"THE REPEATER"

QSA....706

    As many of you know by now, and much to our dismay, we were required by the O.R.R.C to switch out the antenna located at the 706 site (147.060, 100Hz Tone). The 706 repeater is located in Lyons, Oregon and it rests at a total altitude, ASL (Above Sea Level), 1296. Attached securely upon a 200 foot commercial tower it previously serviced a large area that included Salem, Portland, Albany, Corvallis, and other surrounding cities. The antenna prior to switching was a 4 bay folded dipole which boasted a high gain at 6 watts TX power. The new antenna is a single bay folded dipole by Telewave, with a much smaller gain but a higher TX power of 20 watts.   The reason for this switch is a bit controversial and Dan WA7ABU and others fought well to try and block this change. Signal reports have been trickling in and the outcome is a mixed bag of positive and less than positive results.

    Overall, those areas closer to the repeater that previously had a tough time getting in to the repeater are now able to receive and transmit with great success. Those stations further away from Lyons that previously got in great, have a lesser chance of receiving and transmitting as before. We are asking from you, our amazing friends and hamily to tune in with a friend to the 706, hit that PTT, and report to us your findings.

This repeater site is a linked repeater, linked to 444.600 (100hz tone), and operates with C4FM.

AREDN is not just for EMERGENCIES

Whats new in AREDN News !

The most significant change in recent AREDN firmware (starting with production release 3.25.5.0 and the nightly builds leading up to it) is the introduction of the Babel routing protocol, replacing the legacy OLSR system. Babel offers superior stability, loop-free routing, and more efficient network performance by adapting dynamically to wired, wireless, or tunneled links—all while reducing overhead on slower connections . Initially, Babel and OLSR operate in parallel, ensuring compatibility during the transition, with Babel-preferred nodes marked by a three-star icon .

In addition to the core routing upgrade, recent versions have introduced Point-to-Point (PtP) and Point-to-MultiPoint (PtMP) RF modes. These modes enhance performance and lower latency, particularly when used with 802.11ac hardware—and crucially, they function effectively across mixed-manufacturer environments . A new SSID scheme supports these modes (one SSID for Mesh Ad-Hoc, another for PtMP or PtP), offering flexibility in network architecture .

The user interface has also received a substantial overhaul. Building on the new JavaScript-driven UI introduced in 3.24.10.0, subsequent updates (like 3.25.2.0 and 3.25.5.0) added additional features—including mobile-friendly design, theming options (dark mode, high contrast), service validation states, and a more compact mesh navigation display with Babel-specific pages . Minor enhancements such as SSH key support (ed25519), simplified tunnel management, improved watchdog behavior, and smarter firmware download feedback also help make operations more robust .

Lastly, ongoing efforts to modernize the underlying architecture are visible in deeper OpenWRT integrations (e.g., merged support for ath79 and OpenWRT 22.03), expanded device compatibility (including OpenWRT-One and Vultr VMs), and extensive bug fixes around MAC handling, VLANs, DNS resolution, tunnel stability, and the removal of deprecated features like LUA-based MeshChat . Together, these improvements enhance stability, simplify maintenance, and support smoother upgrades—positioning AREDN as a more reliable and capable amateur radio mesh platform.

We are proud to announce that we have finally positioned a AREDN Mesh node on top the new Amazon warehouse facility! Thanks to all volunteer's that have put this together and for your continued support and efforts!

Questions related to AREDN

Maybe your on the fence about joining in on the Mesh experience. I would suggest discussing your options with one of our specialist. Below is a list of individuals that can help with any questions.
Brett-KG7GDB
John-AI7BQ
Richard-K9RCP
John-KE7GBK

WA7ABU 145.290 Repeater
Net Schedule

Monday
Technical Discussion Net: 1000-1100, Dan WA7ABU
Lunch Bunch: 1200-1230, Kirk K1RKS
Technical Discussion Net: 1900-2000, Nick NT3S
Learning Linux : 20:30 N0TIF Mike & K9CAN Kris

Tuesday
Technical Discussion Net: 1000-1100, Scott KF7GGN
Lunch Bunch: 1200-1230, Phil KK7NZG
**Project Net: 1900-2000, Brett KG7GDB
**Homesteading Net : 19:00-20:00 KK7NZG Phil & K9CAN Kris

Wednesday
Technical Discussion Net: 1000-1100, Brett KG7GDB
Lunch Bunch: 1200-1230, Russell KE7QXR
Slow Scan TV Net: 1900-2000, Dan WA7ABU (picture swapping using SSTV mode).

Thursday
Technical Discussion Net: 1000-1100, Gary K7VBY
Lunch Bunch: 1200-1230, Tim KI7KPF
Mesh Network Discussion Net: 1900-2000, Brett KG7GDB

Friday
Technical Discussion Net: 1000-1100, Joe KC7ZZX / Daniel K7CGO
Lunch Bunch: 1200-1230, Kris K9CAN
Space Net/Above Ground Net: 1900-2000, Kris K9CAN

Saturday
Ham Shopping Club Swap Net: 1900-2000, Dan WA7ABU

Sunday
LDS Emergency Net, Lebanon: 1800-1830, Rotating Net Control

** The Tuesday Net at 19:00 alternates every week its topic as seen to the right and Above

S.A.R.G REPEATERS

- 145.290 MHz FM ~ 930 feet -AllStar & Echolink 54326 - Silverton Hills
- 145.190 w/100 Hz tone - WA7ABU Repeater Site ~4000' near Gates
- 444.950 MHz Yaesu Fusion , Wires-X, & FM w/ 100 Hz tone - Newburg
- 444.600 MHz Yaesu Fusion & FM w/ 100 Hz tone - McCully Mtn, Lyons (no I-5 or Portland coverage) (Active & Under Development)
- 147.060 MHz FM -1720 Feet - Mc Cully Mtn, Lyons (Active & Under Development)

Other Repeaters in our area worth mentioning

- 441.100 FM w/100Hz tone - Yaesu Fusion c4FM -480 feet - Shaw K7GIB
- 440.725 MHz FM no tone - Yaesu Fusion FM -700 Feet- Salem KB7PPM
- 440.225 MHz FM 100Hz Tone - Junction City - 350ft K9CAN

DID YOU KNOW?

The first documented ham radio repeater went live in the early 1950s in the U.S., operating on 2 meters. It used surplus WWII radio gear.

In some areas, you can drive for hundreds of miles and stay on the same repeater network, thanks to linked systems like WINSYSTEM or WA7ABU in Oregon.

Elmer's Insider

Prepare for a successful P.O.T.A activation

Its Saturday morning and the dew has yet to dry from the blades of grass at your favorite park. You have been excited about this activation for weeks. You begin by setting up your table where you plan to spread out your devices, and get to logging contacts. While your setting up you realize that you forgot a number of things that are important to the operations of your station. What could you have done to ensure a successful POTA experience?

What can you do to sure up your station at home prior to activation?

STATION

Test Your Radio Setup
- Verify radio powers on and transmits properly.
- Confirm modes (SSB, FT8, CW, etc.) are configured and working.
- Test PTT/keying (especially if using external interfaces like SignalLink or DigiRig).

Check Antennas
- Fully deploy and test your portable antenna.
- Use an antenna analyzer or SWR meter to confirm tuning.
- Mark guying points and test how fast you can set up.

Battery Health
- Fully charge all batteries.
- Verify output voltage under load.
- Label and pack appropriate DC cables and adapters.

Verify All Connections
- Check coax cables, adapters, mic cables, and interface connections.
- Ensure no intermittent shorts or weak solder joints.

LOCATION

Choose Your Park
- Look up the POTA reference number (e.g., K-XXXX) on parksontheair.com
- Check for accessibility, hours, and restrictions
- Scout for radio-friendly spots (parking, shade, trees, etc.)

Plan Your Gear
- Decide which bands and modes you'll operate (HF, VHF, SSB, CW, digital)
- Choose a radio and antenna setup based on that
- Test your power source (battery, solar, or mobile power)
- Bring logging tools (notebook, laptop, or logging app)

Know the Rules
Understand the POTA activation requirements:
- Minimum 10 QSOs to activate a park
- Follow band and mode rules
- Operate within park boundaries

Pack Smart
- Go through your POTA packing list
- Label and organize items by setup order
- Pack redundant items: coax, power cables, logbook, pens, even an HT

Mental and Tactical Prep
- Check the weather and plan clothing, shelter, and hydration accordingly
- Review sunrise/sunset and propagation forecasts (solar index, MUF, SFI)
- Scout the park rules: are there antenna or access limitations?

YouTube Links- P.O.T.A

https://www.youtube.com/watch?v=DdLfnhmHr3A
https://www.youtube.com/watch?v=Ti_6VVpB5c8
https://www.youtube.com/watch?v=u_evqBtZHts
https://www.youtube.com/watch?v=6goR_shOtZI

WORLD RADIO LEAUGE
Best Logging App on iPhone, Android, and Web App

P.O.T.A.....EXPLAINED

Parks on the Air (P.O.T.A.) is a global amateur radio program that encourages ham radio operators to operate portable stations from designated parks and protected areas. Launched in 2017 as a continuation of the wildly successful National Parks on the Air (NPOTA) event in 2016—organized by the ARRL to celebrate the U.S. National Park Service centennial—POTA was created to offer a permanent, year-round opportunity for operators to enjoy field radio in scenic outdoor settings.

The program is managed by volunteers and has grown rapidly, featuring thousands of registered parks and protected areas across the world. Each park is assigned a unique reference number, and operators, known as activators, earn credit for setting up and transmitting from within the boundaries of these locations. Other hams, known as hunters, earn credit by successfully making contact with the activators. This dual aspect of POTA—activating and hunting—fosters a strong sense of community and encourages operators to refine both their field craft and communication skills.

POTA is more than just a challenge; it represents a fusion of outdoor adventure, technical experimentation, and public service. By bringing radios into the wild, activators learn how to overcome the unpredictable challenges of portable operation, including variable power sources, antennas, and band conditions. It's also a great way to demonstrate amateur radio to the public, as many activators take the opportunity to engage curious park visitors and explain the hobby.

The program continues to evolve with the support of the international ham community, offering awards, logging tools, and a dynamic online platform that tracks activations in real time. Whether you're chasing rare parks from home or hiking a trail with a radio in your backpack, Parks on the Air provides a rewarding way to connect with nature, promote conservation, and celebrate the spirit of amateur radio.

P.O.T.A PACKING LIST

Radio & Antenna
HF/VHF/UHF transceiver
Backup HT
Antenna(s)
Coaxial cable and adapters (SMA, PL-259, BNC, etc.)
Antenna tuner if needed
Ground stake, counterpoise, or radial wires
Mast, tripod, or support poles
SWR meter or antenna analyzer

Power
Charged LiFePO₄ or SLA battery
Power cables with fuses
Solar panel (optional)
Powerpole adapters
Distribution block
Spare batteries for all devices

Food & Hydration
Water bottles or hydration pack
Snacks, trail mix or energy bars
Cooler with food if staying long

Logging & Tech
Notebook or tablet with logging software
Pens, pencils, clipboard
UTC clock or app
Smartphone with POTA tools and offline maps
GPS if needed

Comfort & Shelter
Folding chair
Portable table
Canopy or tarp
Weather-appropriate clothing
Hat and sunglasses
Gloves

Optional / Extras
POTA sign or callsign banner
ARRL band plan
QSL cards or contact cards
Trash bag
Notebook for field observations

Tools & Accessories
Multi-tool
Electrical and duct tape
Zip ties and Velcro straps
Rope or paracord
Tent stakes
Small tool kit
Compass or directional pointer

Safety & First Aid
First aid kit
Sunscreen and insect repellent
Flashlight or headlamp
Fire extinguisher
Emergency whistle or flare

Event News

JankFest 2025 is just around the corner!

Originally planned for August 22–24, we're now looking at shifting the event slightly into September to accommodate a better reservation window. Unfortunately, Champoeg State Park, our top-choice location, is fully booked for the original weekend—but we're actively working to secure multiple tent campsites to ensure we have plenty of room to spread out and enjoy the event.

JankFest is growing—not just in size, but in what it offers. We're excited to announce the addition of an antenna-building workshop, which has already sparked a lot of interest. More details will be shared soon, but know this: by the end of the weekend, you'll leave with a fully operational long wire HF antenna that you built yourself.

To help you prepare, we've compiled a list of recommended antenna parts you can purchase ahead of time and bring with you to the workshop. You'll find the list and link below—stay tuned for more updates!

> Build your own antenna....Antenna Parts List for the Event

Antenna wire-135 foot in total
-Super Antenna MS135 SuperWire Stealth Bulk 135 feet Wire #18 Stranded ham Radio
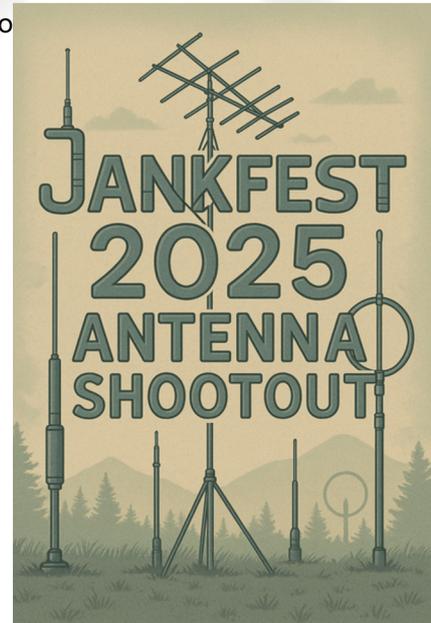
Balun-Pick at least one
-Shortwave Radio Balun Antenna 1:1 Dipole Antenna Voltage 1-50MHz 500Watt
-HF End Fed Antenna, 4 Band 8 Band 1MHz to 30MHz 100W Power End Fed

Antenna Analyzers by Rig Expert
-RigExpert Stick Pro Antenna Analyzer
-RigExpert MATCH Upgradable Antenna and Cable Analyzer, 0.1-70MHz

📏 Resonant Half-Wave Dipole Lengths by Band

Band (Meters)	Frequency (MHz)	Total Length (Feet)	Each Leg (Feet)	Total Length (Meters)	Each Leg (Meters)
160m	1.83	256.5 ft	128.3 ft	78.2 m	39.1 m
80m	3.75	124.8 ft	62.4 ft	38.0 m	19.0 m
60m	5.3	88.3 ft	44.2 ft	26.9 m	13.5 m
40m	7.15	65.5 ft	32.8 ft	20.0 m	10.0 m
30m	10.1	46.3 ft	23.1 ft	14.1 m	7.0 m
20m	14.2	32.9 ft	16.4 ft	10.0 m	5.0 m
17m	18.1	25.8 ft	12.9 ft	7.9 m	3.95 m
15m	21.2	22.0 ft	11.0 ft	6.7 m	3.35 m
12m	24.9	18.7 ft	9.35 ft	5.7 m	2.85 m
10m	28.5	16.4 ft	8.2 ft	5.0 m	2.5 m
6m	50.1	9.3 ft	4.65 ft	2.8 m	1.4 m

PRODUCT REVIEW CORNER

Visit the below webpage to get details about the Rig Expert Match
https://rigexpert.com/news/match-upgradeable-antenna-and-cable-analyzer/

The RigExpert MATCH is a compact, soft touchpad-driven antenna analyzer designed for amateur radio operators and RF professionals who want accurate and user-friendly measurement tools in the field or at the bench. Covering a broad frequency range—typically up to 600 MHz depending on the model—the MATCH delivers critical diagnostics such as SWR, impedance (R + jX), return loss, and complex reactance in time. Its vibrant color display and intuitive interface significantly improve the user experience compared to the small, menu-heavy LCDs seen in many traditional analyzers.

One of the MATCH's standout features is its intuitive soft touchkey navigation system. Rather than relying on a multi-button layout with layered menus, users can quickly scroll through measurement modes, frequency ranges, saved profiles, and graph types. The layout is logical and clean, making complex visualizations like Smith charts or impedance sweeps immediately accessible. This design is particularly useful when you're making adjustments on the fly and need visual feedback that's quick and easy to interpret.

Where the MATCH really sets itself apart from entry-level analyzers is in its advanced feature set. In addition to SWR and impedance scanning, the MATCH includes tools such as Time Domain Reflectometry (TDR) for diagnosing faults or breaks in coax runs—something rarely found in analyzers at this price point. It also provides cable loss measurement, phase angle visualization, and real-time tuning assistance, allowing users to do more than just basic antenna work. This makes it a valuable tool not just for tuning, but for diagnosing system issues and ensuring overall transmission line performance.

Another major benefit of the MATCH is its upgradeable firmware. RigExpert regularly releases updates that improve performance, expand measurement capabilities, and refine user experience. Firmware can be updated via the device's USB-C interface, which also allows for data transfer and integration with RigExpert's AntScope2 software for deeper analysis and logging. This commitment to long-term support means the MATCH can evolve and improve over time—an area where many budget analyzers fall short, often requiring third-party software and manual firmware flashes just to stay functional.

In terms of build, the MATCH is solid and portable. The device is housed in a rugged shell with a built-in rechargeable battery that provides long operating time, even in field conditions. The USB-C charging and data port is a welcome modern feature, and the device comes ready to use out of the box with accessories like a carry case and USB cable. It's clear this unit was designed with real-world use in mind, unlike budget analyzers that often feel like development boards in a case.

As for cost, the RigExpert MATCH typically retails in the range of $300 to $400 USD, depending on the version and vendor. While this is more than what you'd pay for entry-level analyzers like the NanoVNA or some older models, the MATCH offers significantly higher performance, build quality, and user experience. The MATCH isn't just a tool for SWR checks—it's a diagnostic platform that will likely serve operators for years. For those looking for long-term reliability, professional features, and a frustration-free interface, the MATCH is a smart and worthwhile investment.

COME JOIN US AT JANKFEST 2025 TO SEE THE RIG EXPERT MATCH ANTENNA ANALYZER IN ACTION

Thoughts from the "Back Deck"

With Phil Webb   QTH-Back Deck

If you've heard me on the local repeaters, it won't surprise you to learn that my wife, Liana (KK7UUO), raises and hybridizes a rather particular orchid species called Masdevallia. Native to the upper Andes of Central and South America, these orchids are delicate, demanding plants that thrive only under specific conditions—environment, watering, and feeding must be meticulously managed. Hybridizing, in simple terms, is cross-breeding, and it's Liana's passion. She's produced some truly breathtaking flowers, but the process is painstakingly slow and precise. First, both parent plants need to bloom simultaneously. Only then can the pollen be transferred between them. After pollination, it takes roughly three months before the seeds can be harvested. Preparing those seeds for germination takes a few more weeks, and once in flasks, they sit for one to two years before they're ready to plant in moss. Then begins another year of growing until the first bloom emerges—and you finally learn if the cross was successful or destined for the compost bin.

On average, this process spans three years. Some hybrids take longer. One notorious example is Masdevallia Decade, named aptly—it takes ten years from pollination to first bloom.

A decade of patience, care, and meticulous attention, all without knowing whether the final result will be beautiful—or utterly unremarkable.

Now, I can hear a few voices wondering: "What does this have to do with amateur radio?" It's a fair question.

To me, the connection is in the lesson: "Give yourself time and room." In our hobby, it can take years to find that elusive piece of gear that checks all the boxes. CW speed may improve only with persistent practice. Antennas can demand endless tinkering—raising, trimming, rotating—only to find they still don't work with your setup. And yes, we'll inevitably run into personalities on the airwaves that test our patience or challenge our sense of decorum.

These frustrations are real. But if we become too fixated on the final goal—rather than respecting the process—we risk burning out, abandoning what drew us in to begin with.

So, I urge you: give yourself grace. Breathe. Enjoy the ride. The destination will arrive, and when it does, you'll see it was worth every stumble along the path. Often, the greatest rewards come from the surprises we discover while chasing something else entirely.

And on that note, I'll leave you with a few images of the stunning Masdevallia hybrids Liana's created. She's earned awards for them—and yes, I'm very proud of her.
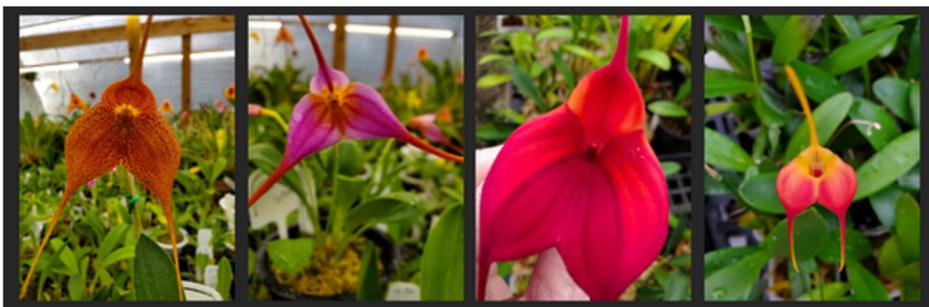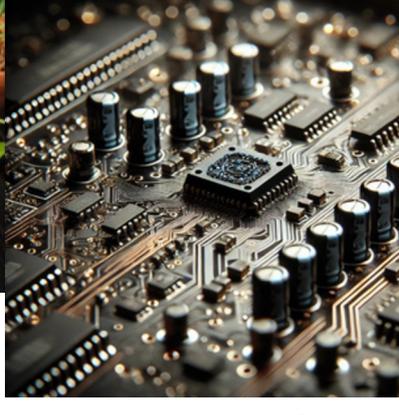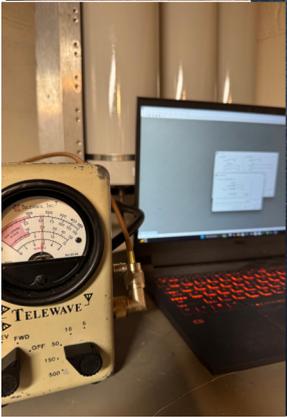
KK7NZG

Left to right: Masd. Crimson Reign, Masd. Eon, Masd. Red Dawn, Masd. Spitfire)
73's, God Bless and Godspeed
Phil Webb
 KK7NZG

JANKFEST 2025 ANTENNA SHOOTOUT

S.A.R.G

14.275.0

"529" Hall of the Greats
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