noticed that is the same lengths Attila uses in his 9 element kits!) I didn't go for a kit as there were several parts in the kit I didn't need, and I wanted to order a few spares of the elements just in case I cocked up some of the cutting. Nuxcom sells the boom in 1.5m and 2.0m lengths but the 2.0m lengths cost more than double the shipping, so I asked Attila if it was possible to buy 2.0m lengths but have them shipped in two pieces, 1.72m and 28 cm lengths. He did this for me at no extra cost, which is good service. The offcuts would be useful for doing tests later.

Element-lengths in mm for the 28-Ohm-Yagi. It is recommended to use the 10mm, 8mm or 6mm elements for best results.

4mm-elements have more losses, lower gain and the bandwidth is smaller.

The given length of the radiator element is from tip to tip, including 10mm spacing for the insulated part.

Updated with 12.7 mm (1/2 inch) elements 08-Sept-2009, updated with 9,5 mm (3/8 inch) 25-Apr-2010

Diam.	Ref	Rad	D 1	D 2	D 3	D 4	D 5	D 6	D 7
12.7 mm	1017 mm	965 (12.7 mm)	930 mm	900 mm	882 mm	873 mm	864 mm	880 mm	864 mm
10 mm	1017 mm	972 (10 mm)	939 mm	909 mm	892 mm	883 mm	874 mm	890 mm	874 mm
9.5 mm	1018 mm	973 (9.5 mm)	941 mm	911 mm	894 mm	885 mm	876 mm	892 mm	876 mm
8 mm	1020 mm	977 (8 mm)	947 mm	917 mm	902 mm	891 mm	882 mm	898 mm	882 mm
6 mm	1024 mm	983 (6 mm)	953 mm	925 mm	910 mm	899 mm	892 mm	906 mm	890 mm
4 mm	1028 mm	989 (4 mm)	963 mm	936 mm	922 mm	912 mm	906 mm	918 mm	905 mm

Element-positions

Ref	Rad	D 1	D 2	D 3	D 4	D 5	D 6	D 7
0 mm	345 mm	615 mm	1175 mm	1870 mm	2675 mm	3505 mm	4345 mm	4980 mm

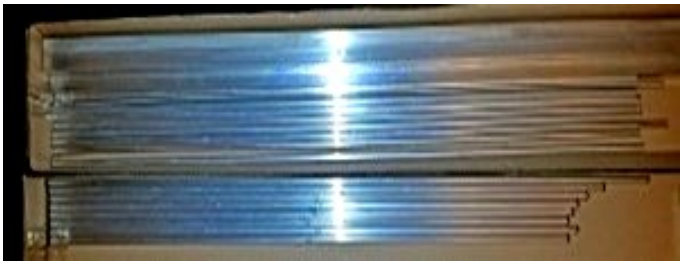
First building task was to cut the parasitic elements to size. Although I'm pretty good with wood saw I'm a bit rubbish with a hacksaw and I didn't want to use a pipe cutter as certainly for the driven element I needed no deformed ends to the tube, so I managed to borrow a mini circular disk cutter like so:

With the Proxxon KG 50 I was able to make nice square cuts. To measure them I used a meter ruler (tape measure for the reflector-checked against the meter rule first) butting both up against a stop to get an accurate measurement. I checked that the first mm was a true mm before starting as some rulers have a dubious first mm measuring stop.

Building a Portable 9 Element 144MHz DK7ZB Long Yagi

And checking D2 (ever so slightly short if anything by a fraction of a mm):

After cutting the parasitic set I fitted end plugs from Nuxcom for a nice finish. (Elements in bottom box, spare elements and boom sections in top)



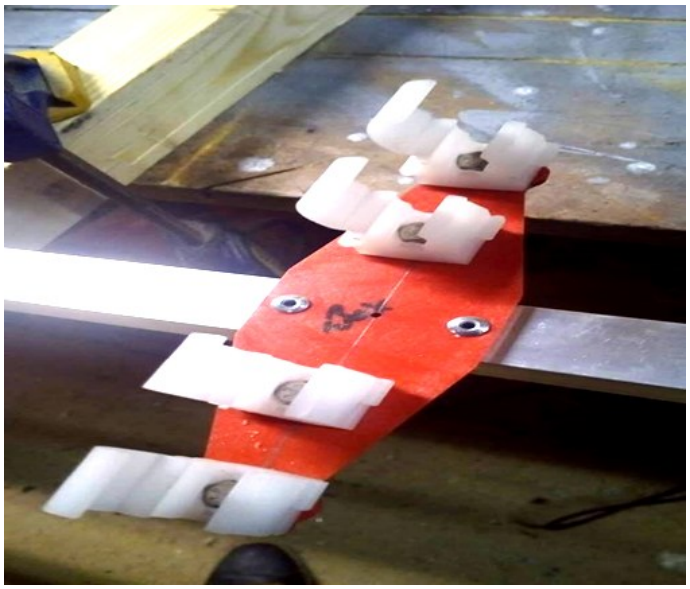
Next to assemble the boom. I bought the Nuxcom boom joiners, and I must say they are very well recommended. The fit onto the 20mm boom sections is a snug push fit and the extrusion is thick enough to be strong yet still light. I got them with the M4 bolt and wing nuts. The one thing I didn't like so much was the massive hole for M4 which was 6.5mm diameter. However, once I modelled up the joiners and dropped them into the antenna assembly, I could see that a 4mm hole at the top of the 6.5mm hole would be pretty much bang on centre of the boom, and mean the boom could not move up in the joiner. I also added a vertical bolt on each side of the joiner too as shown below. That meant the boom section was forced into the joiner tightly ready to drill the holes. I drilled from each side, using the 6.5mm hole as a stop for the 4.0mm drill bit boom joiner

The next picture shows the boom joiner fitted to the center section. Both joiners are fitted to the center section and will stay there permanently so I have used socket cap heads and nylocs, all stainless steel, bolts cut to minimum length. (The four supplied wing nut bolts will be used to attach the end sections on the hilltop). With both joiners fitted, the center section then is pretty much the same

length as the outer sections (by design). I also bought the square boom end caps from Noncom to finish them off nicely. The picture below show the boom sections ready.

The boom was then assembled in my hallway and the centrelines of the element positions scribed on. I used a tape measure masking taped to the boom to ensure it never moved and starting at the 100mm mark on the tape measure to eradicate any errors from the tape measure hook end.

The element clips I needed to find something that was quick to mount the elements and remove them again. The typical single bolt through the center of the elements I didn't fancy as it was a bit fiddly especially with cold hands on a windy hill top. My friend found these 10mm pipe clips that were ideal. Snap in and lock, and easy to open again to remove the elements. They will have a finite life but my test piece has had dozens of cycles and they come in a bag of 100 for under £6: See below

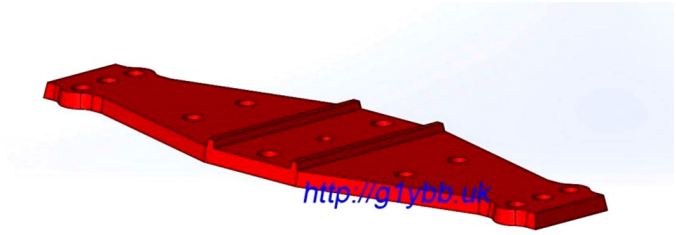


Element Clip

Another plus point of this is the element centre, is a reasonable distance off the mounting surface which means I had good scope for getting the driven element to be on the same plane as the parasitic elements. I just need some suitable plates to mount these on nice and squarely on the

Building a Portable 9 Element 144MHz DK7ZB Long Yagi

boom. My friend offered to injection mold for me rather than my trying to accurately drill out several plates exactly. So, I modelled up a mounting plate to be made from glass fiber reinforced nylon which is extremely strong and stiff for its weight. The image shows the underside. The two ridges are to be located on the square boom:



Element Mounting Plate

Soon in the post came a parcel of element mounting plates. We decided riveting them on was a secure and lightweight fixing method. The two location ridges on the bottom had a slight amount of play when offered to the 20mm boom which of course would be amplified by the approx. 100cm elements so I fitted two tiny strips of masking tape which made the plates a perfect fit. Once the rivets were in it doesn't matter if the masking tape decomposes away

Masking Tape Slack Filler

The small hole in the very centre of the element plate is a sighting hole to align the element in its correct position on the boom. This was used to line up to clamp the plate on for the drill of the first rivet hole:

Mounting plate is clamped and ready to drill.

Once the first rivet was fixed, the clamp was no longer needed and the 2nd hole drilled and riveted:

The Picture to the left shows the Element plate fitted to the boom.

Then a simple case of fitting the 10mm pipe clips and snapping in the elements in the right place centered on the boom. To easily locate the element centrally on the boom without any time consuming I fitted to each element a piece of adhesive lined heat shrink to be positioned between the clamps. I also added some marking numbers for the 8 parasitic elements, numbered 1 to 8 from front to reflector:

Finished Parasitic Elements

Elements Numbered

Element assembled in the numbered location

Now the easy bits are done, time for the driven element. This was the biggest head scratcher on how to make it suitable for repeatedly taking apart and assembling. I needed to come up with a method that both left the electrical connections to the driven element halves but also enabled me to remove them for transportation. This meant a split in each half of the driven, but how to attach it?

I decided to come up with a system of employing a ferrule in the driven to join the two halves. With some custom-made parts it would also be mounted on the same element mounting plate as the parasitic elements and is the reason the element plate is larger than a typical one, although that was also good for rigidity and build accuracy.

When I ordered my 10mm element tubing from Noncom I also ordered 1 meter of 8mm tubing to do this. But there were two issues with this. The first was this was the only piece of tubing that arrived with a bend in it. If I had planned to use it as an element, I would have had to reject it. As it was, I could cut out straight parts to use but the 10mm diameter 1mm wall thickness elements have a bore of about 7.92mm and the 8mm tube an outer diameter of about 8.10mm. No chance of a fit. Out with the calculator and it soon transpired 5/16" should be a perfect size. I bought some T6 grade aluminium from eBay and it was a perfect fit. Sliding with no slop at all.

Building a Portable 9 Element 144MHz DK7ZB Long Yagi

To cut slits in the 10mm tube to compress it with clamps to grip the ferrules I used two 10mm element clamps to mark a dot each end and each side of the clamp and joined them up to make cut lines to follow.

To cut slits in the 10mm tube to compress it with clamps to grip the ferrules I used two 10mm element clamps to mark a dot each end and each side of the clamp and joined them up to make cut lines to follow.

Using Clamps to mark Centreline

Cut lines Marked

Element Slits Cut

Then it was a case of fitting the ferrules into the outer halves of the driven elements and adding a screw to maintain a good mechanical and electrical grip:

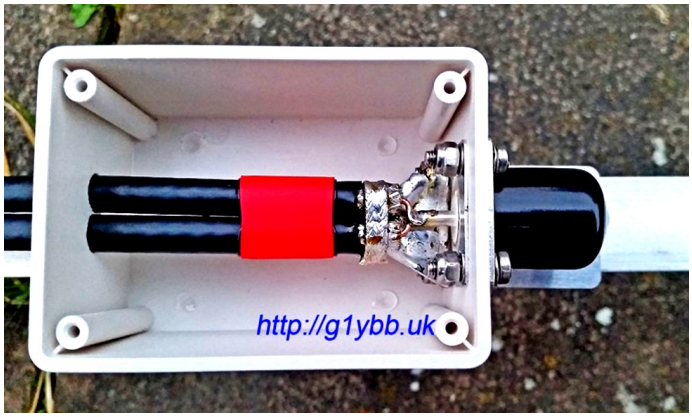
Ferrules fitted to driven halves

Next to feed that driven element. I decided to straighten out the feed match to take the feed point a little closer to the center of the yagi. I'm using WF100 75ohm coax which is fairly low loss for its size, and is not too big or heavy. Its claimed velocity factor is 0.85 so I worked out the length as so:

300/144.300 = 2.079m full wavelength
2079/4 = 519.75mm for quarter wave
519.75 x 0.85 = 442mm

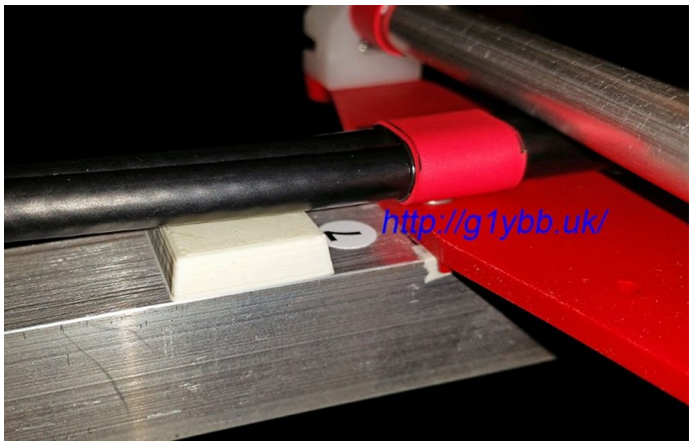
DK7ZB gives a length of 440mm for this velocity factor, but I notice all his lengths are in multiples of 5mm so I wondered if he did some rounding down? I hope so!

This is the length of the braid. I hate stripping and cabling up coax so did all I could to avoid twisting bits of braid about. I cut the braid and dielectric off square and about 5mm or so of the outer jacket to reveal the braid. With a very large tipped iron of unknown wattage I was able to tin the braid nicely with no apparent melting of the foam dielectric. I then made a small, tinned copper plate to bolt to the N-type socket and solder to the braids making a good earth. For good measure I added a loop of braid from some RG223 soldered all round. Then made the inners as short as I could and soldered to the N-type:



Driven Element Feed Box

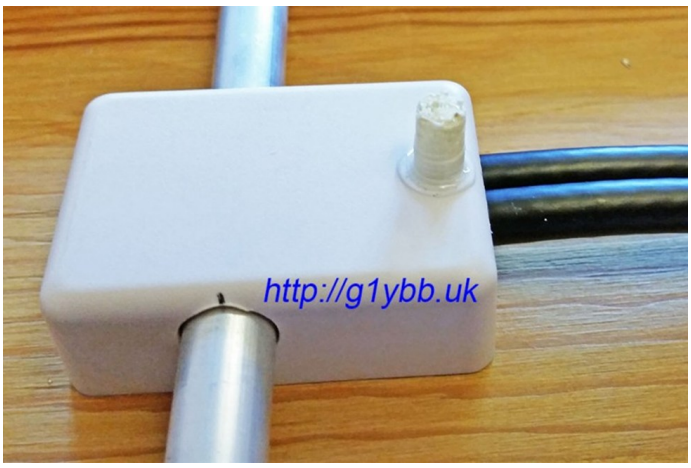
To support and space the feed off the boom as recommended by DK7ZB (although this is going to be used for QRP almost exclusively) I got some ABS spacers 3D printed which I placed in position and then wrapped tightly with insulation tape. The idea is to keep the coax off the boom (which it is miles away from) but also as far away as possible from the element plate rivets but also as far from the element the coax passes under:



3D Printed Coax Spacer

Building a Portable 9 Element 144MHz DK7ZB Long Yagi

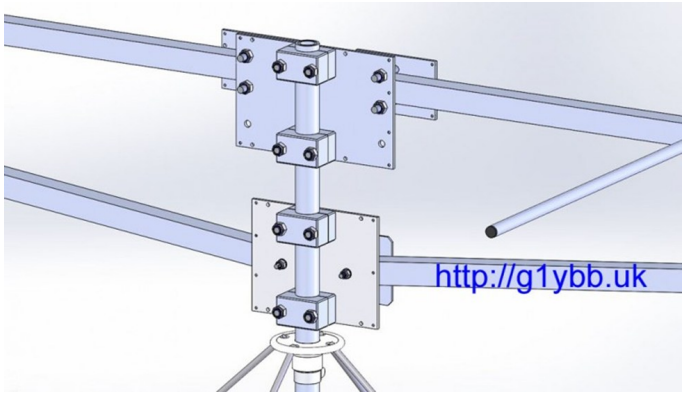
The driven element box is supported solely by the driven element inner pieces themselves, but I added a very small 3D printed pillar to make everything secure



Dipole Support Peg

The Finished DK7ZB Match

As I plan to use this on a lightweight mast section only 20mm in diameter I didn't think the usual U-bolt clamps would be able to create enough friction to stop the beam spinning on the mast without being so tight to possibly crush or weaken the 20mm ali mast. I bought some plastic 20mm clamps for large yagi elements from Nuxcom to try but they do not have enough friction. So I drew up some half round clamps to be made from aluminium



I used a small 3mm aluminum plate in usual manner and bought some 20mm square U-bolts for the 20mm boom itself. As the 20mm boom again is quite small for a long yagi I was again concerned about overtightening the U bolts and creating a weak and potential failure point so I added some small 3mm aluminum plates to allow it to be tightened up nice and tight without any fear of crushing the boom. Here is the finished boom to mast mount. (The two unused holes visible are there to use with the lower 20mm boom mounting holes for a 25mm boom yagi I have):

Boom to Mast Clamp

I used a similar arrangement for the boom support to mast fixings, the aluminium clamps and a slightly smaller aluminium plate. Just a simple M4 bolt per half of the boom support and another plate to help strengthen it all up. The intention is that the boom support will also help offer a little sideways strength against the wind as well.

To bend up the boom supports I first tried to bend some 20mm square section (same as the boom) in my workbench jaws (seen above in the first picture after cutting the elements). They were not strong enough to bend it! Note this is not a proper vice as such, more of a drilling and cutting bench with jaws. I then thought I might use a bottle jack to apply the force but couldn't think of anything solid I could jack onto. Then I remembered we have a small 3000lb lever press at work used for punching small holes in sheet metal. I soon made up a jig using a 10 inch square of ¼" steel with some small aluminium blocks and I used the spare offcuts (yet again) to work out the right number of packers below the centre to give me the bend angle I needed.

20mm Square Tube Bend Test

Picture to left shows the Boom Supports bent up and side by side to check that they bends match

I used 10mm MDF to spread the load from the press and protect the 20mm square tube and a strip of bare FR4 as a bearing and protection to the underside. Once tests were done I quickly and easily put the bends in the actual support:

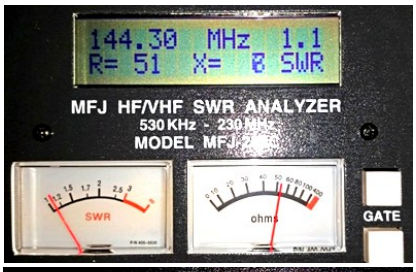
Building a Portable 9 Element 144MHz DK7ZB Long Yagi

Both Support Trusses parallel

Now just a case of offering hem up, drilling the holes in the right places and fitting. All Finished!

Now for the moment of truth, how does it measure on the antenna analyser? Well to me it looks to be best match at 144.660MHz but is showing SWR of 1.1:1 and 51Ω at 144.300MHz so I'll take that thanks:

SWR Match at 144.300



SWR Match at 144.500

SWR Match at 144.660

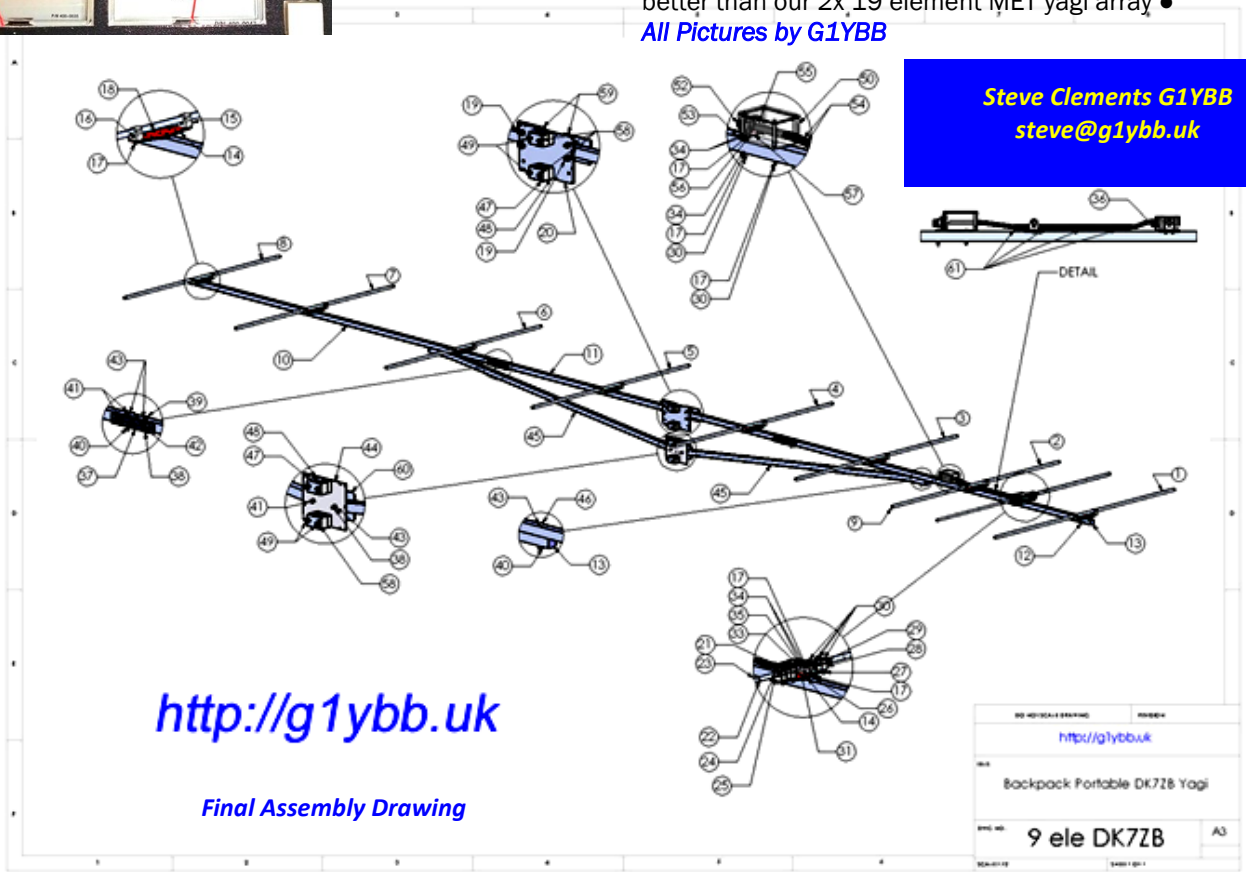
SWR Match at 144.150

Full Bill of Materials PDF https://g1ybb.uk/docs/G1YBB%209%20ele%20BOM.pdf

Since I wrote this article I have done my first contest with this now and it seems to work really well and I got good reports all round. Even with a low loss feeder the radio was not indicating any SWR reading at all on transit. I have come 2nd and 1st in the low power section of the first two UKAC contests I have entered so I am really pleased with the way this yagi performs. It 'feels' even as good or better than our 2x 19 element MET yagi array ●

All Pictures by G1YBB

Steve Clements G1YBB
steve@g1ybb.uk



Final Assembly Drawing

Clark Mast Service

Clark Masts Systems Limited has been dedicated to the design and manufacture of fast-erecting pneumatic telescopic and sectional mast systems for both civilian and military use since the late 1950's.

Many thousands of the company's masts have been purchased by authorities around the world. As a specialist pneumatic telescopic mast manufacturer, the company constantly strives to maintain its leadership by its vigilant awareness of the advancement in communications technology ensuring ideal solutions for tactical mast requirements, particularly for use in the field of battle.

In recent years, Clark Masts Systems Limited has gained substantial military and civil contracts world-wide: in Europe, Australia, Singapore, Middle East, Far East and the United States with its pneumatic telescopic masts. Autonomy is a policy which the company relentlessly pursues, from original design, manufacturing and spare parts production, right through to the publishing of its own technical documentation.

As can be seen at Clark mast are one of the best portable masts out there and are becoming more available to us in our hobby.

At EI3CC Collective Communication have been fortunate to of been given three masts, these are the ST series type. A few years old now but still very functional.
We wanted one to fit on our RCU (radio control unit) so when out mobile we had an on-site instant mast ready to go as required also we needed to make our own mounts so as to let us tilt over the mast and connect a various array of antenna that we needed on an activation. so, the one we fitted had a hand pump as part of the setup so no need for compressor and amazingly very quick to raise with the minimum effort.

On pumping up the mast we noted that over time it dropped slowly so we decided to strip both the small masts and service them all parts are available from Clark Mast but before you place an order strip down fully your mast and then at least you have all components needed to rebuild.

As with everything age and use takes its toll on the mast so to be totally safe with your equipment a full rebuild is the safest option they are fairly straight forward to strip down and in this modern world where we all have camera's take loads of pictures and notes and also place the components in the order that they were removed, any

screws removed put back into the relevant holes you took them from.

Grooves can be seen here between tubes.

Wherever you decide to strip the mast down, make sure the mast is well supported and even make a JIG as in the Clark manual basically just some timber maybe 12"x 6" with a V groove and some spacers to stop it rolling off the bench and getting damaged.

We would be servicing the two similar masts, one being non turnable and the other being turnable by this we mean the vertical tubes .one mast has a groove with keys in each section that prevent it turning say with a directional antenna mounted whereas the other mast its sections are

round and if needed a directional antenna can be rotated to direction needed.

Equipment needed to strip the mast is fairly straight forward screw drivers and a good set of Allen keys. Remember that early mast will have imperial Allen hex heads so make sure your keys are metric and if you have a set of metrics then that would be good too as the metric ones can at times be used on corroded hex head if the imperial ones are slightly loose.

We started with the bottom collar this is where Air is pumped into the mast to raise it and also released out to lower, we would be modifying the two suit our RCU as you will see further on in this article.

A well-known fact in metallics is that aluminum and steel don't get on and as a result they will corrode into each other and become solid and in that case applying some heat to the area may be the only option, if that is the case then apply it liberally and trying to see if you have been able to get the bolt/screw released.

We were lucky that we only had 2-3 that needed a bit of heat to help them on their removal one had snapped but was easily drilled out and tapped.

Gradually the collars are removed and the tubes in each section can be removed and the seals at the lower end of the tubes checked as it is these seals that do all the work of lifting each section.

In our case one of the masts had been lubricated with the wrong grease and as a result this had caused the seals to break down to the point that they were sticking to the tubes and had also gone very much like a latex rubber as opposed to a hard seal. Clark provides a special type grease to lubricate the mast so it is is important to contact them if you are servicing your mast and you need the right lubricant. Seals are not cheap so why destroy them by penny pinching.

Damaged seal from wrong lubricant

At the bottom of each section of tube is what is known as the piston this holds the seal in place with a bayonet type fitting ring, so the seal is fitted and then the ring is pushed down over the seal to keep it in place cheap so why destroy them penny pinching.

All the tubes were stripped and we took our attention to the external bits as in tubes collars. The external tubes had seen better days and so we decided to strip and repaint all external components after a thorough cleaning.

This was a club project, so everyone got involved in the work needed on projects. Joe got straight onto stripping the tubes and repainting them.

Clark Mast Service

In the meantime, Sue had stripped cleaned and repainted the collars and was fitting the bump seals, these are the "O" rings that soften the blow as the mast drops onto the section below, we bonded these in with sealant similar to the type used on motor windscreens and Sue then wiped away the excess with white sprits to clean the surfaces.

Joe and Philip then set about reassembly which is the reversal of stripping the mast down, care is needed in making sure all the components are clean and that you don't have any foreign bodies left in the tubes.

Base of the mast being fitted to the RCU note we replaced all bolts with A4 stainless steel hex bolts, we live near the sea so the salt air can take its toll on standard nuts and bolts.

Airline connector and stainless bolts

Seal fitted and wiped with the Clark silicone

Lower section assembled

Clark Mast Service

Once this end cap is fitted, we clamped on our upper mounting clamp and then we were ready to install the tubes. Again, new seals fitted and hex head screws too. You will see when you strip down the mast that each screw has a small dimple next to it, this is to prevent the screw from undoing itself.

When I refitted the new ones, I put some lock tight thread sealer and then wrapped the area in some aluminum tape just to be sure and then the seals got a good smear of the silicone grease and slid into place and then the top retaining collar fitted.

Philip and Joe continued with the reassembly but one issue we had was that some of the nylon Keys broke on assembly, as explained before one mast has a grove in each section and this is for fixed vertical direction antenna and as so the tubes can't rotate. So, a quick route in the bit's boxes in the workshop and hey presto a piece of nylon was located so I set about making up replacements.

I cut up some old drill bits for the pins and they worked a treat so Philip and joe carried on with the assembly and checking over and over again that all was snug and that everything moved without any resistance.

I must point out that Philip and Joe had no prior experience in servicing a Clark mast but were well able to carry out the strip down and rebuild with very few problems. Also, its good to have club members involved in all aspects of the club activities.

Finally, we had two mast complete and ready for use one would be fitted to the RCU (one with hand pump) and the other mounted on a drive on for use with a vehicle out portable etc.

Note the mast with clamps at the top this allows you once elevated to lock the sections if in use for a long period so this is the one, we fitted to the RCU as we on occasion have the mast extended for four days at some activations.

Here is the mast mounted with dust covers on top and over the hand pump, a pin in the top clamp can be removed and the mast tilted if needed as its hinged on the lower clamp.

We have antenna up and radio running within 15mins from arriving on site and a lot of the time saved is because of the Clark mast.

I hope this has helped in some way to servicing your mast, but if you are ever unsure then contact the Clark Mast Company as they are most helpful and ready to give advice and even sent us on a copy of the service manual in the event we needed part numbers and component names ●

John Tubritt EI3HQB

ei3hqb@gmail.com

EI3CC Midsummer Madness

Each year we at EI3CC hold our "Midsummer Madness", this is where operators and SWLs and XYLs gather for a social event.
We wanted to do this when we formed the group so as we could have a mid-season break from activations and make it that we would meet for lunch and a few drinks, this is our third year and again it has proven very popular with the group.
Our location again was Jack Meades Bar and Restaurant in Waterford, this isn't just a bar serving food & drink it has an extensive complex with various facets.
The old-world bar dates back to c1705, the lime kilns and ice house were built c1860, the grounds have been tastefully developed and are home to ducks, ponies, donkeys & goats. The large new bar was built in 2005 and boasts a large beer garden and has a children's play area

The day was arranged and lunch was for 2pm with most arriving at 1pm just to get settled in. The weather was to be sunshine and showers and, as can be seen, Wayne EI7HKB came well prepared.

Liam, the manager, looked after us with the table laid out for 22 members in the conservatory area.

Jack Meads have a carvery menu with a large choice of food on offer from traditional ribs and colcannon to steak, beef, fish the list goes on.

In no time we were filling up with some members traveling from as far as Galway 240km which equates to 3.5 hours on the road, also members from Wicklow 140km.

We have a number of members that had never met before so it was a great way to meet up and put a face to a voice and for some to realise, they were neighbours.

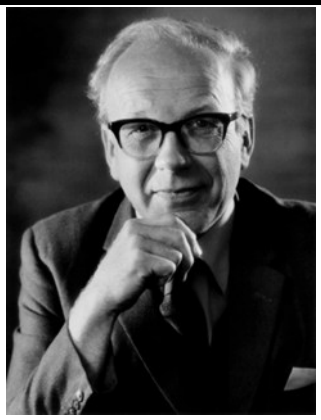
Soon everyone was deep in conversation on various topics and building up an appetite for the lunch ahead ●

EI3CC Midsummer Madness

All in all, a super afternoon with great friends, or as we say, the EI3CC family. We are all filled up now and ready for a busy second half of the year with a packed calendar of activations for the rest of 2025.

So, consider holding an event like this. Its great for the XYLs that don't do the radio but like to meet up with other members for a social gathering.

The Life of Sir Francis Graham-Smith



We are saddened to report that one of the founders of the science of radio astronomy, Sir Francis Graham-Smith FRS, FRAS, FInstP, has passed away at the age of 102.

Sir Francis, or Graham as he was known to friends and colleagues, was the second Director of Jodrell Bank Observatory, taking over from Sir Bernard Lovell when he retired in 1981. His career in astronomy was remarkable.

During the Second World War, Graham had been forced to interrupt his university studies in Cambridge in order to work on the development of radar. At the end of the war, he returned to Cambridge and began working alongside Martin Ryle, another wartime radar expert. There he played a key role in pioneering the new science of radio astronomy, providing some of the most accurate positions for the newly discovered sources of cosmic radio waves using interferometers.

In 1964, he was appointed as a Professor of Radio Astronomy at The University of Manchester and moved to Jodrell Bank. He worked on some early space-based radio astronomy experiments as well as ground-based detection of cosmic rays.

However, when pulsars were discovered by Jocelyn Bell and Antony Hewish at Cambridge in 1967, his focus switched immediately to these new and important phenomena. Their study, using the Lovell Telescope at Jodrell Bank and others, was to occupy much of the remainder of his career.

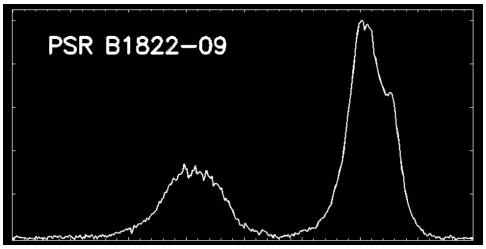
While Director of Jodrell Bank, Graham was instrumental in securing funding for a significant upgrade to the MERLIN telescopes,

Jodrell Bank's own interferometer network, including the addition of a new 32-metre telescope to be sited in Cambridge. This upgrade kept MERLIN at the leading edge throughout the 1990s and paved the way for the later development to e-MERLIN and the Observatory today.

Although he officially retired in 1988, Graham continued to be an active member of Jodrell Bank's pulsar research group, completing the latest edition of the research text 'Pulsar Astronomy' in his 99th year and publishing a review of Fast Radio Bursts in only April of this year, at the age of 102.

The first example of an FRB was discovered in 2007 in archival data of the Magellanic Clouds taken by the Parkes telescope, Australia, in 2001. Within 480 hours of observations, a lone radio pulse, 5ms long and estimated to contain ~10^33 joules of energy (the total output of the sun over 10 years) was discovered, sparking immense excitement in the astrophysical community.

The current tally of these mysterious signals still stands at less than twenty (17) and yet the field of FRB research is one of the most rapidly evolving areas of radio astronomy.



In 1970, Graham was elected as a Fellow of the Royal Society. He then became Director of the Royal Greenwich Observatory in 1975 where he oversaw the development of the UK's optical observatory on La Palma in the Canary Islands. In 1981, he returned to Jodrell Bank to take over as Director when Sir Bernard Lovell retired. From 1975 to 1977, he was President of the Royal Astronomical Society and, from 1982 to 1990, he was Astronomer Royal. He received a knighthood in 1986.

Outside his work in research and scientific management, Graham was always a strong supporter of and participant in public engagement with science and education. For example, he delivered the 1965 Royal Institution Christmas Lecture alongside fellow radio astronomers Sir Bernard Lovell, Sir Martin Ryle and Antony Hewish. Amongst many other activities, including writing popular books and research-level texts, he played a significant role in the development and management of the public visitor centre at Jodrell Bank.

Graham was married to Elizabeth, his wife of 76 years who died in 2021. They had four children. He was a keen gardener and, for many years, an avid bee-keeper, an interest which he retained well into his 90s ●

References

https://www.manchester.ac.uk/about/news/goodbye-to-a-founder-of-radio-astronomy/
Royal Astronomical Society / Science Photo Library
https://www.jodrellbank.net/

Logbooks in Ham Radio

Logbooks for Ham Radio serve as more than a simple record or a legal obligation. They are the pulse of an operator's journey through the airwaves. An efficiently maintained logbook not only keeps track of past contacts but also empowers the amateur radio enthusiast to grow, improve, and connect with a global community.

The Purpose of a Logbook

At its core, a ham radio logbook is a chronological archive of every radio contact (QSO) made by the operator. Traditionally kept on paper, logbooks have now evolved into digital formats, but the essential purpose remains unchanged: to record key details for each QSO. These details typically include date and time (always in UTC), frequency or band, mode of transmission (CW, SSB, FM, digital modes), call signs of both the operator and the contacted station, signal reports, and sometimes additional notes about weather or equipment used.

Benefits of Efficient Logbook Use

- Verification and Awards: Accurate logs are essential for verifying contacts for awards such as DXCC, WAS, or IOTA etc etc. They provide the proof needed to claim these prestigious recognitions.
- Technical Improvement: Reviewing log entries can highlight patterns of propagation, effective times for specific bands, or successful antenna configurations, leading to technical enhancements.
- Community Engagement: Sharing logbook data facilitates QSL card exchanges and participation in contests, building camaraderie within the amateur radio community.
- Regulatory Compliance: Most countries require operators to keep logs for a specified period, ensuring legal compliance and accountability.

Digital Logbooks: Modern Efficiency

The proliferation of computer software and mobile apps has revolutionised the way hams keep their logs. Programs such as Ham Radio Deluxe, Logbook of The World (lotw.arrl.org), hrdlog.net, Clublog.org, eqsl.cc, and QRZ Logbook allow for automated entry, export, and verification. Digital logs can interface with most radios now to capture data automatically, reducing the risk of human error and speeding up the process, especially during high-volume contests.

Advantages of Digital Logging

- Automated time and date stamping
- Easy searching and filtering by call sign, band, or date
- Instant logbook synchronization across devices
- Seamless QSL and award tracking integration

Paper Logbooks: Tradition Meets Functionality

Despite the rise of digital alternatives, many operators still cherish the tactile and personal nature of paper logs. They require no batteries, are immune to data corruption, and can be easily customised. Whilst they are not particularly resilient to coffee spills, efficient paper logging means using structured log sheets, legible handwriting, and storing logs in a safe, accessible place.

Too Much Like Work?

The main online logs are LOTW and QRZ, with N1MM+ being the probable favourite for contests many are free and those that aren't are relatively inexpensive.

LOTW is controlled by the ARRL in USA, and you must go through some considerable hoops to register, such as providing proof of having an active licence etc., but it is regarded and the "Rolls Royce" of logs – and their LOTW (Logbook of the World) DXCC awards are without doubt the most highly regarded.

QRZ on the other hand is the equivalent of a telephone Directory for radio hams as well as an online log. You have your own page on which you place whatever information you like about yourself, your interests, and your station, you get a fully searchable database of your log, and you can see confirmations instantly.

Sometimes you will see comments on an operator's QRZ page to the effect that "I don't do digital logs/QSLs, life is too short to be messing with computers". However, if you buy a core program such as Ham Radio Deluxe ($100) and set it up as your main log, it not only updates all online logs automatically or with just two clicks, it also includes an amazing range of 'side-products' such as CW / Digital decoders, a Rotator controller, rig-control and much more.

You can easily set up HRD to instantly update LOTW, HRDlog.net, Clublog.org, and eQSL, without you having any involvement and a mere right-click and send updates QRZ.com.

Each of these online logs have their own characteristics with regard to awards, band conditions, countries worked and recent activity, DxPeditions, statistical analysis, all of which makes the hobby more interesting.

Conclusion

An efficiently kept logbook -whether digital or paper - is not a mere formality but a living document. It charts the history of one's interactions, accomplishments, and learning within the rich world of amateur radio. By embracing good logging practices, operators ensure that each QSO resonates beyond the moment, serving as both a record and an inspiration for further exploration of the airwaves.

The existence of digital / online logs increases the fun and presents additional opportunities to chase targeted countries / entities to land that most sought after QSO.

Garrett Kennedy - EI4IZB / ZP4BVK
garry.kennedy@hotmail.com

Adam's Journey

In April/May 2026, Adam will travel back to the Himalayas, again with an all-Irish team, to take on the challenge of the highest mountain in the world, Mount Everest. If Adam makes it to the summit, at 22 he will be the youngest Irish person to fly an Irish Flag on the top of the world.

In April/May 2026, Adam will travel back to the Himalayas, again with an all-Irish team, to take on the challenge of the highest mountain in the world, Mount Everest.

If Adam makes it to the summit, at 22 he will be the youngest Irish person to fly an Irish Flag on the top of the world.

For 75 days, I committed to a challenging routine that pushed me mentally and physically.

Here's what it entailed

☑Follow a strict diet (no cheat meals, no alcohol)

☑Two workouts per day (45 minutes each, one outdoors)

☑Drink a gallon of water every day

☑Read 10 pages of a non-fiction book daily

☑Take a progress photo every day

The mental toughness was definitely the hardest part, but I'm so glad I stuck with it. Drinking all that water was tough at times, but I felt so much better overall. The workouts weren't too bad since I'm pretty active already, but the reading definitely tested my patience!

The no alcohol part was tricky with friends going out, but honestly, it was nice not waking up with a hangover. The diet was easier than expected—prepping meals made it way more manageable, and I actually found it easier to eat healthier.

It was definitely tough, but I'm glad I did it. I've learned so much, and I'm taking a lot of these habits with me moving forward.

Week 1 and 2 done of 75 hard. Rules are pretty simple.

1. Two 45 minute exercises every day and one has to be outside.
2. 2. Drink 3.5 litres of water daily.
3. Read 10 pages of a non fiction each day.
4. Stick to a diet as well as no alcohol for the 75 days.
5. make a progress picture everyday and compare.

The hardest part is getting the water in but it's a great mental and physical challenge for Everest which is next year now.

What gear do I use to survive -30 degrees on one of the hardest mountains in the world?

1 Crampons and boots are vital to help you stay on the mountains when you're hiking over ice and and snow. The boots also keep you warm when facing extremely low temperatures.

2. A really good down sleeping bag is so important to ensure you get a solid nights sleep before a big day in the hills. As well as staying warm in these temperatures.

3. A good down jacket gets you through those really cold nights and is so important for your summit

push when leaving in the early hours of the morning.

4. Good gloves were a must as even with these on you could feel the cold. Taking time to move your fingers every once in a while, can help this but without gloves you'd be in trouble.

5. A harness to attach to safety ropes not only keeps you safe on vertical drops but also helps you to get up the mountain easier and to get down in one piece.

https://www.instagram.com/reel/DGbNsCcIyA9/?utm_source=ig_web_copy_link&igsh=eG1ld3ozbWdyNmZk

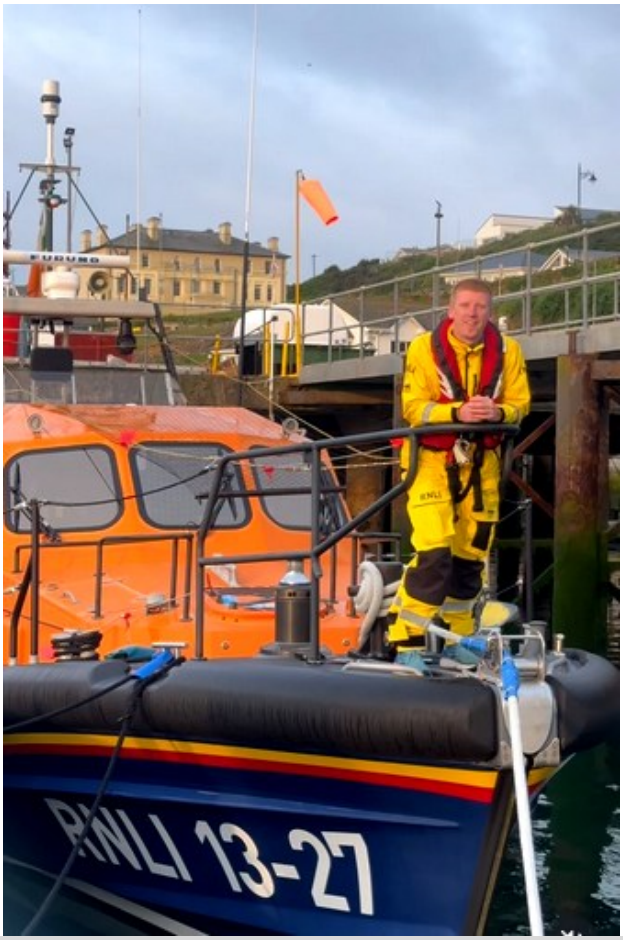
So training still continues and I have just finished the Viking marathon in my hometown Waterford. I completed the half marathon in a RNLI Kit It's hot, heavy, and definitely not made for long-distance running but it was all for a good cause and plenty of stamina and training for me.

I finished a half marathon in full RNLI kit, what a day out. Huge well done to everyone who ran. Everest 2026, we're coming.

A big thanks to all at EI3CC for their support and highlighting my challenge to make it to the Everest summit. Further updates will follow please check out my go fund me at thanks for the support.

https://www.gofundme.com/f/adam-become-the-youngest-irish-person-to-summit-everest

Big challenge coming soon, so make sure to follow along! ●



EI75RAF Special Event Station Activation

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

In January 2025 members of the Mayo VHF Group decided that it would commemorate these eight members of RAF 202 Sqn. Flight registration number RG843 who lost their lives when their aircraft crashed in very thick fog into Croaghaun mountain in Achill, Co. Mayo, Ireland.

Our amateur radio Group applied for and were granted the EI75RAF callsign which would be valid from June to December 2025.

On Sunday June 15th Enda EI3IS and myself EI3IX travelled over to Achill to carry out the last reconnaissance before setting up the next day at Lough Accorymore. The weather was warm and sunny with partial cloud on Croaghaun.

We arrived down at our transmitting site beside Lough Accorymore the next day at 1600hrs local the 75th anniversary of the air crash to find the find the weather wet, windy with Croaghaun mountain totally covered by dense cloud barely able to see the lake! Weather forecast for the rest of the day and evening was for winds of 30km/hr gusting to 55km/hr, very similar weather the pilot of RG843 would have experienced 75 years ago!

Dense fog when we arrived at site

We had hoped that before we would commence the activation, we would commemorate the 75th anniversary by laying a wreath at the actual site of the crash but unfortunately the inclement weather prevented this from happening. However, we hope to have a further two EI75RAF activations from Lough Acorrymore later in the year during September/October when we hope to lay the wreath at the crash site.

The Rands Tipi tent – Enda EI3IS & Tom EI2GP

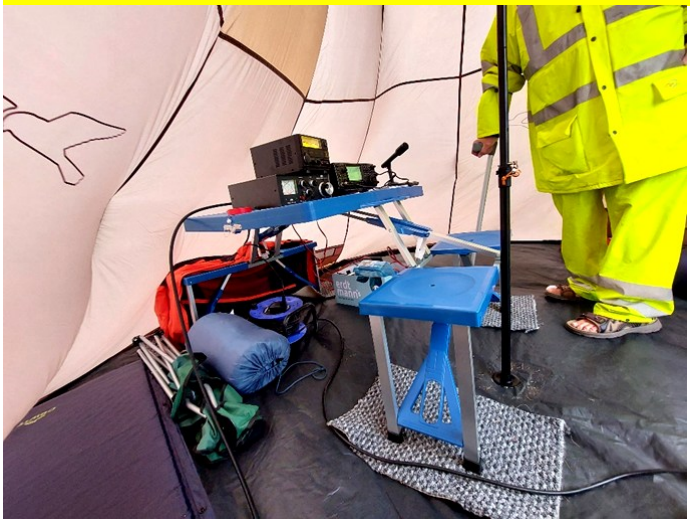
With a temporary break in the weather we got the Rands Tipi Tent up in 10 minutes, our folding picnic table fitted perfectly in the tent, after getting the ICOM IC-7400 in place and powering up using our Honda 10i generator, it was time to sort the antenna. For this event we used a Longcom LC9 long wire antenna incorporating a 9:1 UNUN at the feed point allowing it to be fed with 50ohm coax.

Getting the Long-wire setup – Tom EI2GP & Enda EI3IS

The antenna was held up by two 10m portable masts, one fibreglass the other a Wimo hybrid attached to the metal rails beside the lake.

At this point we had two amateurs visit us at the site, Tom EI2GP and Manfred DC2MH & XYL, we all had a good chat about all the various aspects of amateur radio.

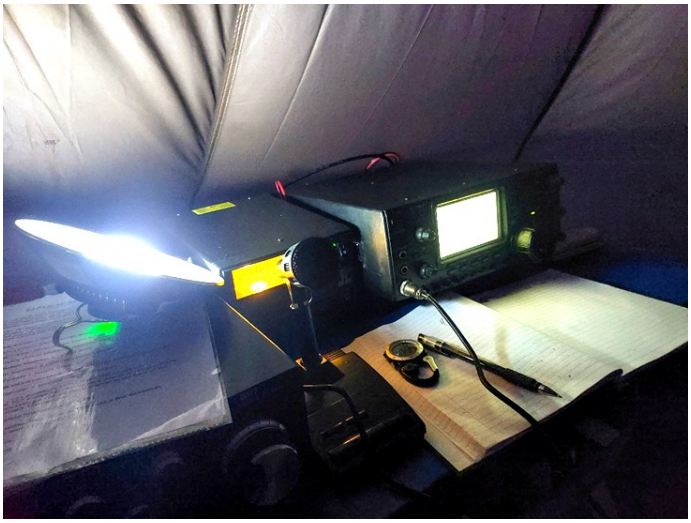
EI75RAF Special Event Station Activation



Folding camping seats and table, excellent and very sturdy

We eventually got the HF station on the air at 1827hrs after we had logged a few 2m contacts, all bands tuned perfectly 160m to 10m. We mainly operated 20m & 40m, overall band conditions were not good. Most of our signal reports were 5/5-5/7 which we were happy enough with running 100w. In total we worked 60 stations across 11 DXCC's

Tom EI2GP – Enda EI3IS – Manfreds XYL – Manfred DC2MH



Night time operation

Late that evening, and into the night, the wind gusts were severe with torrential rain, tent held up very good, no leaks and no damage. Very little worked throughout the night, only heard two EI's on 160m, 80m was very poor with little heard

Tea in the morning on portable gas stove

By the morning the rain had stopped but winds were still strong, according to our weather app we were going to get a break of an hour before the gusts would pick up again, so we decided to call it a day. By the time we got to the east side of Achill Island on our way home it was almost flat calm!

Cloud lifting temporarily Tuesday morning as Enda EI3IS packs up. Note: white rock in almost centre top of photo, this is the site of two of the four engines and a guide to anyone climbing interested in finding the crash site.

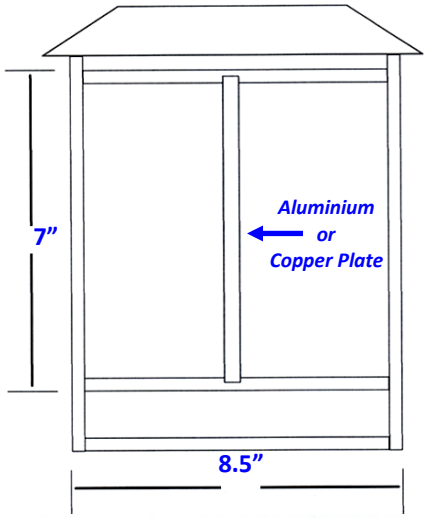
Details of the dates of our next activations will be posted on QRZ.com once decided.

Joe Fadden EI3IX
joe_fadden@yahoo.com

Tips And Topics - A Coax Cable Earthing Box

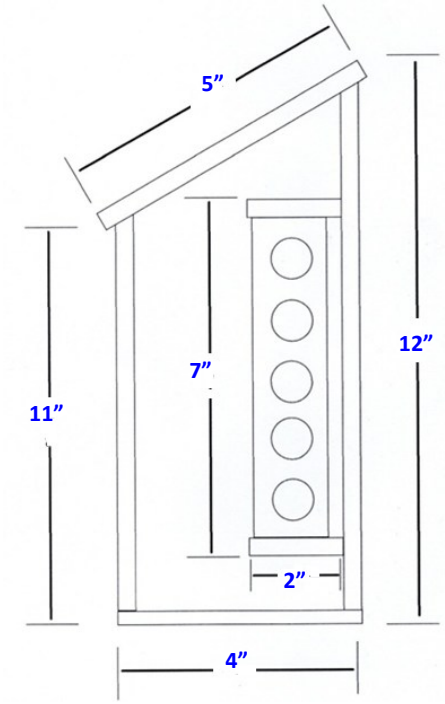
I built this a number of years ago as I had issues with noise and this was an attempt to reduce that by earthing all cables before entering the QTH. It Is a straight forward build and no real carpentry skills needed a lot of the timber you can get cut by a local carpentry shop.

Here are the drawings to work from as a guide, you can adjust to suit yourself and how many antennas your box can have.



The bottom of the box is cut to allow cables to enter from LH to RH this opening allows air to move and keep internals dry also.

The pitch on the roof is 30 deg or so and is not set so you can make it what you want. I started with the back of the box that way every thing would be screwed to that.



Note the plastic shelve buttons, I fitted these to keep it off the wall when mounted. **Fig 2** & **Fig 3**

This will prevent damp and eventually rot forming on the back it will get a coat of paint also before being fitted.

Then we turn to the sides

Fig 2 & Fig 3 Showing Plastic Shelf buttons

again fairly straight forward 30deg cut and then a piece cut for the roof **Fig 4**, the bottom as I said before is left short at the back to allow cables enter the box as seen in the painted image **Fig 5**.

Fig 5 & Fig 6

Now to the internals, first thing I did was got a piece of ¼ x 2” x 7” flat aluminium bar I got it from a friend’s scrap bin, this was to be my earth bar I worked out that six antennas could be put thru this bar. **Fig 7**

Fig 7 Aluminium Bar drilled out for 6 SO239 Threaded connectors

Fig 8 SO239 Threaded Connector

The holes were then drilled to suit SO239 straight threaded connectors. **Fig 8**

Once the bar is drilled and all ok you are ready to make the mounting pieces for the bar. All this requires is a groove cut into the top and bottom pieces of timber to the thickness of the bar, make sure they are directly opposite each other to keep vertical **Fig 9**.

Fig 9 Mounting the Earth Bar

The two pieces of timber can now be fitted as high up in the box as possible, this will give you plenty of room when the cables enter later, you can also see two plastic lugs that I fitted to stop the bar sliding out and this will become very handy when fitting the coax later as it allows you to remove the bar for easier access when fitting new coax for added antenna, the same lugs were also used for the front cover they were made from 1 ½ x ½ plastic from an old tea tray I cut up.

Note also the timber strips on the inside of the box this is set at the thickness of the timber used in the build.

Tips And Topics - A Coax Cable Earthing Box

You should end up with something looking like this after a coat of paint, the knob again found in the bits box. **Fig 10**

Fig 10 External appearance of the completed Project

You can see how the buttons keep a clearance of the wall when mounting and allows air to pass behind and not trap water which in time would rot through the box.

Now you can bring your cables into the box, the lower of the antenna SO235 has a large round cable connector **Fig 11.**

I have 3 x cables running from this to my earth rod **Fig 12** so, this in turn earths the bar in the box and once the cables terminate at the bar from the antenna, they are then picked up on the other side for the runs of cable into the QTH so in effect everything is earthed before entering the house.

Fig 11 Box in place with cables from the house connected to the antenna coax cables

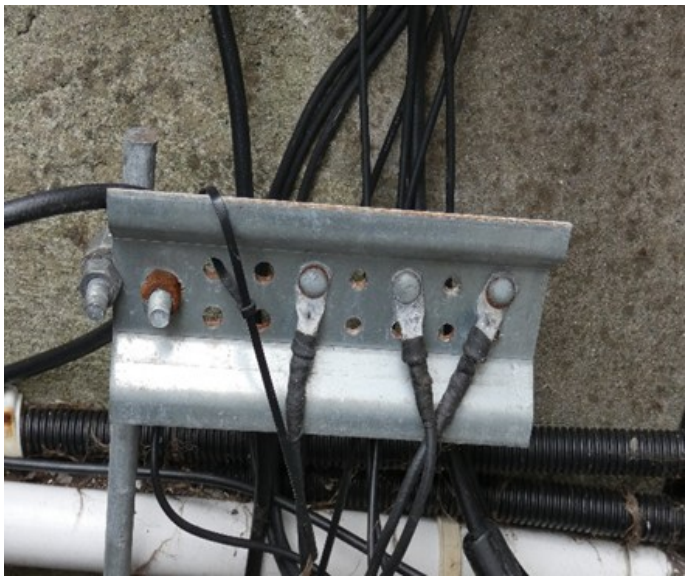


Fig 12 three cables connected to Earth Rod

Connectors for Wires to the Earth Rod

Does it work? in my case yes to a point it took noise to some effect out of the shack from a local shop with possible fridge issues it was also good at keeping RFI coming back into the shack also, again its good to have all the antenna earthed in any case and this is a real easy way of doing it.

If you have any ideas for our tips and topics section then drop us an email to the editor wright14@gmail.com or ei3hqb@gmail.com ●

Museums on the Air - Duncannon Fort

Museums on the air is held on the 22nd June and also the 29th June, Ei3CC decided to do an activation on the 22nd June as we had another calendar date booked on the 29th. Duncannon Fort is an impressive presentation of a bastioned fortress perched on the side of the stunning Hook Peninsula, County Wexford, part of Ireland's Ancient East. This historic structure has gathered countless intriguing and awe-inspiring stories over its 450-year history and holds one of the best vantage points to take in the beautiful Waterford Estuary it also houses a maritime museum and has a wonderful tour for visitors.

We headed of the Passage east ferry on a fine Sunday morning only to find out the ferry did not start operating until 9.30am, I was expecting to be abord at 8am so I had some to burn so a wonder around the village it was to be.

Passage east is a stunning village on the river Suir and a gateway to Wexford via the ferry, the crossing takes only a few minutes to Ballyhack and saves a long journey into Newross to cross the bridge.

Time had passed and my ferry had arrived, and I was ready to cross into Wexford to meet up with Alex EI1895 and Wayne Ei7HKB who had left Thomastown at 7am and were waiting patiently for me as I had the Radio unit and all the equipment.

With a toot of the whistle we were crossing the river and I was looking forward to a day operating a museum activation.

The distance from the ferry to Duncannon beach is only a matter of a few miles and in no time I had arrived , the tide was well out and a number of camper vans had spent the night on the beach and the day traffic had also started to arrive so it was looking like it could be a busy day so with no haste we decided on a spot for the radio unit making sure it was back into the steady breeze that was developing so as not to have the sand blowing into the unit.

Museums on the Air - Duncannon Fort

Next priority when we are out before we get into antenna and radio setup is a cup of tea after which we then lofted the 49-1 endfed on our Clark pneumatic mast and the other end tied to a post. The radio was checked for SWR and all was good.

At least that's what we thought, the bands were abysmal QSB was very strong and stations just disappeared as if just switched off.

So, we picked a frequency and put out calls I also added us to the clusters and eventually we started getting calls in the logs from other museum activations.

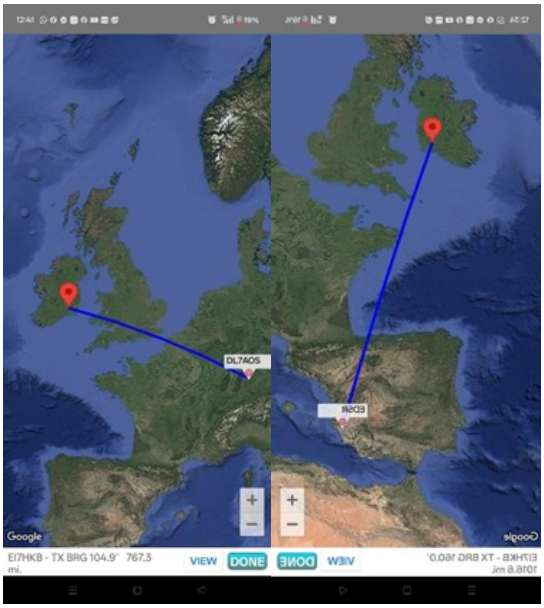
These stations had also commented on the band conditions and that we would just make as many calls as we could under the circumstances.

The wind had also increased, and this was having an effect on the tide to the point it was pushing in quicker than expected, so we kept a vigil on the oncoming tide while searching for contacts to add to the log but that was proving hard work.

The water by now had got choppy and an occasional gust would rock the unit even the ships traveling up the river were struggling.

Wayne EI7HKB decided to see if any of the other bands were working like 17m – 20m etc. but again heavy QSB was the killer, he then for no reason hit the 6m frequency and low and behold 6m was alive with a contest.

To our surprise the end fed made by Wayne tunned up on 6m and the first station we worked was a friend Roger EI8KN, so we decided we would work what ever stations we could hear and in no time, we had more contacts on 6m than 40m earlier in the day.



The furthest stations we logged were one in Germany and another in Spain so we were happy with that and the fact that we had done it on Wayne's 49-1 that was cut for 80m.

The tide by this time was looking deridingly closely and it was decision time to break camp and not become a news item on the TV with a maritime mobile activation that we never intended.

All in all, it was not a bad day even if it was shorter than we expected we had got Duncannon fort on the map and have a location again for other activations in the future.

This is what makes the hobby fun for me after a long number of years since 1973 that we can still go out and have fun and be even surprised what can come out of a day that was not expected ●

John Tubritt EI3HQB
ei3hqb@gmail.com

Radio In Scouting

We are lucky, that globally we are not too far from a scouting club / movement and that scouting is still as popular as ever.

This gives us a great opportunity to bring the scouting movement into our hobby in various ways and encourage the scouting movement from leaders to scouts to become licensed operatives.

The new building blending into its surroundings

Ei3CC has been involved with scouts for a number of years and at the moment our group the copper coast scout group are having a new eco log scout building constructed.

The building was designed France and it comes on site like a big flatpack unit a team from France accompany the kit and they stay with the project until fully constructed.

The building is a full ECO build and in keeping with the surrounding area of forestry and a large lake.

On completion it will resemble a log type building with stunning views over the lake.

EI3CC will have a club room on site with a fully functioning radio room to run activities on site.

So how do we get involved with our scout groups, simple go and visit your local group and talk to the leaders.

In your introduction you need to be positive and describe our hobby to its full potential but also make it sound exciting, if you dribble on in electro science you will more than likely scare them off you need to keep it simple and in such a way that the leaders themselves would want to get involved.

KEEP IT SIMPLE

I have always found this to be the difficult part getting past the post of a youth officer or leader, if they get bored listening to you describe the hobby in power to the minus three etc. they then either get bored or think it is too technical for the group to get involved in.

One of the biggest items on the scouting calendar each year is JOTA Jamboree on The Air What is JOTA-JOTI?

Radio In Scouting

What is JOTA - JOTI

JOTA-JOTI (Jamboree on The Air – Jamboree on The Internet) is an international jamboree taking place around the world simultaneously. It is organized by WOSM, the World Organization of the Scout Movement. Scouts from all over the world communicate over the Air (amateur radio) and the Internet using any technology locally available. There are loads of different ways to communicate, including text-based chat, voice chat, video chat, emails, blogs, and social media networks. JOTA-JOTI allows you to build friendships around the world and to find out more about their culture and scouting life.

First held in conjunction with the fiftieth anniversary of Scouting in 1957, it was devised by Leslie R. Mitchell, a radio amateur with the callsign G3BHK. It is now considered the largest event scheduled by the World Organization of the Scout Movement annually.

Amateur radio operators from all over the world participate with over 500,000 Scouts and Guides to teach them about radio and to assist them to contact their fellow Scouts and Guides by means of amateur radio and since 2004, by the VOIP-based Echolink. This provides the Scouts and Guides with a means of learning about fellow Scouts and Guides from around the world. Scouts and Guides are also encouraged to send paper or electronic confirmations known as "QSL cards", or "eQSLs" when they are sent electronically.

Now amazingly even with the high figures that do get involved in JOTA you would be surprised that some groups have never heard of it. Here where I live, we have three groups in the town and they had never heard of it and were surprised when I told them it's been running since 1957 and it's global.

When is it?

JOTA/JOTI is held in the third weekend of October; some groups just do one day of operating, others like us make a full weekend of it.

Friday evening, we arrive on site and start setting up our stations, this gives us the whole of Saturday to concentrate on running the station as we are already set up.

We do encourage the scouts to get involved with setting up, that way we can explain the reasons why the antenna needs to be in a lactation it is in and how putting it say near the building would affect its performance, then they can connect up the radios to power and check that the antenna is resonant on the bands that we intend to use.

Now the scout understands the antenna location and knows that that piece of wire needs to be resonant with the radio so he/she can speak to the other stations on the air, as we all know this is the first rule of radio. We also get them to set the Pc's up with the logs we will be using over the weekend and have the paper logs ready in the event of a Pc collapse as they say you never know.

What do we do

We have various stations running through the day one has the HF station and various bands are used 40m to 20m or whichever bands that are working on the day.
Over the years we have found that on HF either the conditions are poor, or we are in a contest weekend so the group went down the road of acquiring equipment to allow us to use the Q0-100 satellite.

Having the Q0-100 gear has made it easier to contact stations no matter what the bands are doing.

We had arranged with other groups that had access to Q0-100 equipment so prearranged skeds could be made and the scouts were over the mood to be making the contact vis a satellite sat in outer space.

Our equipment is a sat rover transverter mounted on the arm of a 1.1 mtr dish, the Tx / Rx is a good old trusted Yaesu FT290 R with 2.5w output.

We have a VHF station working through the repeater network and this helps EI stations in range of the network to talk to local operators or other groups also.

We have two camps at our location one being higher up the hill, so we set up an 11m CB station and the groups are quite happy to chat away with each other from camp to camp and this gives some of our groups 11m operators a way of joining in with the JOTA weekend.

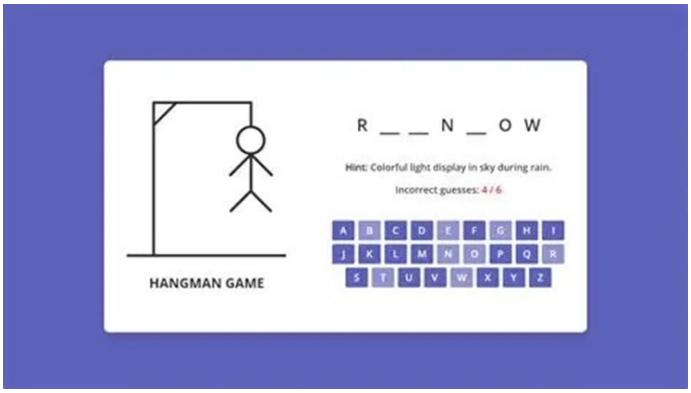
We also hand out PMR radios to the scouts and they spread over the forest area range finding and working out where the limit of the radio's work

We have equipment for foxhunting ARDF all the antennas have been built by the scouts so again they understand that they are directional and that the rear element is a reflector. The antenna are again very simple tape measure and plastic tubing, and they enjoy building them and even better testing them too.

Radio In Scouting

CW always plays a part in the JOTA weekend the scouts straight away that morse and the titanic are well connected.`

We play a game of hangman where we have a word say five letters so five lines are put up on a whiteboard and a brief clue of what the word is and then they must guess what each letter is. they have to send the letter they think it is on a CW key, so if you think it's a letter B then send **-...** if it is wrong then a part of the gallows is drawn on the board, the aim of the game is to get the word before you get hung.



Another game we organise is Treasure hunt whereby we hide various clues that eventually lead to the final prize. This is a timed event , so we start with a team of five two stay in camp with a radio and a map of the area. The other three have headed off with a clue that should take them to the next hidden clue.

Once the clue is found they radio back to the two at camp saying stop the clock I found a clue, the clue is in an envelope and on opening it they need to read back to the camp what is on the letter. Only thing is the clue is in cw symbols so they may have -.-. which the team back at camp must decipher from a list of cw symbols, the messages are relayed back via radio, so they are using radio and working the clues from cw to get to the final goal so its great fun.

One of the other clubs, Sky Wave, from Cork that help with us have a telescope and in a clear evening the scouts get to see some of the galaxies above their heads and are totally blown away again this is a great attraction that they look forward to it each year.

Ireland is fortunate to have a group Radio scouting Ireland https://www.radioscouting.ie/ They are a group of Scouters and Amateur radio enthusiasts who aim to support scout and guide leaders to bring the highest standards of Amateur Radio, Science, Technology, Engineering and Mathematics (STEM) activities in a fun and interesting way to the scout and guide groups of Ireland in a safe and fun environment for youth members and leaders.

This is a new group and they have been very successful in moving the scouting in Ireland toward radio.

Training & Facilitation

RSI provides a one-day training course for scout and guide leaders to enable them to bring scouts and guides through Stage 1 and Stage 2 of the Radio Scouting skills program. We also provide a one-day stage 3 leader training course. Working towards Level 4 and up involve self-study and external courses run by the National Shortwave Listeners club.

RSI has the capacity to support a limited number of national camps and national and international Jamborees with fun bases and IST.

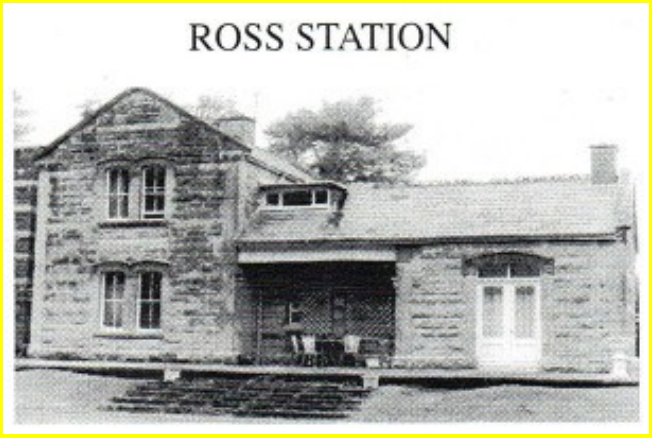
We can also facilitate connecting scout and guide groups with a local amateur radio clubs to facilitate an activity night or participation in JOTA-JOTI.

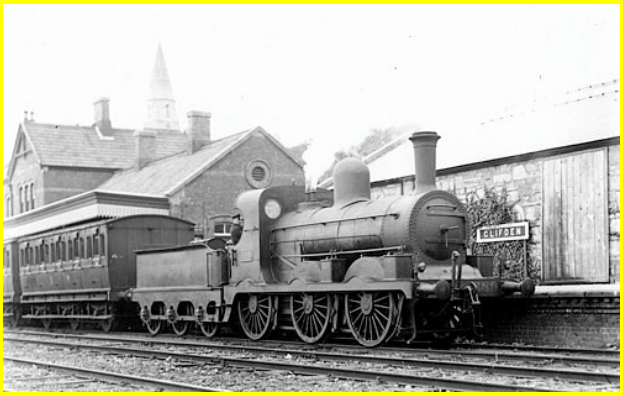
JOTA is on the calendar in October and its always a good to get involved in your scout group at an early stage ,this makes planning your event easier on you and your scouts and you will be better prepared.

Youth is the future of our hobby and what better way of introducing youth into it with the scouts/guides , leaders of groups are always on the lookout for new activities for the groups and what better way of getting new people into our hobby ●

Railways On The Air

The Mayo VHF Group members are looking forward to activating Ross Railway Station, Rosscahill East, Co. Galway.





Mayo VHF Group will participate in this year's event on the weekend of 27th & 28th September using the call EI2MRG.

Sadly, the now disused Ross Railway Station which had a rich history was part of the Midland Great Western Railway (MGWR) and is located some 12 miles from Galway city.

The Midland Great Western Railway (MGWR) was the third largest Irish gauge (1,600 mm (5 ft 3 in)) railway company in Ireland. It was incorporated in 1845. The station played a role in the transportation of goods and people in the region, connecting it to the wider railway network, sadly the station closed with the line in 1935.

We will be active during the weekend of the event on 3.65Mhz +/-, 7.150Mhz +/-, 14.250Mhz +/-.

Fingers crossed that propagation is favourable for the weekend, if you hear us please give us a call•

This year EI3CC will operate from the Lartigue Railway in Listowel

The Listowel - Ballybunion Railway opened on 1st March 1888 and operated until 1924. It ran the ten miles between the two towns and was remarkable as the only railway of its type in the world. How two small towns in the south west of Ireland came to be linked by the world's first commercial passenger-carrying monorail is a fascinating story.

The train carried passengers, freight, cattle and sand from the Ballybunion sand-hills.

Among the passengers were Ballybunion school children going to the Listowel Secondary Schools, Kerry

and Limerick people making their way to the beach resort of Ballybunion and golfers going to the fledgling golf course at Ballybunion, which was to develop into one of the greatest golf courses in the world.

The line was only barely financially viable for the whole of its existence; it is reputed never to have made a profit. The closure was hastened by the severe damage that was inflicted on the line during the civil war of 1921-23

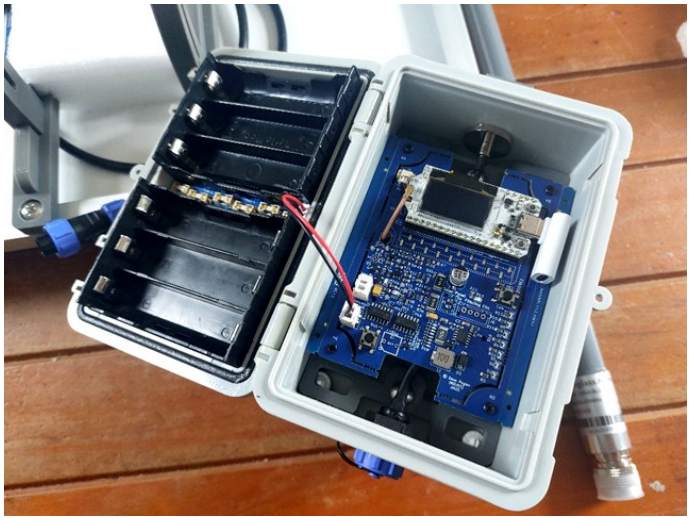
EI3CC will arrive on site Friday 26 – 28 September and will operate on 80m-40m-20m SSB / CW so listen out for the station on the bands•

Is Mayo Meshtastic taking off?

I have been interested in the Meshtastic concept for some time, so I decided to put up a node at my QTH 16 kilometres east of Castlebar. I decided to go for the complete Meshtastic 25w Solar (MPPT) outdoor node (EU868Mhz) using a Heltec V3 WiFi board, SX1262 LoRA with up to +22dBm (0.16 Watt) with vertical 5.5dbi antenna. This unit is powered by 6 X 18650 3.7V 3000mAh rechargeable batteries.

Next, I downloaded the Meshtastic app from Google Play Store. If you want to connect your Node via Bluetooth, do it before putting the Node up on the mast as the code to allow pairing with your phone will be displayed on the Meshtastic OLED screen. Once phone and unit are paired you can seal the unit and place it on the mast. I connected my base unit via the internet for the moment.

I wasn't expecting to find any Meshtastic Nodes due to my reasonably remote 330ft ASL location, but to my surprise I picked up one other node on the outskirts of Castlebar some 12Km (low elevation) away using a Seeed SenceCAP Solar Node with 2dbi rubber rod antenna. This station also had a mobile device (Seeed CardTracker T-1000-E). Contact was established quickly with this station via the app using text (Messages up to 200 characters max).



Outdoor sealed Meshtastic unit

Assembled unit on the ground

For the mobile unit I went for a waterproof vehicle node EU868Mhz, hardware is a TrackSenger (Big OLED) with a 6.3mm thick watertight acrylic window for easy viewing and is USB powered (5V) with 3dBi antenna. This unit has 2 very effective suction cups, very secure on the car roof.

I used an old smart phone and connected via Bluetooth after downloading the Meshtastic app as my main phone is paired with my car audio system.

Mounted on the shed gable wall with solar panel facing south

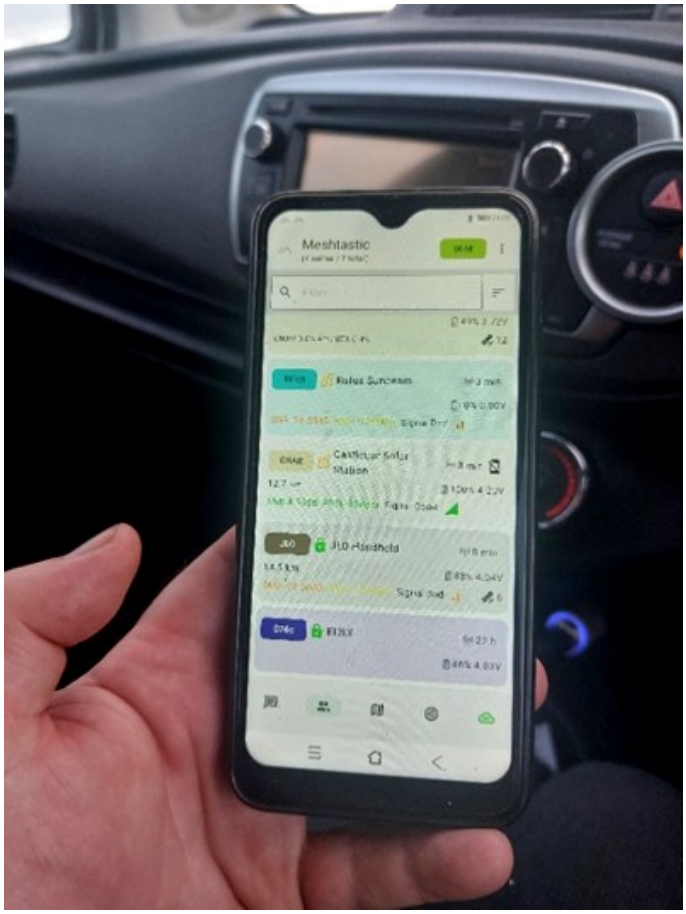
Mobile unit roof mounted, very strong suction cups

I drove to high ground close to my location 900ft to test the unit, managed to pick up a new Node in the Ballina or Swinford area so I'm sure there are plenty more to discover as the further out one drives.

Currently there are one of two more interested in setting up Nodes in Castlebar town, interest also in Ballina, Swinford and Mulranny areas. Even plans to get one or two Nodes up on high ground are in the pipeline which would make a huge difference coverage wise. The

Is Mayo Meshtastic taking off

more Nodes the better it will get and eventually a healthy Network.



Active stations displayed on the App

Just starting out here on Meshtastic so lots to learn, while its not amateur radio its a halfway house between 70cm & 23cm so will be fun experimenting with.

Want to know more:

https://meshtastic.org/docs/introduction/

The World distance record on 868Mhz is 331Km! See:

https://meshtastic.org/docs/overview/range-tests/

Meshtastic app

https://play.google.com/store/apps/details?id=com.geeksville.mesh&hl=en_IE

Worth checking out ***Meshtastic Ireland*** a very good Facebook page, as is ***Meshtastic SW Ireland***.

Joe Fadden EI3IX
joe_fadden@yahoo.com

In Memoriam

It is with sadness we learned of the passing of Dave Court EI3IO on Monday 14th July. Dave was first licensed as an amateur radio operator in 1963 as G3SDL, Dave held various call-signs in several countries, including F0CWN, OZ3SDL, S21BI & A92IO. Dave was very active on the VHF bands and was well known to those operating on the 50 MHz (6m) and 70 MHz (4m) bands.

Dave will be remembered for his involvement in the radio regulatory and spectrum management field for over 40 years. He participated in spectrum management consultancy projects Worldwide. Dave chaired spectrum management forums in CEPT, ITU and NATO. He became Head of ERO (now ECO) for 6 years, the centre of European spectrum management expertise and responsible for UK frequency and spectrum policy in the 1980s.

Whilst serving as a Rep to the IARU for the RSGB he became IRTS Rep to the IARU also. Dave became Chairman Region 1 Spectrum & Regulatory Liaison Committee (SARLC) at International Amateur Radio Union (IARU). He was one of the pivotal figures involved in helping the IARU secure a full 2-MHz allocation from 50 to 52 MHz.

For his dedication and services, Dave was jointly awarded the RSGB Founders Trophy and in addition, the RSGB Harold Rose Plate. In 2020 he received the IARU medal for his services. Dave was part of the delegation to establish common ground and agreement between the policies of IARU and EURAO. Some may also remember Dave as Co- Founder of Quartzlab.

Dave will be forever remembered by his family and many friends.

Ar dheis dé go raibh a anam - May he rest in peace

EI3CC Barbecue Weekend

Once again we find ourselves out along the coast from Tramore in county Waterford, this is what we call our home spot as we had formed the club on this site nearly three years ago.

The forecast was to be a mixed bag again with sunshine and showers and a stiff breeze, a stiff breeze at this location can be a bit stronger than a breeze as we are at the edge of a cliff overlooking the ocean.

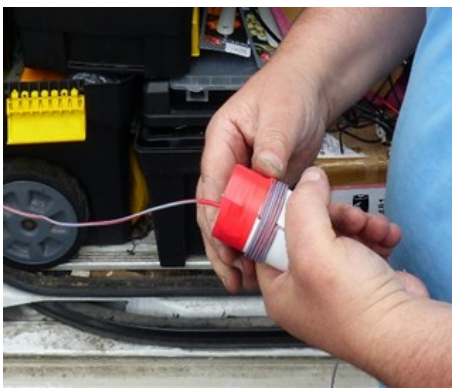
This is an ideal location as it's only 4km from our farm where we store all our equipment, that being our RCU or Radio control Unit, and our group caravan.

We usually arrange that our weekend starts on a Friday so by mid-day we arrive on site and are set up by the evening ready for the weekend operating etc.

The weather was overcast on arrival but we were promised sun later in the day, first job as always is to set out our area in the carpark with the RCU and caravan and also allow an area for tables and chairs for the BBQ planned later on Saturday evening.

Once we have a layout then we then raise our flags and antenna supports, our antenna is a home brew 49-1 build by Wayne EI7HKB and this works a treat on the bands.

We did have to cut a new wire as we had given our last one to a member on our last outing.



That was no big deal as we have a roll of wire with us and in no time Wayne EI7HKB and Sam EI4VI were busy getting the antenna made for the activation.

In no time the camp was set up and the sun had made its presence and it was looking like a great weekend of radio operating the call EI-0-EVRST for Sam who will

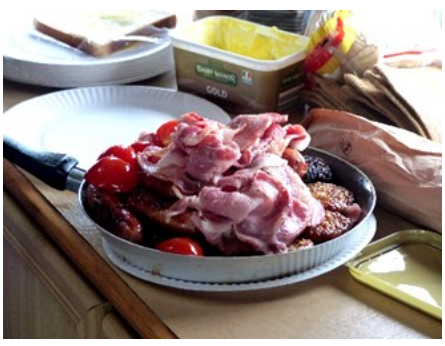
EI3CC Barbecue Weekend

attempt a climb on Everest in April 2026.

One of the benefits of this location apart from the views and take off is the footfall, it's on our coastal road tour so we always get plenty of coaches and cars pulling in checking out the view and also asking what we do with the radio etc. its also a great overnight spot for the campervan and camping people so we always have company in the evenings and make plenty of new friends.

The camp was now setup and all radio equipment tested and satellite dish aligned to the Q0-100 for use as backup under poor band conditions.

On Saturday the weather was looking great again and as usual each year we seem to attract the services of the local GARDA (Police) and ambulance crews the word has gone out that EI3CC are on site so it's a handy call for a cuppa tea/coffee and a sandwich from the kitchen.



We activated the EI-0-EVRST call but the bands were not the best, the Q0-100 was also active so calls were going into the log from SSB and CW.

The skywave lads had arrived from cork on Friday evening and as usual the craic (fun) was mighty and on Saturday we were shown some of the POTA/SOTA gear they have been working on over the summer.

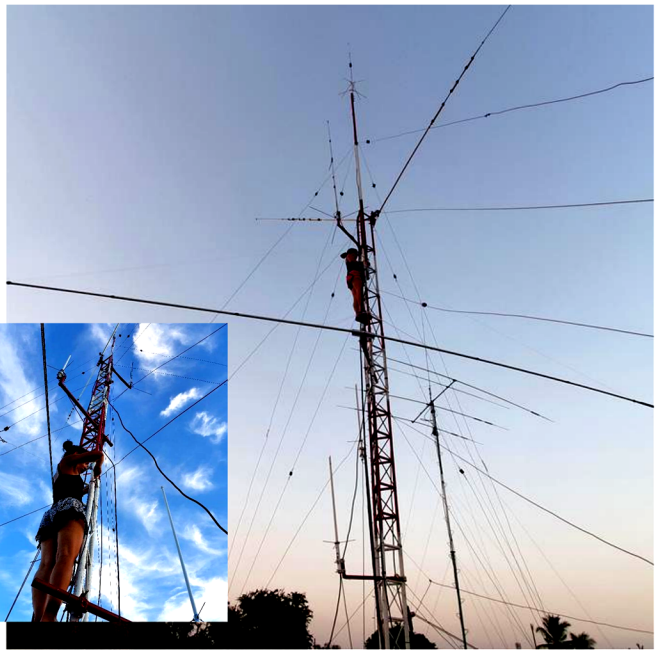
The antenna is a modified JPC and the radio X6100 has had a mod also for FT8 and to top it off a modified battery with various application and connections even with a solar panel point for recharge.

By now the weather was turning and the forecast was looking grim rain soon arrived and the winds had picked up so the BBQ had to be cooked on the stove in the caravan, no complaints there and a few beers and everyone was a happy camper.

Sadly Sunday did not fare much better with the weather so by mid-day we broke camp and called it a day, again lots of visitors both licenced and public and great fun even in and out of showers, heading to bed at 3am always means it's been a good activation and social gathering and again all looking forward to the next outing with EI3CC.

So if you have something planned and would like it to feature in the magazine please drop us a line and we will publish it at no cost to you, get your group/club seen in this mag now circulating in 68 countries with nearly 20,000 downloads from the last three editions ●

MY JOURNEY AS A HAM RADIO OPERATOR



CQ from the Negros Island

Hello fellow radio enthusiasts!
I'm Aile, proudly holding the amateur callsign DU7DTQ, and also known on the air as DU7Q through my vanity call. I've been part of the amateur radio community for nearly 13 years now, and I'd love to share how this incredible hobby became such a meaningful part of my life.

Amateur radio has taught me valuable lessons—technical skills, communication, and patience. Through this hobby, I've been able to connect with people around the world and build lasting friendships. It's more than just a hobby; it's a lifelong journey.

DU7DTQ- DU7Q

DX7HQ-CUERA

My journey into the world of amateur radio started with my family. We've always loved to travel, and in the early days, we used handheld transceivers to stay in contact while on the road. As we learned more, we realized we needed to operate legally and responsibly—so we decided to take the exam together. We all passed, and that moment marked the beginning of something truly special.
We didn't stop there. Together, we founded our own amateur radio club—DX7HQ - Cuernos de Negros Radio Amateur League, Inc. At first, it was just for us, a small family project. But before long, others began to join, and the club grew into a thriving community. Today, we remain active and committed—not just as hobbyists, but as volunteers ready to serve during emergencies and disasters.

The Priceless Joy of Making Contact

Ham radio has taught me more than I ever imagined. Contesting, for one, has become a big part of our club's activities. There's nothing quite like the feeling of making contact with a distant station—it's priceless. Of course, propagation isn't always on our side, and sometimes you have to wait and take on the challenge. But that's part of the fun. As our area grows and modernizes, my station has faced its share of interference and noise. That's another challenge—but also an opportunity to learn, adapt, and improve. In this hobby, learning never stops. Whether it's finding ways to deal with interference, building better antennas, or simply tuning in and listening, there's always something new.

Contesting, Community, and Continuous Learning

Amateur radio isn't just a hobby—it's a lifelong journey. It's about discovery, service, connection, and community. And every time I get on the air, I know there's always something to learn. To anyone thinking of joining this world, I encourage you: give it a try. You won't just gain a new hobby—you'll gain a new way of seeing the world.

Wherever you go, every trip becomes an opportunity to connect. A quick signal check, a friendly call—and just like that, new friends on the air!

MONDAY- SATURDAY
DUMAGUETE CITY 6:00 PM (PHT)
CANLAON CITY 7:30 PM (PHT)
SUNDAY - 7:00 PM (PHT)

FREQUENCY - 144.340 MHZ + 600 KHz
ECHOLINK DX7HQ-L ALLSTAR 53666
YSF REFLECTOR- PH DX7HQ-15043

DX7HQ

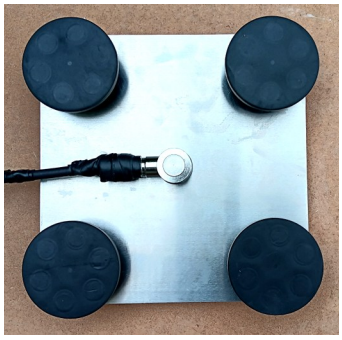
73 and Mabuhay!

The Mini Magnator Mobile Antenna Mount

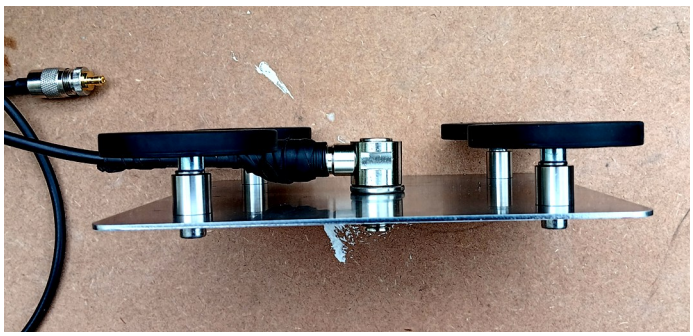
The Mini-Magnator is a magnetic mobile mount currently in the pre-production stage.

The Mini-Magnator base measures 200 x 200mm and is elevated 35mm above the roof. The mini Magnator has four circular feet measuring 65mm diameter and each containing 6 strong neodymium magnets. Each circular foot exerts a magnetic force of approx. 22kg and is covered with a rubber membrane to minimise damage to the paintwork.

The washers that secure the PL mounting base are specially made of stainless steel for both the Prepper14 Mini and 6 mag Magnator. The Magnator ism ade of a stainless steel plate to provide maximum protection against rust. Once placed on the roof of the car it requires a fair pull to remove it from the roof. The mount is supplied with a right angled Good quality SO259 to PL 259 base.



Coax feeder is not supplied with the mount giving one the choice of length for a given situation. A short length is ideal for mobile use whereas a longer length mag be required if operating from a tent and using the mount on the car roof to support the antenna. This is fine for most VHF/UHF antennas and some HF antennas.



Of course, a PL259 to 3/8 stud adaptor can be purchased. I am reliably informed that a 3/8 stud mount option will be available on future models.

The Mini-Magnator has a high capacitive coupling and has a noticeable improvement over traditional mag-mount antennas. This is evident when using a Yaesu ATAS antenna which can be difficult to tune on the traditional 3 mag mount. The Mni-Magnator has no problem securing the Yaesu ATAS antenna to the roof as it is a low profile antenna.

My initial tests were carried out using different 2 metre whip antennas. Some of these never tuned properly on a single mag mount and, to my surprise, gave a perfect match on the Mini-Magnator. I suspect that the antennas that would not tune on the traditional mag-mount would

have matched better on a fixed mount rather than a mag amount. I have tried some heavier antennas such as a VHF/UHF antenna, a 5/8 λ whip for 2m. a 7/8 λ whip for 2m, a 1/4 λ whip for 4 metres and a 1/4 λ whip for 6 metres.

These antennas provided a good match with this mount and the amount stayed in place when driving to a speed of 100 KPH. I cannot vouch for a combination of speed plus windspeed with a PL259 to 3/8 stud adaptor, A DV 27 and the larger Tornado Stinger antenna for 27 MHz tuned well and remained in place at speed. I suspect my Nissan Qashkai looked a bit out of place as a boy racer vehicle with the Tornado Stinger on the roof.

I have selection of AmPro whip antennas for the amateur bands 80 through to 10 metres and these require a stronger base as they are heavy, long, and have a high profile in strong breezes. Traveling at lower speeds there were no problems with these antennas. The Mini-Magnator would be an ideal mount on the roof of the car during static mobile conditions. With this in mind I tried my MP-1 Super antenna which is a large centre loaded whip measuring 7ft in length. I had no problems tuning this antenna whilst it was sitting on the Mini-Magnator. This was strictly static mobile operation given the size of the antenna.

Noting the specifications of the Magnator mount with 6 magnetic feet and a larger surface area, I would have no hesitation using it with the AmPro whip antennas for mobile use or any bulkier antenna •

More information from :

https://www.cb-hassberge.de/en/magnator-en/

Steve Wright EI5DD
wright14@gmail.com

Shaafheim - Germany CB Radio and Ham Radio in Harmony

01.07.1975 is a date in Germany that started the legalised CB-Radio in Germany. It started with half watt AM units on channel 4 to 15. Fifty years on, we have 80 channels with FM and on the normal 40 channels SSB and AM. This year marks the fifty years celebration of legal CB-Radio but also the German Ham Radio Club (DARC) has its seventy-five years birthday. Celebrations in this hobby that may have added to the warm and friendly atmosphere to this year's event in Schaafheim-Germany.

The birth of a radio event in Schaafheim was in 2015. Michael Sloboda and Dennis Brozio, a CB and a Ham operator joined together to form the organiser team. The support team is made by Michael's son and three of his friends. Back in 2015 the event started on a Saturday with about twenty-five guests. After a request to allow guests to arrive on Friday, the event was extended and after another request, the Schaafheim weekend started on Thursday, ending on a Sunday with a breakfast.

This year was no exception, Thursday the 17th July, Michael, Dennis and his team had around thirty quests arriving with their vehicles. A mixture of CB and Ham started to park in the sport club grounds. The sport club house provides electricity, the use of toilets and the possibility to shower. It has also a large room that get used for the radio flee market. Outside is a large counter where ice cream and drinks are sold. A large sitting area with a roof provides a meeting area but also the possibility to cool off which was needed on Saturday.

I arrived on Saturday with my girlfriend and with Peter, a Ham that has a beautiful van with a nine-metre electric mast that was used in Denmark as an outside transmission vehicle for radio and television. It was just past 10.00 and the grounds was filling up quickly. We parked close to our other radio friends and Peter found a spot were even a power connection was made available for him to use.

Shaafheim - Germany CB Radio and Ham Radio in Harmony

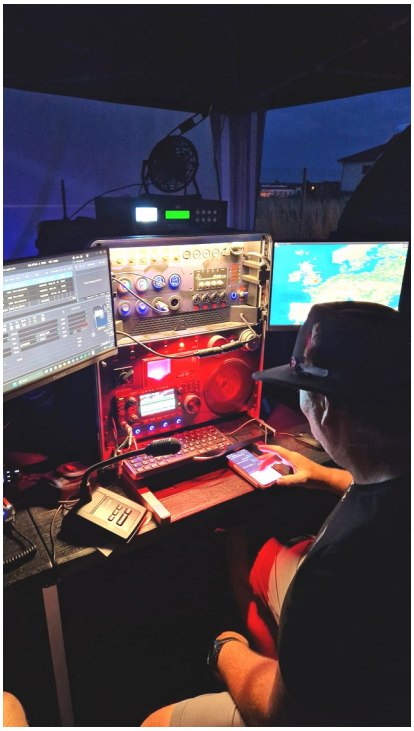
It was already getting so hot, around 31°, that we immediately started to set-up our pavilion. It did not take long and it was announced that a chicken grill van had arrived to provide food for the hungry. I had a chat with the poor man who was selling the half chickens, but he reassured me that after 15 years selling, he had no problems to work in the heat. The seating area was filled with people eating food but also with people chatting with one another.

Walking the large grounds provided the opportunity to see people selling everything to do with radio communications and to see the many set-ups in CB or Ham. The telescopic masts from Spiderbeam or various aluminium masts were everywhere. Yagis for 2m or 70cm with rotor, Delta Loops, Long-wires, Gain Master copies, T2LT, various home-base antennas and various self-made antennas could be found. What I loved was the open-hearted greetings and how everybody was prepared to share information. This year was so nice that I could not help myself to tell others of my day in Schaafheim.

I asked Michael for details to this event. Preparing for the event starts in Autumn. This year, I was told by Michael, many guests even booked a room in nearby holiday houses or hotels. He had over 300 registered guests which was not the first time. It is not known if it was a record turn-out. Two radio shops came this year to sell new products: Markus Neuner Funk and Bonito Ham Radio Shop.

The selling of raffle tickets and the donation of the Radio-Active Group made about €400 which Michael wants to top up to €500 for the SOS Kinderdorf. The quest with the longest trip to Schaafheim was out of Bordeaux, France driving over 800 kilometres.

I asked for other unusual details which Michael also gave me. Electricity: over 500 Kw/h used. Water, 10.3m³ used for shower and toilets. I did not find out how many toilet rolls were used. From a message from Dennis, I got the following details: 4 Liters scrambled eggs, 4,5 Kg potatoes and 2 Kg cheese. As you can gather, Dennis was in the kitchen.



Talking to Michael, he revealed that this event was never thought as a profit making event. Handicapped people even do not have to pay an entrance fee and what profit is made is used to cover cost for the coming event should the weather turn bad. It is a concept from a CB and a Ham operator that takes the boundaries away making this event something special.

My thanks to Michael for taking time to give details. I will be there next year and hope to experience that atmosphere we had this year ●

Marten, 13EC39, 13LR029, 13RCT12
martentoonder67@gmail.com

70cm Amateur Band Under threat

Threat to 70cm band

The Space Bureau of the US Federal Communications Commission (FCC) has received an application from AST SpaceMobile to use 430 - 440 MHz for conducting Telemetry, Tracking, and Command (TT&C) operations for both space-to-Earth and Earth-to-space communications. In addition, AST SpaceMobile also sought the use of 902–928 MHz for space-to-Earth and 902–915 MHz for Earth-to-space communications. The US has an amateur radio allocation from 902 to 928 MHz, which is unique to ITU Region 2 (the Americas). AST's application was lodged with the Space Bureau in June; designated docket DA 25-532, the FCC gave interested parties until 21 July to provide comments and responses. The AST's request mentions various bands other than amateur allocations.

AST SpaceMobile claims to be building ". . **the first and only space-based cellular broadband network accessible directly by everyday smartphones,** designed for both commercial and government applications."

The company intends to operate a world-wide constellation of Low Earth Orbit (LEO) satellites with substantial antennas that will enable typical mobile phones to operate normally in areas where there is no terrestrial network coverage, working on some of the same frequencies as terrestrial carriers. Amateur bands around the world in the 420-450 MHz spectrum are generally secondary allocations, with primary services often being defence radar systems.

Texas-based AST wants to use the spectrum outside the US to track and control its proposed fleet of 248 satellites, which promise to deliver internet connectivity to everyday smartphones in cellular dead zones. However, Lorenz claims AST's application is "vague" and lacks details about how it'll harness the spectrum and avoid interference with ham radio operators.

Despite not being amateur satellites the first five commercial satellites use these amateur frequencies for telemetry links with a 50 kHz bandwidth: 430.5, 423.3, 434.1, 435.9 and 439.5 MHZ

AST SpaceMobile are planning to launch a further **243 satellites** also using **430-440 MHz** for TT&C. AST SpaceMobile say each UHF TT&C beam will support one command channel and one telemetry channel and the channel bandwidth will be between 64 kHz and 256 kHz.

Amateur groups and organisations globally are mounting formal objections to the AST's intentions. In June, the company announced it had achieved the successful demonstration of the world's first Non-Terrestrial Network (NTN) tactical satellite communications delivering high-throughput data, voice, and video using unmodified mobile devices.

Separately, an amateur radio operator based in Germany has filed a petition with the FCC to oppose AST SpaceMobile's request to utilize portions of the 70 cm band allocated to amateur radio use.

The 430-440 MHz band is used for a variety of Amateur Radio applications, examples include amateur space communications, weak-signal SSB, digital television, data communications, repeaters and other applications. The proposed 243 satellite constellation will cause interference to amateurs world-wide.

In the UK, the Primary user of the 70cm band is the Ministry of Defence and the Amateurs are secondary users. Certain areas of the UK have restrictions on the 70cm Band use.

References and More information from:

https://amsat-uk.org/2025/06/26/use-of-430-440-mhz-by-ast-spacemobile-constellation/

https://www.facebook.com/groups/starlinkusersaustralia/posts/2535856283474234/

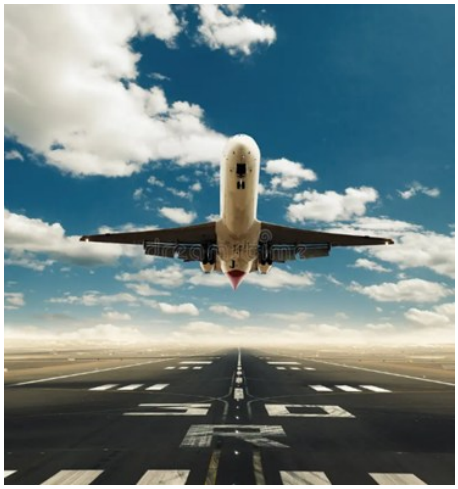
https://uk.pcmag.com/networking/159203/ham-radio-users-clash-with-starlink-rival-ast-spacemobile-over-spectrum-use

Plane Spotting at Cork Airport

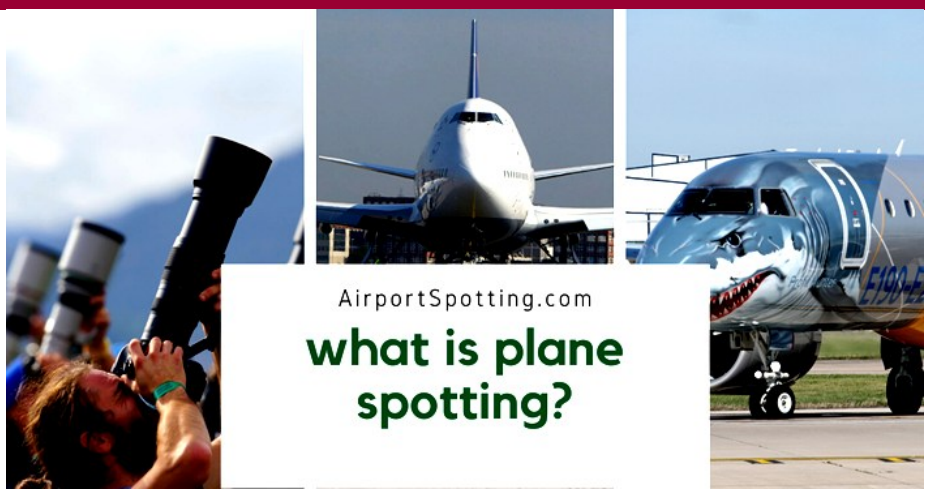
Hey guys! I'm Cathal and I'm 13 years old. I love plane spotting! There's nothing better than standing outside Cork Airport, binoculars in hand, watching planes take off and land. My friends think I'm weird, but I don't care – plane spotting is the best!

My Favourite Spot

The best place to spot planes at Cork Airport is near the end of the runway. You can see planes taking off and landing really clearly. Sometimes, I get to see planes taxiing along the runway, too. I've seen some really cool planes at Cork Airport. Here are a few of my favorites: My dad says it's cool because you can see all the different types of planes up close.



I've seen some really cool planes at Cork Airport. Here are a few of my favorites:



Ryanair Boeing 737s: These planes are so big and loud! I love watching them take off and land.

Aer Lingus Airbus A320s: These planes are really sleek and shiny. I like watching them taxi along the runway.

Private jets: These planes are so cool! They're really small and look super fancy.

Plane Spotting Gear

To be a good plane spotter, you need some cool gear. Here's what I use:

Binoculars: These are super important for getting a close-up view of the planes.

Spotting logbook: I use this to record all the planes I see. It's really fun to look back and see how many planes I've spotted!

Camera: Sometimes I take photos of the planes, but it's hard to get good pictures with my phone camera.

An aircraft scanner is a must as you can listen to the tower and crew as they approach the airport or as they taxi for departures.

The Uniden Bearcat BC125AT is a versatile and compact Airband scanner that boasts an impressive range of features. With 500 channels and a frequency range of 25-54 MHz, 108-174 MHz, and 225-380 MHz, this device is perfect for monitoring both civil and military aviation communications. The BC125AT also includes Close Call RF Capture Technology, which automatically tunes to nearby transmissions, ensuring you never miss any action.

Tips for Other Plane Spotters

If you're interested in plane spotting, here are some tips from me:

Be patient: Plane spotting can be boring sometimes, but it's worth it when you see a cool plane.

Know your planes: Learn about different types of planes and airlines. It's really cool to recognize a plane and know where it's going!

Bring a friend: Plane spotting is way more fun with a friend. We always have a blast together, trying to spot as many planes as possible.

Useful Apps and Websites

Flight Radar24 on the mobile phone will show all traffic in the area but bear in mind that there are slight delays so aircraft appear to be further away than shown on the display.

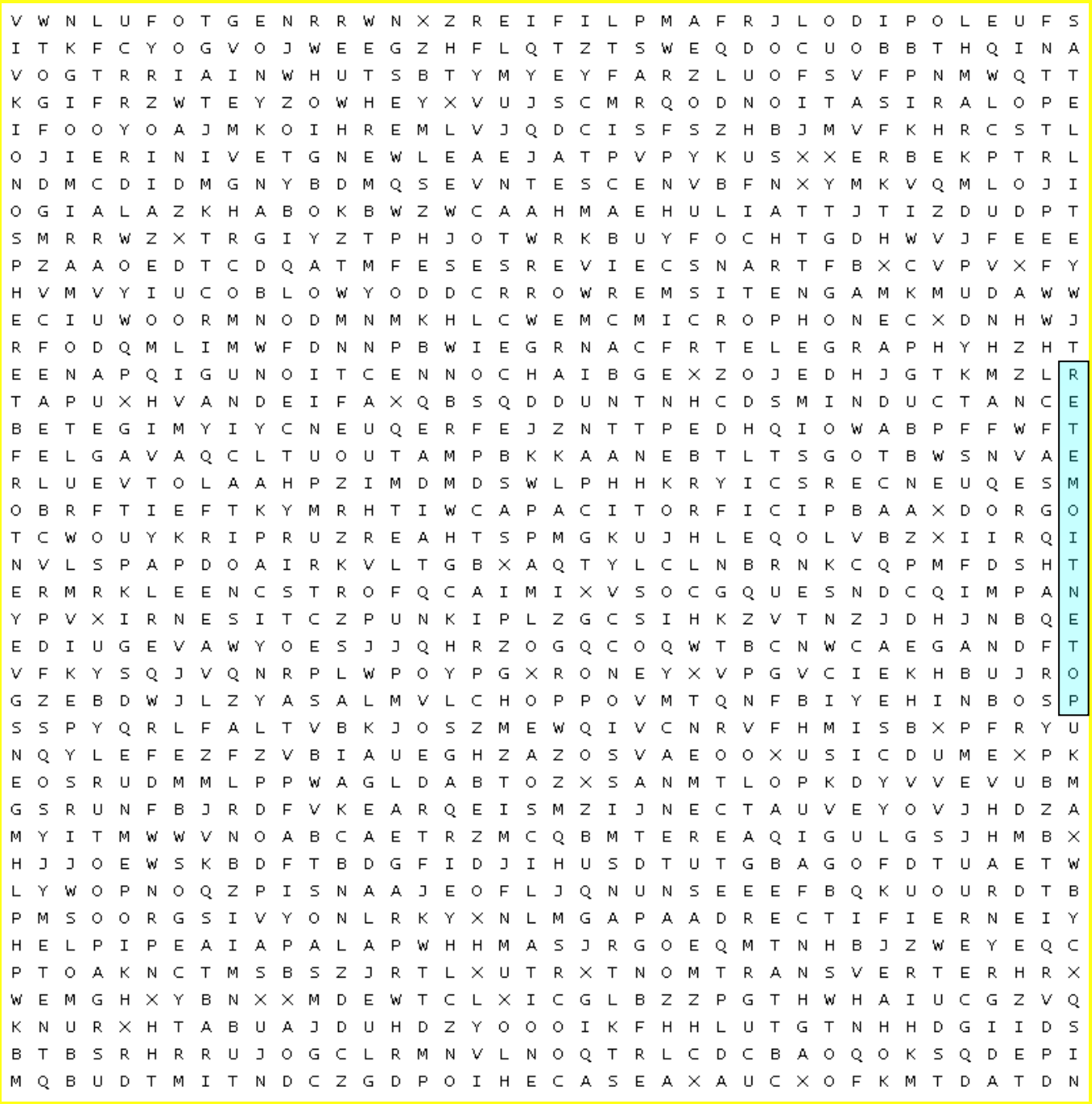
https://www.flightradar24.com/41.81,12.26/15

https://www.liveatc.net/search/?icao=eick

https://www.airportspotting.com/

Cáthal Sexton aged 13

Ham Radio Ireland Wordsearch



Find these words in the Grid

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Capacitor
Coaxial
Communications
Computer
Connection
Counterpoise
Detector
Diode
Dipole
Electromagnetic
Emission
Ferrite
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Handheld
Headset
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Magnetron
Measurement
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Navigation
Oscillation
Oscilloscope
Polarisation
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~~**Potentiometer**~~
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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

https://www.gofundme.com/f/adam-become-the-youngest-irish-person-to-summit-everestfbclid=PAZXh0bgNhZW0CMTEAAaZxMo4nC-TUp0397g_vjJK24WSq1nNqSC6W-egfI0HzXYIQTHxu80UjcXk_aem_i7TyCaN4SJcFBR3vkpmCLQ

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:

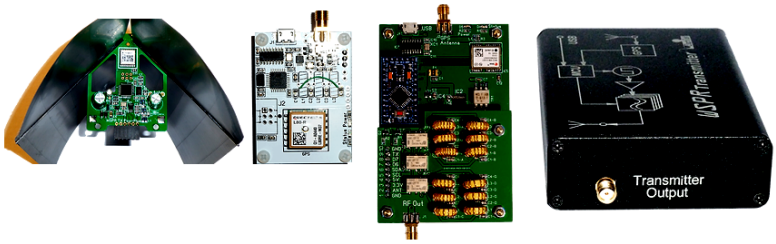
https://www.irts.ie/dnloads/sota.pdf

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

ZachTek

Handmade products for radio amateurs and RF enthusiasts.

Welcome to ZachTek, here you will find RF related products and information.
Some of my more popular products are different models of WSPR transmitters that is made for the radio amateur that wants a standalone transmitter for mobile or stationary use.
With these in your shack you can run WSPR 24/7 without tying up your regular transceiver.



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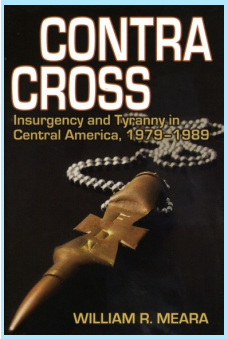
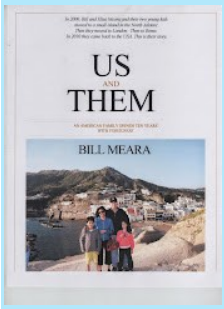


A journey through the Central American wars of the 1980s as seen through the eyes of a young American officer who worked on both sides of insurgency in the region: In El Salvador Bill Meara supported efforts to defeat insurgents; with Nicaraguans he worked to keep an insurgency alive. One of very few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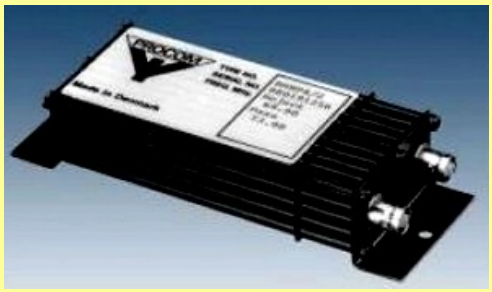

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