VOL. 1 JULY 2025

NEW ZEALAND - AMATEUR RADIO

A Free Magazine with Product News, DIY and Interviews

Email: ZL1GUD@proton.me

INTRODUCTION

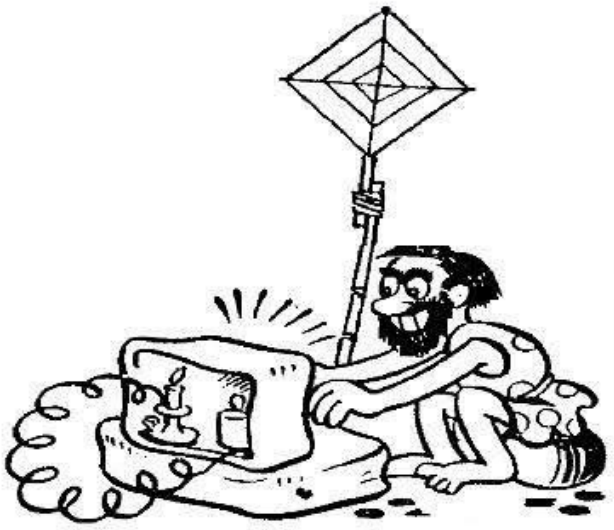
So why a new FREE Amateur Radio Magazine?

I enjoy writing and have had over a hundred articles published, (mostly on adventure and survival) and having been a radio amateur since around 1990 as ZR1XZT, then ZS1GD and now ZL1GUD I believe that the amateur radio scene needs a kick in the pants and needs to attract more (young) people.

New Zealand Amateur Radio magazine is free and is going to include Product News, International Amateur Radio News, DIY projects, Interviews, POTA and SOTA news and DX Pedition news. Club news is for the clubs and will not be included in the magazine.

I you want to be featured or have a project that you want to feature then email me the details and we will include it.

Greg
ZL1GUD



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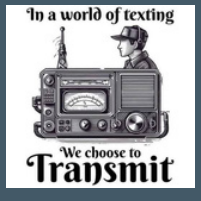
This issue:



Tactical 7000hds - compact heavy-duty 7 m (23 ft) mast

www.thehamshack.co.nz Sotabeams NZ Distributor

Features:

- Heavy gauge pole sections—the perfect balance of strength, stiffness and weight for more demanding applications
- Super short packed length for easy transport in a rucksack
- Fits diagonally in most aircraft carry-on baggage (check before flying!)
- The very best extended length for tactical use in extreme conditions
- Telescopic - perfect for rapid deployment
- Military colours for low visual signature
- Camouflage carry bag with draw string
- Built-in base shock absorber
- Non-conducting low-loss fibreglass construction
- Hollow top-section allows wires to be fed through
- Screw-cap base allows field repairs and section swap-outs
- Perfect for use with our Band Hopper antenna range

"Every serious portable operator needs a Tactical 7000hds in their armoury"

Detailed Specifications:
Extended length: 7 metres (23 ft). Lengths approximate
Packed length: 59 cm (23 inches)
Number of sections: 14
Wall thickness: at least 1.5 mm (0.06 inches) bottom, at least 0.8 mm (0.031 inches) top. Actual thickness is usually a little larger than these minimums.
Weight: 1.5 kg approx - this can vary a bit between batches.
Mast Material: heavy-duty glass-fiber composite (non-conducting)
Tube diameter: top 4mm (0.16 inches) base 52mm (2.05 inches)
Base cap diameter: 64mm (2.5 inches) as of October 2020, 61 mm (2.4 inches) for older masts
Tube colour: Pantone 19-0622 TPX Military Olive
Mast sections hollow to the top
Supplied with camouflage* carry bag with drawstring
High impact foam shock absorber built into base.

Notes:
The mast is made of Glass Reinforced Plastic (GRP) = Fiberglass. This is an insulator with excellent RF properties (very low loss).
The packed length can be reduced to 58.2 cm by removing the top and bottom caps - useful in some airline carry-on bags. The maximum dimension for an airline carry-on bag (56 x 35 x 22) is 69.5 cm diagonally bottom right to top left.
Friction lock: pull each section firmly with a twisting motion for best lock. When erecting always start with the smallest section. When taking down always start with the largest section.
Mast sections may be removed by unscrewing the endcap at the bottom of the mast, pulling out the shock absorber and removing unwanted sections. Always replace the shock absorber before use.
Some masts may have a few small paintwork defects (scratches or marks). However, these should not affect the structural integrity of the mast, just the visual appearance, and are in most cases not very noticeable.

Guying
Multi Function Guying kit
The following guying rings fit the Tactical 7000:- Tactical Guying ring 22 mm, Tactical Guying ring 35.5 mm

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From the Editor

I have been involved with radio since 1977 and have had my amateur license since 1990 first as ZR1XZT and then after passing the CW component after just 20 days became ZS1GD.

In 1990 I started GRS Two Way Radio in Cape Town supplying Yaesu amateur radio equipment to the amateur community. With my passion for HF SSB we supplied and installed “lots” of Barrett and Kenwood commercial HF gear in Africa, travelling 140 000km a year by 4x4 to remote villages to install Barrett ALE (automatic link establishment) gear. I then won the contract to supply and maintain the communications system at Cape Town International Airport (UHF repeaters, links to airband and maintaining the antenna masts.)

I have lived in New Zealand for almost ten years, first in Auckland for 8 years and in Canterbury for 2 years. My passion is POTA and field stations and every weekend I get out to a remote location doing a POTA activation.

Akaroa activation

Activating Loburn Domain

Ashworth Ponds

The First Australian Woman Radio Ham - Florence McKenzie

Australia's first female electrical engineer was a woman of firsts. In order to gain an electrical engineering diploma, Melbourne-born Florence Violet McKenzie (then Wallace) needed to undertake an apprenticeship – so she established an electrical contracting business in Sydney in 1918 and apprenticed herself.

In the 1920s and 30s, as the first female amateur radio licensee, McKenzie established a Sydney wireless shop, the Wireless Weekly magazine and the Electrical Association for Women. By the 1930s she was experimenting with the chemistry of television and teaching electrical and radio technology to women.

With the Second World War looming, McKenzie anticipated the demand for communications technicians. She established the Women's Emergency Signalling Corps (WESC) in 1939, eventually convincing the government that trained women telegraphists should join the navy and airforce, and that they were competent to instruct servicemen in Morse code. The Minister for the Navy, former Prime Minister W.M. (Billy) Hughes, however, required that 'no publicity ... be accorded this break with tradition'.

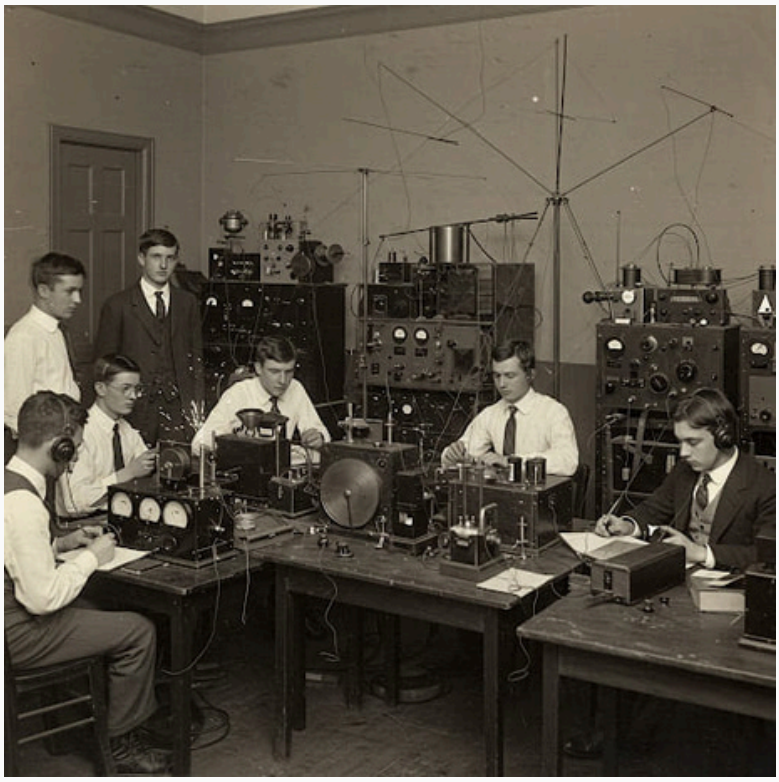
By the end of the war, 12,000 servicemen and 3,000 women had been through McKenzie's school. The WESC, in turn, became the foundations of the Women's Royal Australian Naval Service (WRANS), which expanded to more than 2,600 members by the end of the war.

After the war, and not finished by a long shot, McKenzie continued training merchant seamen and civil aviation pilots. She maintained her wireless shop until 1953, at which time the airlines were establishing their own schools.

In 1950 Florence McKenzie was appointed an Officer of the Order of the British Empire (OBE) and in 1957 was elected a Fellow of the Australian Institute of Navigation. She was inducted onto the Victorian Honour Roll of Women in 2001 and a plaque at the Australian War Memorial commemorates her services.

Ref Wikipedia

The First Ham Radio Club



The first amateur radio club was The Junior Wireless Club, which was organized in New York City, USA, in 1909. It later changed its name to the Radio Club of America.
This is disputed *In 1908, students at Columbia University formed the Wireless Telegraph Club of Columbia University, now the Columbia University Amateur Radio Club. This is the earliest recorded formation of an amateur radio club, collegiate or otherwise.*[7] *In 1910, the Amateurs of Australia formed, now the Wireless Institute of Australia.*

While specific details about the initial operators and their exact equipment from 1909 are limited, we can infer some general information about early amateur radio setups:

Operators: These early "hams" were pioneers and experimenters, often with a background in telegraphy. They were fascinated by the new technology of wireless communication and were typically young enthusiasts or technically minded individuals.

Equipment: In the early days of amateur radio (around the turn of the 20th century up to the 1910s), equipment was rudimentary and often homemade. Key components would have included:

Spark-gap transmitters: These were the earliest form of radio transmitters, producing broad, noisy signals. They typically consisted of a high-voltage power source (like an induction coil), a capacitor (Leyden jar), and a spark gap. When the key was pressed, sparks jumped across the gap, creating electromagnetic waves.

Simple receivers:
Early receivers were often crystal sets or used a coherer.
Crystal sets: These used a crystal (like galena) and a cat's whisker to detect radio signals. They were passive, requiring no external power source other than the received radio waves, and typically used headphones for listening.

Coherers: These devices, filled with metal filings, would become conductive when a radio signal was received, allowing a circuit to be completed and a bell or other indicator to be activated. They needed to be "decohered" (tapped) to reset them after each signal.

Antennas: Early antennas were often simple wire antennas, sometimes strung between buildings or supports. The length and configuration would have been experimental.

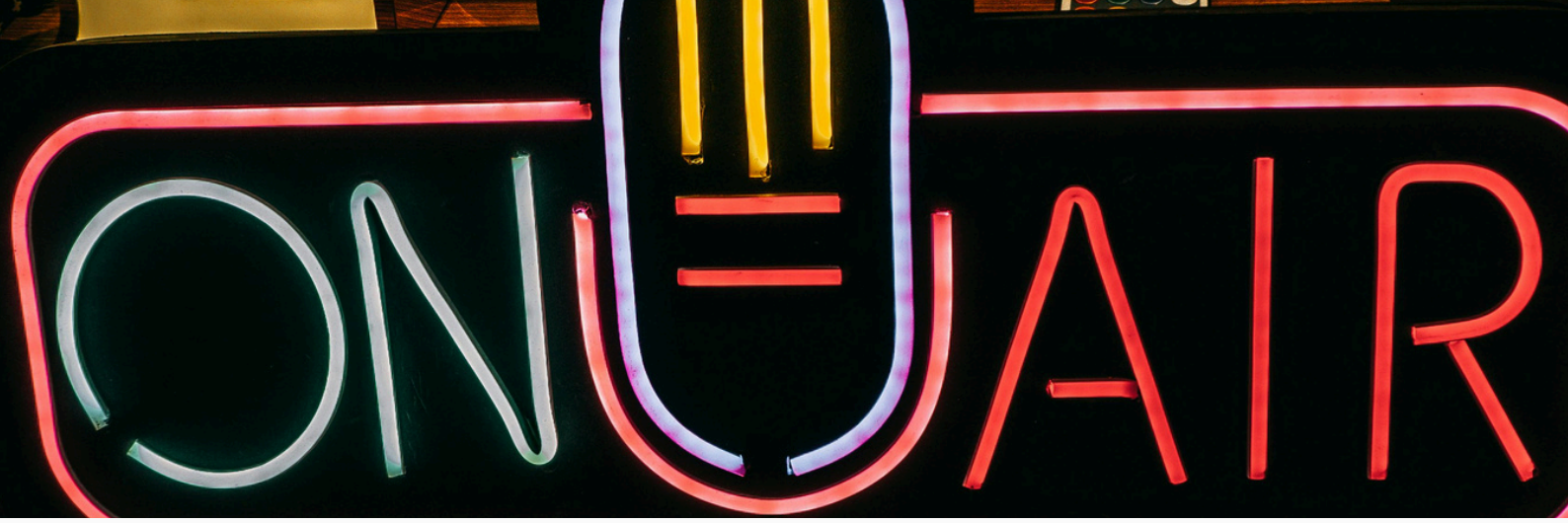
Morse code keys: As voice transmission was not yet practical for most amateurs, communication was primarily through Morse code. A telegraph key was used to send the coded signals.

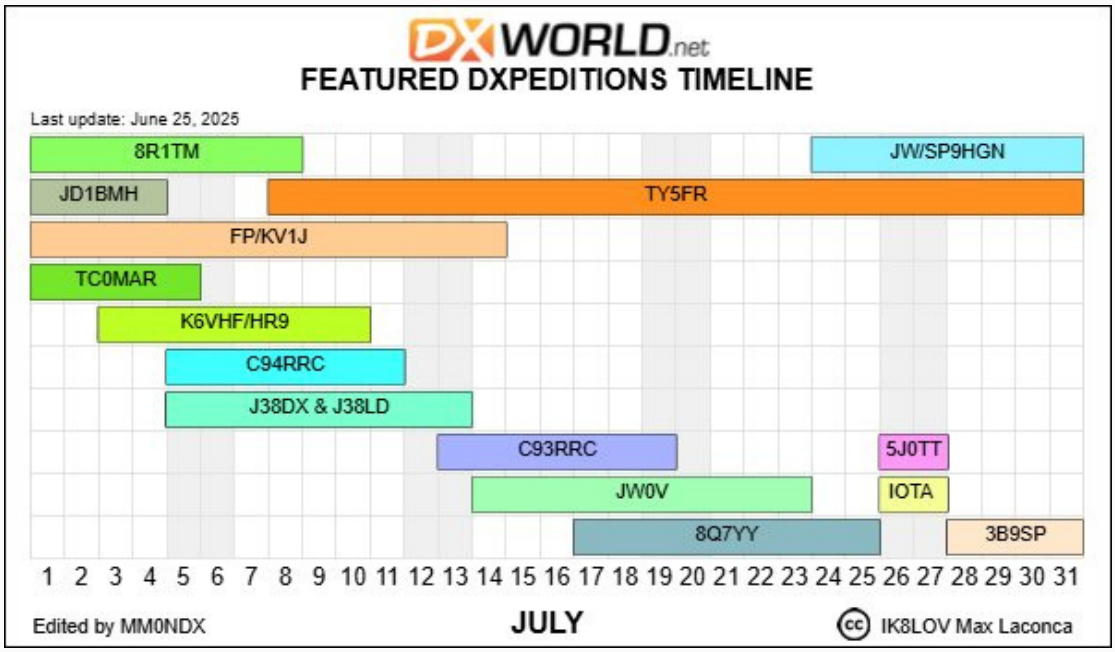
Headphones: Used to listen to the faint signals received by the early detectors.

It's important to note that early amateur radio operators often caused interference to commercial and military radio systems due to their broad signals.

This eventually led to government regulation, such as the Radio Act of 1912 in the US, which required licensing and restricted amateurs to shorter wavelengths (higher frequencies) to reduce interference.

The American Radio Relay League (ARRL), a significant organization in the history of amateur radio, was founded later on April 6, 1914, by Hiram Percy Maxim. Its initial purpose was to facilitate the relaying of messages over long distances by amateur radio operators.





5K0T FUERTE ISLAND

HK4T will be active as 5K0T from Fuerte Island, IOTA SA - 078, late July 2025.

He will operate on HF Bands, including activity in RSGB IOTA Contest, 26 - 27 July 2025.

Recent DX Spots 5K0T
QSL via EA5GL.

Previous activity:
Radio Amateurs members of Yaguarete DXers Group will be active from San Andres Island, IOTA NA - 033, as 5K0T, 12 - 26 November 2017.

Despite being located near Nicaragua, the island is part of Colombia. Its modest size, just over 12 km long and 3 km wide, makes it an attractive destination for tourists. This little gem of the Caribbean Sea beckons with its mysterious places and interesting sights.

Thanks to Christopher Columbus

The history of San Andrés is full of adventure and excitement. According to some sources, the island was discovered by the great navigator in 1502 during his fourth expedition. However, it appeared on maps much later, in the second half of the 16th century.

Around this time, the colonization of San Andrés began. Virtually nothing is known about the population before the Dutch arrived here in 1628. A little later, the British arrived, followed by the English, who were attracted by the fertile land, abundant fresh water resources, and favorable climate. It took the English two years to completely drive the Dutch out of this attractive territory. Later, slaves were brought here to work on cotton and tobacco plantations.

San Andrés was attractive in every way, especially from an economic point of view, so the island changed hands several times. The English were driven out by pirates, who even managed to rule the island for a while, and the latter were driven out by the Spanish, but they did not last long either. In 1740, the island once again became British property, which it remained until 1787. The series of conquests could go on and on, but let's stop in 1900, when the island officially became part of Colombia.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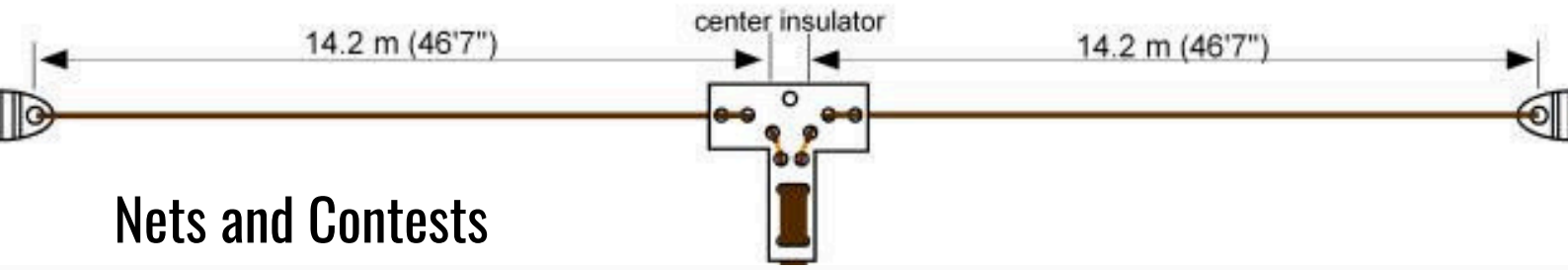
LEVEL
M▸V
V/M⧉
A/B
BAND
QMB
FUNC
DNR
NAR
RF GAIN/SQL
STEP/MC
DSP
AF GAIN
CENTER
EXPAND
SPAN
SPEED


WHY IS AMATEUR RADIO SO GOOD?!
LET US COUNT THE WAYS...
It's not just a hobby — it's a passport to the world! Talk to someone in Tokyo, Texas, or Tasmania... all in one evening.
Build it. Fix it. Tinker with it. Amateur radio is DIY meets sci-fi — and YOU'RE in control
Learn something new every day! From propagation to soldering, it's a full-on brain boost
No Wi-Fi? No problem! When the grid goes down, radio keeps you connected Emergency-ready and proud!
Best of all? The community. One big global family that shares knowledge, stories, and plenty of good laughs.
Drop a if you LOVE amateur radio – or if you're curious to get started, come


HAM RADIO OPERATOR
n. ham ra·dio op·er·a·tor
1. Someone who solves problems in a way you don't understand.
2. A person who does precision guess work based on unreliable data provided by those of questionable knowledge.
see also; genius, wizard.


Overweight
Ages 45+
HAM RADIO OPERATOR!
REALISTIC MEDICAL CONDITIONS!
LOW SWR & HIGH CHOLESTEROL!


CW Op
ACCESSORIES
IF IT AIN'T CW THEN IT'S JUST CB



Nets and Contests

HF SSB Nets

AREC Section Leaders – 3900 kHz USB, 3rd Monday of each month at 2020 NZT

Alpine Fault Net – First Sunday of each month on 7115 kHz LSB at 0930 NZT and on 3605 kHz LSB at 2030 NZT.

NZART Branch 03 Auckland Western Suburbs – 3650 kHz, Fridays at 2000 NZT
NZART Branch 05 Christchurch – 3650 kHz, Mon-Fri at 1600 NZT
NZART Branch 10 Franklin – 3700 kHz, Sundays at 0900 NZT
NZART Branch 12 Hamilton – 3579 kHz, Mondays at 1930 NZT
NZART Branch 16 Horowhenua – 3720 kHz, Wednesdays at 2030 NZT
NZART Branch 18 Hutt Valley – 7075 kHz, Sundays at 0900 NZT
NZART Branch 20 Manawatu – 3570 kHz, Sundays at 0900 NZT
NZART Branch 22 Marlborough – 3876 kHz, Tuesdays & Saturdays at 2030 NZT
NZART Branch 26 Nelson – 3890 kHz, Sundays at 0900 NZT
NZART Branch 27 New Plymouth – 3660/7120 kHz, 1st of each month at 2030 NZT
NZART Branch 28 Whangarei – 3585 kHz, Sundays at 2030 NZT
NZART Branch 30 Otago – 3613 kHz, 1st Monday at 2000 NZT
NZART Branch 35 South Otago – 3585 kHz, Mondays at 2030 NZT
NZART Branch 41 Thames – 3850 kHz, Sundays at 0900 NZT
NZART Branch 42 Titahi Bay – 3710 kHz, Sundays at 2000 NZT
NZART Branch 50 Wellington – 7050 kHz, Sundays at 0930 NZT
NZART Branch 53 Te Puke – 3690 kHz, Sundays at 0830 NZT
NZART Branch 61 Central Otago – 3600 kHz, 2nd Thursday at 2000 NZT
NZART Branch 62 Reefton-Buller – 3600 kHz, Saturdays at 2030 NZT
NZART Branch 80 Hibiscus Coast – 3692 kHz, Mondays at 2000 NZT
NZART Branch 83 Raglan – 3608 kHz, Saturdays at 0830 NZT. *Sunday sessions at 1900 NZT appear to be no longer operating (30/6/24)*
NZART Branch 89 Radio Electronics Group – 3615 kHz, Thursdays at 2000 NZT

Canterbury Branch 68 Wednesday 2000hrs 3.730MHz Wednesday Grant ZL2G

Geek Net – 3655 kHz Wednesdays at 2000 NZT. Contact ZL1GKB for information.

Homebrew Net – 7105 kHz (summer) or 3760 kHz (winter), daily at 1730 NZT

New Zealand Amateurs Club Net – 3700 kHz, Sundays at 1930 NZT. *Appears to be no longer operating (30/6/24)*

Old Timers' Club (OTC) – 3870 kHz, Mondays at 2030 NZT

Ten Ten International (Down Under Chapter) – 28530 kHz, Saturdays at 1030 NZT (all year)

ANZA Net – 14183 kHz, daily at 0500Z. For DXers.

HF AM Nets

OTC (Old Timers' Club) – 3850 kHz, Sundays at 1030 NZT

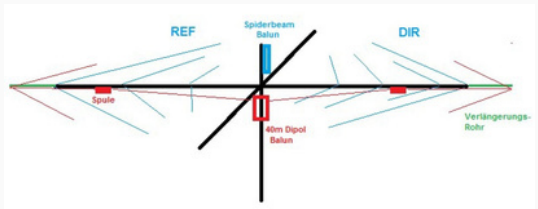
SPAM (Society for the Preservation of Amplitude Modulation)
Sunday: 7125 kHz at 1600 NZT
Monday: 3850 kHz at 1130 NZT
Wednesday: 3850 kHz at 1130 NZT
Friday: 3850 kHz at 2000 NZST or 2030 NZDT

Canterbury 2M SSB Net 144.200MHz every Tuesday from 2000hrs (vertical polarisation)
Canterbury 6M Net 3850 6M Repeater Thursdays from 2000hrs (vertical polarisation)
Canterbury Area Net 5625 Repeater, 2000hrs on Sundays
Canterbury Branch 68 Wednesday 2000hrs 3.730MHz Wednesday Grant ZL2GD

National Broadcast last Sunday of the month at 2000hrs on 3.900MHz, National System, 6975 and 705 Repeaters

Preparedness Net (South Island) - 3705MHz Monday nights 20:45 hrs Greg ZL1GUD

PRE ASSEMBLED SPIDERBEAM
YAGI 20-17-15-12-10M HD ANTENNA



Bands: 20m / 17m / 15m / 12m / 10m (optional 40m add)

Nr. of Elements: 3 / 2 / 3 / 2 / 4

Forward Gain at 10m height [dBi]: 11.7 / 10.5 / 12.3 / 10.5 / 12.6

Front/Back ratio [dB]: 15-20 / 20-25 / 20-25 / 10-12 / 18-22

SWR: < 1.5 / < 1.5 / < 2 / < 1.5 / < 2

Max. Power: 2000 W PEP / balun is included

Impedance: 50 Ohms / single feedline
Boom length: 10m (33 ft)

Turning Radius: 5m (16 ft)

Max. ∅ standpipe: 60mm (2,36 inch)

Wind load area: 0.35 sq-m (3.8 sq-ft)

Weight: 11.5kg (25 lbs)

Transport Size: 120x27x18cm (47x11x7 inch)

The Heavy Duty Spiderbeam is a specially reinforced version, optimized for permanent installation at home (see chapter 4 of our construction guide PDF). Doubling the wall thickness of the aluminium and fiberglass parts added a lot of extra ruggedness to the design, making it strong enough to permanently survive severe weather conditions for many years. All parts are made of high quality materials resistant to weather, UV rays and corrosion.

The well proven electrical concept remains unchanged: 5 monobanders are interlaced on one boom, forming a highly efficient 5-band yagi. At 11.5kg this full size beam is still a lightweight, compared to many other permanent yagis in the same performance class.

ATTENTION: this is the partially prefabricated antenna. The wire set was measured, cut and pre-assembled by hand to be able to attach it to the spreaders. You will receive all components and the complete wire set ready wound on a plastic spool. This saves you the hours of preparation and you can devote yourself entirely to the construction of the antenna on site.

A LONG-WIRE FOR 6 METERS

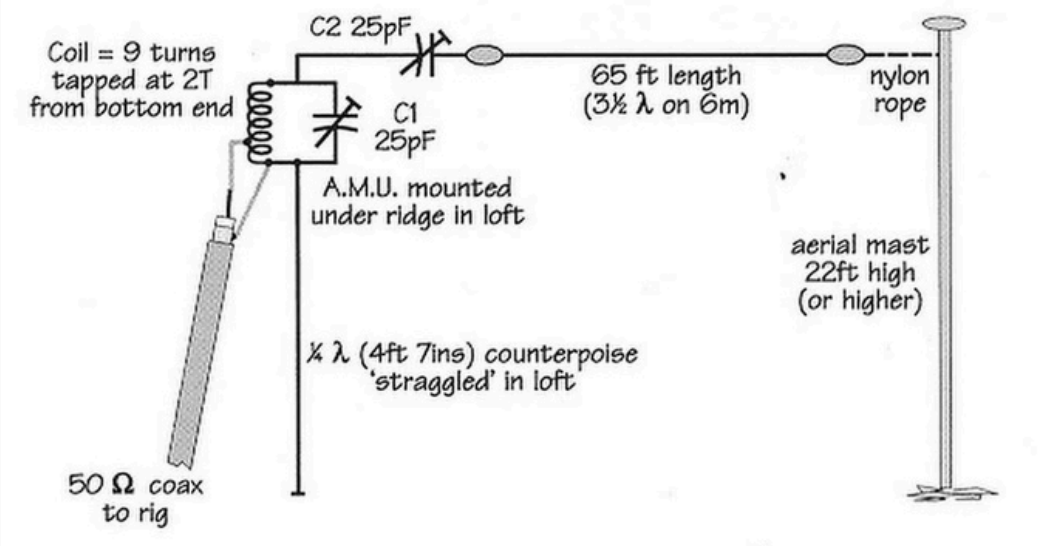
“A Long-wire Aerial for Six Metres

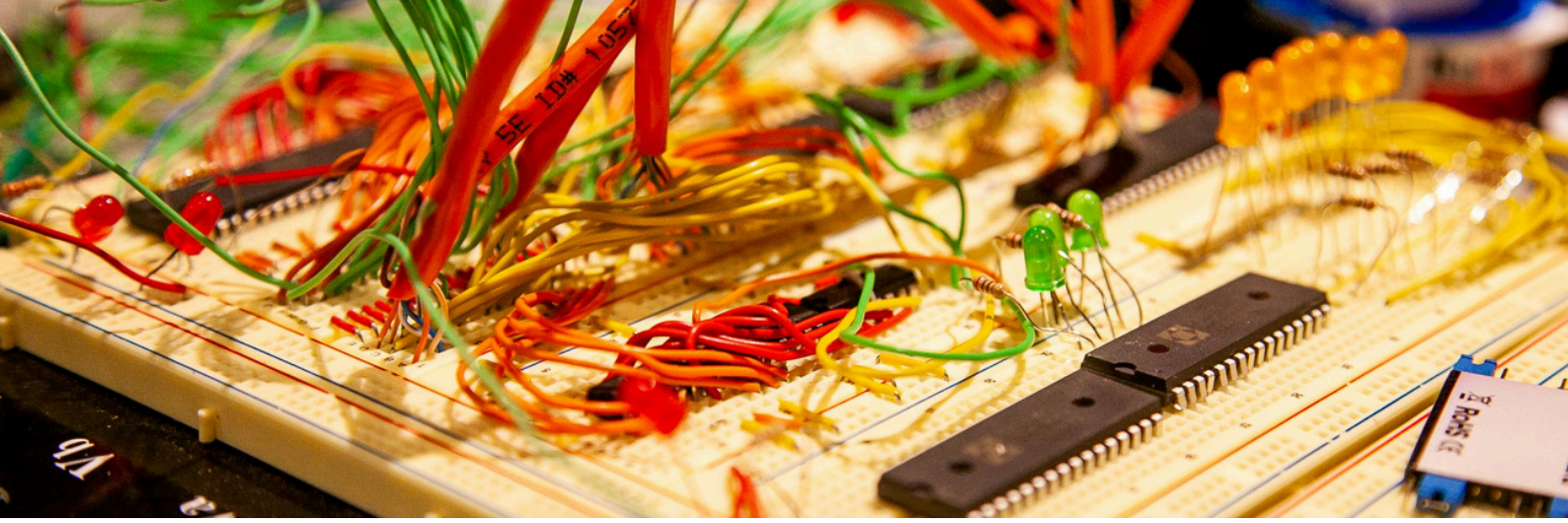
The theoretical diagram.
The aerial is voltage-fed (high impedance) and the antenna matching unit (AMU) transforms this to match 50 ohm cable. The two trimmers are ‘polycon’ variables - these are OK up to 50 watts. For operation at higher powers, obviously more substantial trimmers, such as mica compression types, will be needed. Old radio receivers of the 1950 vintage or before are often a source of these types of trimmer. ‘Cirkit’ can supply them, but they are not cheap! The trimmers are likely to be the only ‘expensive’ parts required for this antenna, however.

The method of adjustment is to set C2 to half capacity and then adjust C1 for best noise on receive. Then feed in a carrier (or an audio tone on SSB) and adjust C1 for a low SWR reading. 1:1 is achievable at this QTH.

No problems with ‘RF in the shack’ have been encountered at 50 watts SSB. The counterpoise were effectively ‘earths’ the bottom end of the parallel-tuned circuit; it hangs from the AMU in the loft. It is 4ft 6in in length.

The AMU is constructed on a tobacco-tin lid. The coil is nine turns of 18 SWG copper wire taken from old coax cable. It is 3/8 inch in diameter, spaced over approximately ž inch. Increasing C2 too much will prevent the tuned circuit from resonating at 50MHz. This, in turn, depends on the capacitance of the whole aerial wire to earth - but no problems were found and it was easy to get unity SWR. Shorting out C2 might be acceptable if a low-capacity system can be constructed.“





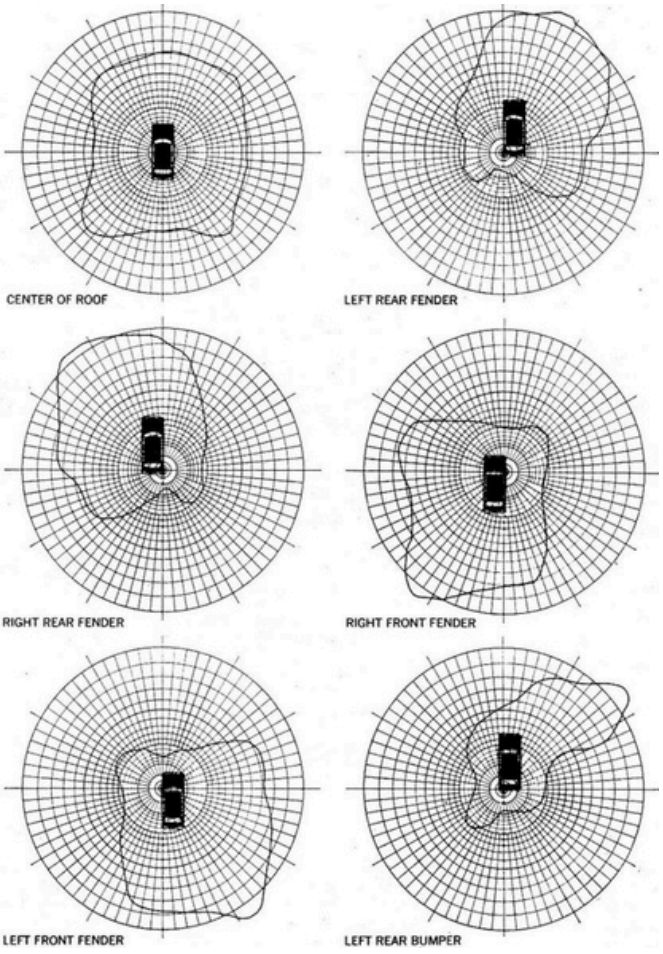
Mobile Antenna Placement
Best Placement of a Mobile Antenna
Don't Lopside Your Pattern!

Source: Larsen Amateur Catalog (PDF) - Written by Aaron Logan.

We have provided you some guidelines for mobile antenna selection. When selecting a mobile antenna, there are a number of factors that significantly affect the ultimate performance of the antenna. Gain requirements, electrical type, ground plane availability mounting style and placement, coaxial type and loss ratings, physical size, appearance, and surrounding environment are all issues that must be addressed to ensure the maximum performance from a mobile antenna installation. The electrical type or design of the mobile antenna is commonly referred to in terms of its dimensions in terms of wavelength: 1/4 wave, 1/2 wave, 5/8 wave, etc. Each electrical type has a specific radiating pattern to be considered when selecting a mobile antenna. For example, the signal radiating from a 1/4 wave antenna is directed more vertically, thus making it ideal in urban environments where buildings might obstruct the signal. The design of a 5dB collinear mobile antenna is designed to direct the signal more towards the horizon. This type of antenna is ideal for geographically flat regions where signal coverage is sparse.

Ground plane availability is another critical factor in mobile antenna performance, and must be considered when determining the location and type of the antenna. Ground plane requirements vary given the type of mobile antenna and the frequency of operation. A typical 5/8 wave antenna at 150 MHz requires a ground plane of at least 42" in diameter. At 450 MHz, 15" is required, and 800 MHz, a minimum of 8" is considered sufficient.

In terms of mounting mobile antennas on a vehicle, there are five general locations: the roof, front fender, rear fender, trunk and rear window glass (although other glass mount locations may be used). Of these, the center of an automobile roof is considered the best for mobile antenna placement, followed by the center of the trunk lid, the fenders, and then on-glass mounting. This ranking is determined by the amount of ground plane provided by the positioning, and clearance from obstruction (i.e.: the roof line), and is the reason the center of the roof is considered the ideal mounting location, provided the roof is metal. The diagram above illustrates the effective loss (at 800 MHz) due to insufficient symmetrical ground plane.



MORSE CODE REVIVAL IN 2024 – WHAT'S HAPPENING?

Digital media might not be losing its shine, but many people are discovering — or rediscovering — different ways to do things.

The appeal of vintage technology explains the re-emergence of the Polaroid camera or vinyl records. But the comeback taking everyone by surprise in 2024 is Morse code.

Morse code is enjoying a revival, not just among amateur radio users. So how do we explain its resurgence? This guide looks at some of the reasons.

Radio 4 Morse Code Interview – Howard Bernstein from CW Club

In an interview, Howard Bernstein from the Long Island CW Club said the main reasons for the resurgence of Morse code are its international reach, reliability and portability. It can be a lot of fun and an exciting challenge for your brain.

How Long Does It Take to Learn Morse Code?

In his radio interview, Howard Bernstein suggests a couple of their classes a week and practice sessions of 20-30 minutes a day. This frequency gives a reasonable skill level in around three or four months.

Morse code takes time and persistence, but it's possible to be competent quite quickly.

Is Morse Code Still Significant in This Modern Era?

In the UK, Michael Stanton, who helps run the Long Island Club, said that K-Pop has significantly influenced the popularity of Morse code amongst younger people.

South Korean K-pop boy band, TXT, uses Morse code in their songs and music videos to send fans messages about new releases.

Is Morse Code Still Used in 2024?

The US Navy have Morse code on the syllabus for cryptologic technicians at the Training Center for Information Dominance in Pensacola, Florida. Morse code is also popular amongst people with speech defects or impairments that impact their communication, like speaking on a call or typing on a keyboard.

How Many People Know Morse Code?

Acknowledging the familiar dots and dashes of Morse code is widespread, but proficiency in reading it remains at less than 1% of the population. In the UK, where Morse code is not obligatory for a radio license, the exact numbers of Morse code users are difficult to ascertain.

https://moonrakeronline.com/us/blog/morse-code-revival

POTA OPERATORS

NICK ZL2NEB

Thanks for your help with this article Nick *Editor ZL1GUD*

I got my license in 2021 at the first HamCram that the Blenheim branch ran. I was encouraged (pressured in a good natured way) by ZL2GVA (Gerard VanAntwerpen) to get my license. My background is in IT so in some ways I guess that probably helped with some of the ideas covered in the material.

I was first interested in digital - I suppose not feeling confident talking on the radio this is probably a natural first step.

Then I took part in the JWFD and enjoyed that. Mainly because the exchange is so clearly defined. From there I did some other SSB competitions followed by some CW competitions (don't ask just how that was achieved. Lets just say that I'd never be a threat to anyone who actually was even loosely proficient in CW).

At some stage I heard about POTA or SOTA. One of the other members of the club probably talked about it and I would have read about it in a QST magazine. I looked into it and I could see that also the exchange was straightforward. Really its like a contract between the chaser and the activator. Each party has a relatively well defined role so there is no expectation of a long conversation. Initially I did some portable QSO's to get used to the gear that I was using (IC-705) and then my first activation was Mt Augarde in the Molesworth. I really had no idea what I was doing. It was a weekday and there was no cell coverage. I can't remember if I put out an alert - I certainly couldn't put out a spot. My first contact was ZL1HOG and then probably my second was ZL3RIK who suggested that I move to 7.085 (I was on 7.090). I think that I got 15 contacts. It was pretty exciting.

After that I started looking for other places/things to activate. There wasn't anyone else in Marlborough that I knew of that was doing activations (John - ZL2BH would have been but I didn't meet him until later). Soon after that I ended up working in Europe for 6 months which is when I got the G90 which I took with me and then operated from a nearby forest. It was an interesting experience to see just how much more operators there are on every band and every day. It's really a bit crazy over there - especially in the weekend. Also there is some unbelievable poor operating behaviour and some very funny arguments (well funny if you are not involved).

I had been looking at some of the videos on YouTube and had been slightly dismayed at how many of the videos display things that are completely unrealistic in NZ. These are mainly videos by USA operators where they drive up to the top of a summit or in a park in their F150, casually lob a wire into a tree and then make 150 contacts in 35 minutes from the comfort of their car on 400W (ok maybe not exactly but you know what I mean).

When I returned to NZ I decided that I would record my own videos. This was really for my own amusement but I thought that they might be useful for anyone else who wanted to see what a location was actually like. I also hoped that they would encourage others to also go out and try an activation. Initially I committed to releasing one video a week. It's a bit of work but over time I've refined the process a bit so generally it's not too bad. The funny thing is that the videos were supposed to be a by-product of the activations. Now I sometimes find myself thinking - gee I need another video so I had better go and do an activation so its sort of swapped around.

I think that I like the frantic activation activity that comes as part of doing an activation. I'm not known for calculating when I'm going to be somewhere very accurately so I end up putting myself under quite a bit of pressure at times to be operating at the time I may have indicated. Thankfully everyone seems to know this now so they all have a good laugh when I'm actually on time. It's been interesting to see the community grow over the last year. If I think about the chasers I had a year ago - they pretty much all remain but over the last 3 months there have been a lot more respond that I had not heard before. It think the "OTA" activities is really helping expand the interest in the hobby and has breathed a bit of new life into it. You can see this online now as well with more people recording and sharing their activations and experiences.

What else am I interested in? Well I do have a bit of a thing for MagLoop antennas - I really like them and have used them a lot with digital modes but are really a bit impractical for anything that needs frequency agility. If I respond to a POTA/SOTA call during the day then there is a good chance I'll be doing this using a MagLoop - probably with the G90. I also am a big fan of WSPR for testing antennas.

Gear: IC-705 (should really be used more), G90 ("one careful owner"), FT-891 (long story as to why I have this - lets just say that indecision played a factor and it was supposed to be this or the G90 instead of this AND the G90). Base station IC-7610 (should be used far more than it is).
Masts are generally SOTABeams (7m & 6m) but I do also use a 10m Haverford and a 9m Maintrac mast (I should stop listing gear now i'm not sure that I want to see it written down (lol)). Antennas - Big fan of random wire antennas but also use 40m EFHW and I hate to admit, 40m Dipoles (using this more now than I care to admit). I've made the unun's that I use.

Logging is into a notebook in the field and then usually into hamrs so that I can export out an adif file.

NICK'S YOUTUBE CHANNEL

68 Videos for you to watch

https://www.youtube.com/@zl2neb

FEATURED SHACKS

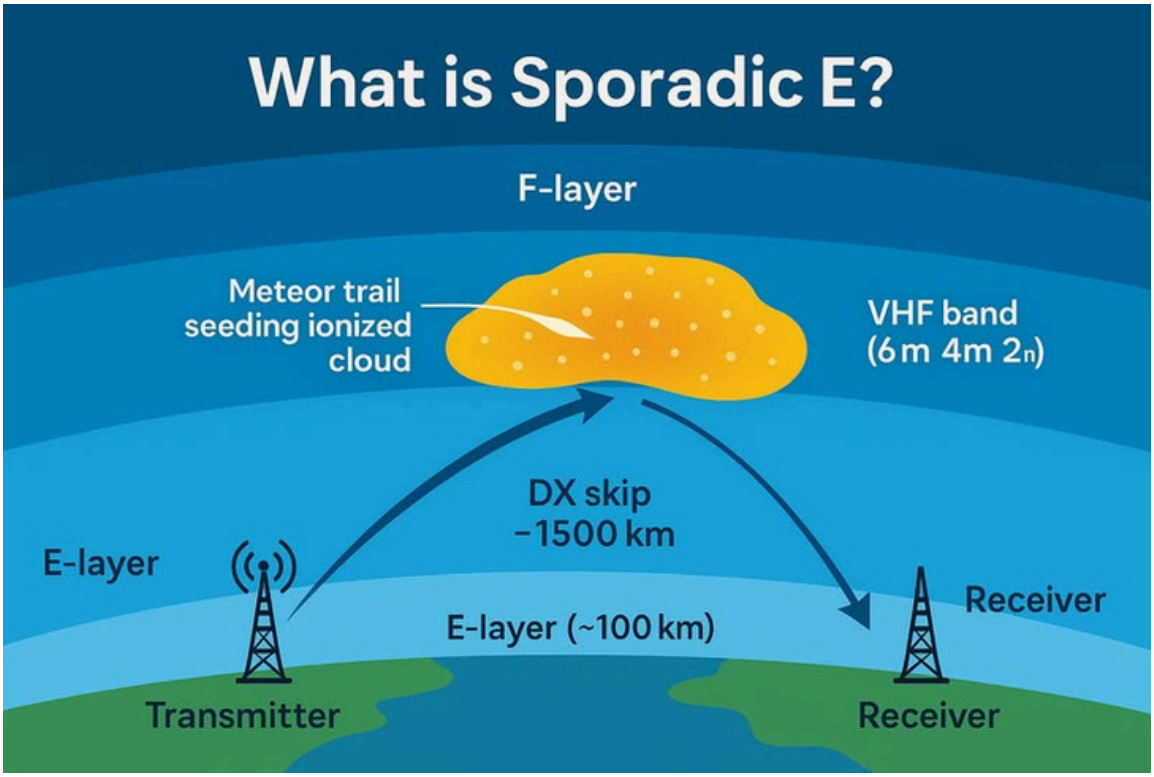
PORTABLE SETUPS

My first attempt at a go kit.
Icom 705 with 50 amp, MAT tuner, Yaesu 857 with tuner, Raspberry Pi 5, GPS, Wifi Hot Spot, Solar Charger, 2k display with dual hdmi ports, 2 x3amp batteries, external port for charging with solar. Main lid opens up like the hood of a car to allow easy access, Keyboard, USB switch to allow external PC (Winlink) to connect to Digital rig which is connected to Yaesu 857.

Two battery meters, outside shows voltage, temp and capacity. Internal shows voltage, watts, amp hours, watt hours temp and total running time. Master power switch. Pelican Case and it floats.

Whats missing is the coffee maker.

What is Sporadic E?



Sporadic E propagation is a result of highly ionized patches or “clouds” that occasionally form in the E region of the ionosphere at altitudes between approximately 80 and 150 kilometres.

Communication distances of 800–2000 km can occur using a single Es cloud. This variability in distance depends on a number of factors, including cloud height and density. MUF also varies widely, but most commonly falls in the 25 – 150 MHz range which includes the amateur radio 2-meter, 6-meter, and even the 10-meter bands. Strong events have allowed propagation at frequencies as high as 250 MHz.

Sporadic E propagation is probably the most interesting and exciting forms of signal enhancement for the keen VHF operator, or anyone interested in the 28Mhz (10m) 50MHz (6m) and 144MHz (2m) amateur bands. Sporadic E clouds are usually fairly small in size, but larger clouds or multiple clouds often form during substantial openings.

Sporadic E is a sporadic concentration of the E layer ionisation into thin layers of high ionisation density that are able to reflect radio waves at much higher frequencies than normal.

The E region is defined as that between 90 and 120km above the earth’s surface, and it can be regarded as the transition zone from the earth’s atmosphere into space; there are discontinuities in pressure, temperature and chemical composition at this height. Above about 90km ions predominate over neutral atoms. Most of the short-wavelength ultraviolet rays and less energetic X-rays from the sun are absorbed by ionizing the E layer.

Yet another emerging theory suggests that sporadic E clouds are formed by concentrations of meteoric debris. Again, there seems to be a strong correlation between meteor shower activity and the number and intensity of sporadic E clouds.

The point is, nobody has presented a definitive explanation for how and why sporadic E clouds form. There are many excellent papers on the subject. It’s entirely possible, perhaps even likely. that sporadic E clouds are formed as the result of a combination of factors, perhaps involving wind shear, cosmic debris and thunderstorm activity.

Sporadic E is very common on 50MHz (6m) during the summer months – October through to January in VK. From time to time, the intensity of Sporadic E cloud ionization increases to the point where the **MUF** rises into the 144MHz (2m) band. It is common for the **MUF** to rise up to and then stop at a particular frequency within the FM band. Distant signals will be heard below the **MUF**, while only local or tropospherically enhanced signals will be heard above the **MUF**.

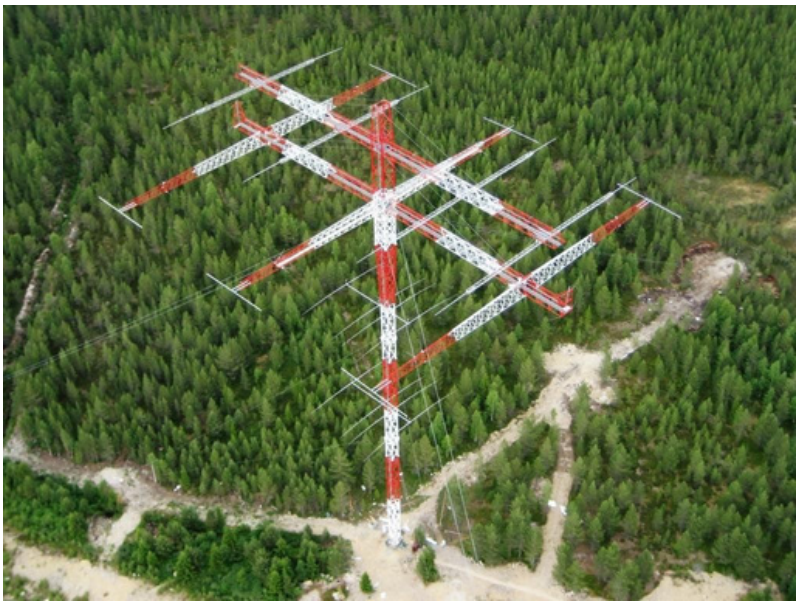
Refraction

Refraction is defined as “...a change in direction of a wave as it crosses the boundary that separates one medium from another.”

The amount by which the path of a radio signal is refracted by sporadic E clouds depends on the intensity of ionization and the frequency of the signal. For a given level of ionization, the signal refraction angle will decrease as the frequency is increased. Above a certain critical frequency, refraction of the signal will be insufficient to return it to the surface of the Earth. This critical frequency is known as the Maximum Usable Frequency or **MUF**.

https://3fs.net.au/sporadic-e-propagation/

Big Amateur Radio Antennas and tall masts



There are quite a few radio towers in the range of 2000 feet (~600 meters), as listed on this Wikipedia page. At 2063 feet, the KVLY-TV mast in North Dakota is the tallest radio mast in the world. The WEAU tower in Wisconsin, listed as 2000 feet, collapsed in 2011 due to a winter ice storm.

The antenna above is a yagi for 80m and 160m and reportedly the biggest amateur radio antenna in the world. It apparently collapsed in a storm in 2013 however the size is impressive. it is so high that they allowed three base jumpers to climb it and base jump from the top.

No details yet but it has been reported and confirmed on the ARRL contest letter that the MASSIVE 80/160m rotatable yagi at OH8X aka Radio Arcala has collapsed in a storm. A quote says "The Radio Arcala team is preparing a report that will be available in a few days."

KB8RQ array for EME comms

SIGNAL ONE 1030C

Signal One 1030C. Regarded as one of the rarest and most expensive transceivers ever produced, this legendary radio commanded an eye-watering price of approximately USD 12,600 in the early 1990s—equivalent to over $28,000 today when adjusted for inflation.

- Country United States of America (USA)
- Manufacturer / Brand Signal/One; Phoenix (AZ)
- Year1983
- Category Amateur TRX: Transmitter/Receiver (and Transceiver)

- Main principle
- Superhet, double/triple conversion
- Wave bands
- Wave Bands given in the notes.
- Power type and voltage
- Line / Batteries (any type) / 120; 240; 12.6-15 Volt
- Loudspeaker
- Permanent Magnet Dynamic (PDyn) Loudspeaker (moving coil)
- Power out
- 2 W (unknown quality)
- Material
- Metal case
- from Radiomuseum.org
- Model: Milspec 1030C - Signal/One; Phoenix AZ
- Shape
- Tablemodel, low profile (big size).
- Dimensions (WHD)
- 16.2 x 7.8 x 17.8 inch / 411 x 198 x 452 mm
- Notes
- Signal One MilSpec 1030C amateur transceiver. Computer controlled modular system, coverage 10 kHz to 30 MHz in 10 Hz steps, 10 kHz to 1.6 MHz with reduced sensitivity, 1.6 - 30 MHz transmit, 8 memories, SSB, CW, AM & FSK operation mode, 10 MHz oven.
- Price in first year of sale
- 4,995.00 U$ so NZ$ 8,350 in 1983 so at 5% annual inflation that is NZ$58.785 today

4O3A CAT2LAN Interface

The CAT2LAN interface, manufactured by 4O3A in Montenegro, is the perfect solution to connect your CAT or RS232 interface to your LAN network. This advanced device allows you to seamlessly integrate any radio with any of our Genius devices - including antenna, amplifier, tuner, rotor and station manager.

Features and benefits:

- Universal integration: CAT2LAN is designed to connect any ham radio to any control interface. It is feature-rich, easy to install and simple to use.
- Flexible control: The interface offers both automatic and manual control of CAT commands via the dedicated application or third-party applications.
- Interlock function: The CAT2LAN's interlock function controls the status of each transceiver (TX or RX) and creates flexible interlocks between radios based on this, with multiple priority levels. These can be easily set via the touchscreen display or the Windows app.

Product features at a glance:

- Easy installation: Intuitive installation and operation, ideal for any radio amateur.
- Versatility: Compatible with a wide range of devices and applications.
- Advanced connectivity: Significantly improve the networking and control of your radio devices in the shack.

With CAT2LAN from 4O3A, you can control your radios from anywhere and take connectivity in your shack to a new level. Experience the freedom and flexibility offered by this innovative interface and optimize your radio experience with the latest technology.

VHF/VHF, UHF/UHF Simultaneous Receive

The IC-2730A provides VHF/VHF, UHF/UHF simultaneous receive capability as well as VHF/UHF receive. Main dials, volume, squelch knobs and primal buttons are symmetrically laid out for each band.

50 Watts of Output on VHF and UHF

The IC-2730A employs a durable PA module and delivers 50 watts of high-power operation on both VHF and UHF bands.

Optional VS-3 Bluetooth® Headset

The optional VS-3 Bluetooth® headset can wirelessly control the IC-2730A with three programmable keys and a PTT button. It also provides VOX operation for hands-free communication.

* Optional UT-133A Bluetooth® unit must be installed in the IC-2730A.

Easy Controller Mounting with the Optional MBF-1

The combination of the optional MBF-1 suction cup mounting base and MBA-5 controller bracket provides easy tilt and swivel adjustments. The large suction cup can be mounted on flat surfaces and can be removed easily.

High-contrast Large Black Inverted LCD

The display size of the IC-2730A is 35.8 inch x 10.6 inch (91 mm x 27 mm) view area. The black inverted LCD provides higher contrast.

Built-in 50 CTCSS and 104 DTCS tones with Split Tone Function

The CTCSS and DTCS tones are built-in for quiet stand-by and repeater access. The split tone function allows you to set CTCSS/ DTCS tones separately for repeater uplink and downlink on a per channel basis.

Controller Attachment to the Main Unit with Optional MBA-4

With the optional MBA-4 combination bracket, the controller can be attached to the main unit.

Wideband Receiver

The IC-2730A covers 118–174 and 375–550 MHz. You will be able to listen to aviation, marine, weather channels and other utility communications.

And More..

• Hands free operation with HM-249 • CS-2730 Free download PC programming software • Versatile scanning capability • Squelch delay and squelch attenuator • Sub band auto mute function • Sub band busy beep function • Auto power off • Time-out-timer • 16 DTMF auto dial memories • Weather channel receive with weather alert* (* USA version only)

SPECIFICATIONS

GENERAL		
Frequency coverage		
Version	Transmit	Receive
USA	144–148, 430–450 MHz	118–174, 375–550 MHz*1
EXP	137–174, 400–470 MHz*2	118–174, 375–550 MHz*2
Guaranteed range *1 144–148, 430–450 MHz, *2 144–148, 430–440 MHz		
No. of memory channels	1052 channels (including 50 scan edges and 2 Call)	
Type of emission	F2D, F3E (FM, FM-N)	
Frequency stability	±2.5 ppm	
Power supply requirement	13.8 V DC ±15 %	
Current drain (approximate) Tx / Rx	13 A / 1.8 A/1.2 A (Max. audio/Stand-by)	
Antenna impedance	50 Ω (SO-239)	
Operating temperature range	–10 °C to +60 °C; 14 °F to +140 °F	
Dimensions (W×H×D) (Projections are not included.) Main unit / Controller	150 × 40 × 151 mm; 5.91 × 1.57 × 5.94 in / 150 × 50 × 27.2 mm; 5.91 × 1.97 × 1.07 in	
Weight (approx.) Main unit / Controller	1.2 kg; 2.65 lb / 140 g; 4.94 oz	

TRANSMITTER		
Output power (at 13.8 V DC) TPE version		50 W, 15 W, 5 W / 25 W, 15 W, 5 W
Max. frequency deviation		±5.0 kHz/±2.5 kHz (W/N)
Spurious emissions		Less than –60 dBc
Microphone impedance		600 Ω (8-pin modular)
RECEIVER		
Intermediate frequencies	A band	38.85 MHz/450 kHz
	B band	46.35 MHz/450 kHz
Sensitivity (at 12 dB SINAD)		Less than 0.19 µV
Selectivity		More than 60 dB/55 dB (W/N)
Spurious response rejection	A band	More than 60 dB/55 dB (V/U)
	B band	More than 60 dB/60 dB (V/U)
Audio output power		More than 2 W (10 % dist. 8 Ω)
External speaker connector		2 conductor 3.5 (d) mm (⅛") 8 Ω

Supplied Accessories

• Hand microphone, HM-207 • Controller cable
• Microphone hanger • DC power cable • Spare fuse

Receiver sensitivity			(Not guaranteed, for your reference only)
FM/FM-N (12 dB SINAD)			
137–159.995 MHz*	0.32 µV	160–174.000 MHz	0.56 µV
375–399.995 MHz*	0.56 µV	400–499.995 MHz*	0.32 µV
500–550.000 MHz	0.56 µV		
AM/AM-N (10 dB S/N)		118–136.991 MHz	1 µV

* Except amateur bands

All stated specifications are subject to change without notice or obligation.

Applicable U.S. Military Specifications

Standard	MIL 810G	
	Method	Procedure
High Temperature	501.5	I, II
Low Temperature	502.5	I, II
Vibration	514.6	I
Shock	516.6	I, IV

Also meets equivalent MIL-STD-810-C, -D -E and -F.

OPTIONS

Some options may not be available in some countries. Please ask your dealer for details.

NOISE CANCELING MICROPHONE

HM-209

HAND MICROPHONES

HM-207 HM-154 HM-232

HANDS FREE MICROPHONE

HM-249

MICROPHONE EXTENSION CABLES

OPC-440: 5 m (16.4 ft)
OPC-647: 2.5 m (8.2 ft)

MICROPHONE EXTENSION CABLE

OPC-2500
For use with HM-249 remote PTT button 2 m (6.6 ft)

MICROPHONE ADAPTER CABLE

OPC-589
For use with an 8-pin microphone

Bluetooth® UNIT & Bluetooth® HEADSET

UT-133/A
VS-3
Use with UT-133/A in a pair

EXTERNAL SPEAKERS

SP-36: 2 m (6.6 ft) cable
SP-36L: 6 m (19.7 ft) cable
SP-30
4 inch (102.5 mm) diameter speaker

MOUNTING BRACKET

MBF-4
For mounting the main unit.

MOUNTING BASE & CONTROLLER BRACKET

MBF-1
Suction cup mounting base.
MBA-5 is required.
MBA-5

COMBINATION BRACKET

MBA-4
For attaching the controller to the main unit.

CONTROLLER EXTENSION CABLE

OPC-1156
3.5 m (11.4 ft) cable.
A modular connector is supplied.

PROGRAMMING CABLE

OPC-478UD: USB type cable for use with the CS-2730.

• CS-2730 PROGRAMMING SOFTWARE
Free download from Icom website.

• OPC-474 CLONING CABLE
For transceiver to transceiver cloning cable.

The "3D GENUINE Icom label" is attached to the bottom of the main unit.
Check the Icom website for details: https://www.icomjapan.com/explore/genuine_info/

Icom Inc. 1-1-32, Kamiminami, Hirano-Ku, Osaka 547-0003, Japan Phone: +81 (06) 6793 5302 Fax: +81 (06) 6793 0013

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The HAM RADIO event held at the Messe Friedrichshafen is Europe's largest ham radio event.

The motto of this year's HAM RADIO in Friedrichshafen, “REMOTE RADIO - CONNECTING THE WORLD”, demonstrates in a unique way that amateur radio is on the pulse of the times.

Where previously the radio operator needed to be physically present with their equipment, remote operation now allows transmission from anywhere. This is defined in the amateur radio regulations as the “unmanned, remote-controlled operation of a fixed amateur radio station” by a licensed amateur radio operator. The respective station is controlled remotely over the Internet.

One of the advantages of remote operation is that it allows amateur radio operators who are unable to set up a station and, in particular, an antenna at their place of residence, to operate. In the event of a disaster, remote stations can be used as emergency radio stations, replacing destroyed but essential communication structures. In educational settings, they can help to teach amateur radio technology to students, with minimal technical effort required. In addition, many other opportunities for radio experimentation become possible – including radio operation where people cannot or do not wish to stay for an extended period of time.

PS A few of us are talking about going in 2026 - let us know if you are keen.