

TORC newsletter

Eleventh edition

82 members

strong as of

May 25, 2021



Photo by Chris Sege



Photo by John



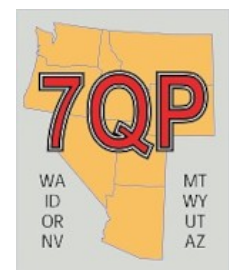
ARIZONA QSO PARTY



Payton



Our new club logo
SAGUARO by KI7DET Chris



references

Click on titles below to go there

*Clicking on **references** at the bottom of any page returns you to this area of the newsletter.*

CLUB OFFICERS

GROUPS.IO

Contest Calendar July 2021

ARRL Field Day

3YOJ DXPEDITION CANCELLED

YOUR QSL CARD: DEFICIENT OR INORDINATE?

Wooden Satellite to Launch by Year's End

TIPS AND TRICKS

You may have seen some of these before - still fun!

Getting on the Air - How to Avoid G.A.S.

Battery Powered Portable Power Generators

MFJ SUPERLOOP MFJ-1786 PERFORMANCE review by w7hd

FOR SALE

PURPOSE of this newsletter

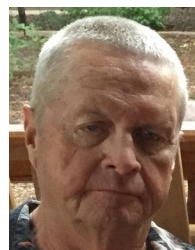


CLUB OFFICERS

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& Newsletter Editor**



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GROUPS.IO

They click the address ToRC+subscribe@groups.io or copy and paste that address and send an email. They have to get an account - really simple. It only takes a minute.

Once they ask to join I will accept them and off we go.

Send members here: <https://groups.io/g/ToRC>

TORTOLITA RADIO CLUB

Serving the Greater Tucson Area



A big thank you to John Mount KJ7VOK and karl Gross N7MXC. They collaborated to come over at 6 am and mount the new A/C, put the MFJ loop in the air, and fix the "leaning" of the 2M beam. They were done by 7:30 will ALL of the work. And a great job they did!

Ron Herring
W7HD

Congratulations to Keith KR7RK

Keith just achieved his 500th SOTA activation. That's a lot of climbing. You da man!

de W8TK



**Attached photo shows new ToRC banner for display at operating events.
Any member may borrow it. de W8TK**



Contest Calendar July 2021

Tom Kravec W8TK

Summer is not considered contest season, but with temperatures soaring in AZ, we'll take whatever we can get. Turn up the AC in the shack and pour yourself a lemonade.

July 1: Canada Day celebration. July 1 is always the date so this year it falls on a Wednesday/Thursday. It's a national holiday: (https://en.wikipedia.org/wiki/Canada_Day) up north so many VE's are off work. Sponsored by RAC, Canadian equivalent of our ARRL. Usually pretty busy despite usually being on a week day. Details:<https://www.rac.ca/rac-canada-day-contest-celebrate-canadas-birthday-on-the-air/>

July 10-11: IARU HF World Championship. SSB/CW. Exchange is RS(T) + ITU zone (ours is 6). Extra points for QSOs with stations on different continent. Extra points for QSO with IARU headquarters stations which will have suffix of HQ, as in PJ2HQ for Curacao. This is the contest which decides WRTC champs every 4th year. CW ops beware--this is the fastest contest of the year with many stations running around 50 wpm. Not for the faint of heart.

Details: <http://www.arrl.org/iaru-hf-world-championship>

July 31-August 1: Missouri QSO Party. Usually busier than average. MO stations send RS(T) + county, others send RS(T) + state. All bands, all modes. Bonus points for submitting log electronically and for working special event stations. Details: www.w0ma.org/index.php/missouri-qso-party

Weekly: K1USN Slow Speed Test (SST) offers slow Morse for practice under contest conditions. Speeds are limited to <20 wpm, though I run 12 wpm. Exchange is name and state and maybe some conversation. It's pretty informal.

Every Friday afternoon 2000-2100 UTC and Sunday evening (0000-0100 UTC Monday). Friday may catch some EU stations since it's evening there.

Details: www.k1usn.com/SST.html

As always, complete calendar at www.contestcalendar.com TNX WA7BNM!

73 de W8TK

From ARRL Contest Update May 26:

JUNE is **ARRL Field Day**, and after most groups didn't operate together in 2020, many will return to their usual ways in 2021. What's different in the [Field Day rules](#) this year? Well, the rule waivers put in place last year remain in effect. New in 2021, however, home stations (Class D or E) are limited to 150 W PEP output. It is always a good idea to check the rules in advance! But even though some things have changed since 2019, the fundamentals of a successful group Field Day remain in place. Let's revisit a few.

Agree On A Plan

There are as many ways of approaching Field Day as there are groups participating: club picnic, emergency communications exercise, competitive scoring, public demonstration, "county fair," and more. No one style is the best, but the common factor for success is for everyone to be aware of the plan in advance. A competitive Field Day effort is not the place for someone to just show up and experiment. Likewise, a competitive operator will not be happy if the primary goal is socializing with a little operating on the side. Managing expectations for RF, food, and operating is important to everyone having a good time. Make a plan and publish it so everyone knows what it is.

Play Well Together

Since Field Day in 2019, a lot of new gear has appeared, along with changes in modes and software. The latest and greatest stuff may work just fine by itself, but what about with other extremely close stations? Unless your group is operating in a one-transmitter class, this is a good time to find out who is bringing what type of radio. If someone is offering to bring a model with known noise issues, or a receiver that overloads easily, gently suggest that they leave it at home. It is not fun to discover radio shortcomings at 1800 UTC on Saturday!

Wideband transmitted noise presents real problems for Field Day efforts with multiple stations all located within the 1000-foot separation limit. So do harmonics and other spurious emissions. Every station should use a band-pass filter and have additional harmonic-suppression stubs available, if needed. (See *The ARRL Handbook* and *Antenna Book* for more information.) One of the first setup tasks should be resolving inter-



station interference. Make sure all of the radios are configured for clean modulation, with mic gain and compression carefully adjusted. This is great practice for SO2R (Single-Op, 2 Radios) or multi-op home stations!

With solar flux expected to stay below 100 and early summer conditions, only a couple of bands may be productive at a time. Trying to get a phone and CW or digital station on the same band requires careful attention to antenna location, very clean transmitters, and cooperative, patient operators. Planning operating time helps get the most out of the bands and operators.

Manage Your RF

Recognize that the stations will be temporary and with antennas close by, there may be RF issues to deal with due to the strong local signals. A lot of RFI problems can be minimized if attention is paid to bonding all of the equipment together, including computers. Bonding can be as simple as laying down a sheet of aluminum foil and using short clip leads to attach equipment to it. Take a look at the bonding examples from W6GJB and K9NN for portable stations in the Contributed Examples section of <http://www.arrl.org/grounding->. The goal is to keep equipment at close to the same voltage, avoiding hot spots and RF current where it shouldn't be. Bring plenty of type 31 or type 43 ferrite cores for RF chokes on sensitive cables, too.

Generator and AC Safety

Finally, don't overlook basic electrical safety. Make sure your power generation and distribution system is sound and secure. While ground electrodes (usually ground rods) are not required for most modern generators, many groups like to use them. If you do, all of the electrodes must be bonded together so that voltage differences between widely separated rods or short circuits don't create a shock hazard. Rain or dew are often encountered, so consider using GFCI-protected outlets at each station, too. *The ARRL Handbook's* "Assembling a Station" and "Safe Practices" chapters are good sources of ideas.

Ready, Set, CQ FD!

I'm coming up on 5 decades of ARRL Field Day, and each event has been unique. I've learned something -- technical or personal -- at every one, and this one will be no different. What's the secret to Field Day happiness? Plan, prepare, perform.

That's all for this time. Remember to send contesting related stories, book reviews, tips, techniques, press releases, errata, schematics, club information, pictures, stories, blog links, and predictions to contest-update@arrl.org

73, Brian N9ADG



Hi there fellow TORC friends,

For those of you who will be enjoying working Field Day this year; remember that you can easily enter your data after the end AND GET 50 EXTRA BONUS POINTS by entering your data via the ARRL applet at this url address:

<http://field-day.arrl.org/fdentry.php>

The applet will take your data, automatically calculate your score & send you back a confirmation email within a few minutes.

SB SPACE @ ARL \$ARLS006

ARLS006 International Space Station to be in Cross-Band Repeater Mode for Field Day

ZCZC AS06

QST de W1AW

Space Bulletin 006 ARLS006

From ARRL Headquarters

Newington, CT June 10, 2021

To all radio amateurs

SB SPACE ARL ARLS006

ARLS006 International Space Station to be in Cross-Band Repeater Mode for Field Day

The Amateur Radio on the International Space Station (ARISS) cross-band repeater will be available for ARRL Field Day, June 26 - 27. Contacts will count toward Field Day bonus points as satellite contacts and Field Day contacts.

Field Day rules limit stations to one contact on any single-channel FM satellite. Note that contacts made during Field Day by ISS crew would only count for contact credit, but not for satellite bonus points. ISS cross-band repeater contacts are also valid AMSAT Field Day satellite contacts.

The ARISS cross-band repeater uplink is 145.990 MHz (67 Hz tone), with a downlink of 437.800 MHz.

ARISS suggests that those unfamiliar with the ISS repeater may want to practice with it prior to Field Day. ARISS had planned to switch modes to the Automatic Packet Reporting System (APRS) during the second week of June, but this won't happen until after the first ARISS school contact following ARRL Field Day.

The ARISS ham station will be off-air during spacewalks on June 16 and June 20.

NNNN

/EX

As the specter of COVID recedes in the rearview mirror, thoughts turn to the HF radio outings we did before the pandemic stopped everything. We will do Field Day as we did last year, as individuals or small groups, but we will resume large group FD in 2022. I have penciled in an outing to the Titan Missile Museum for September 18. If you have not been there before, you're in for a treat. Check website: <https://titanmissilemuseum.org>

In addition to the museum which offers an outstanding guided tour on which you can actually reach out and touch a missile, there is a giant discone antenna on the grounds which is available for use by any hams. You can just drive up, hook the coax up to your radio, and operate any HF bands since discones are broadbanded :(https://en.wikipedia.org/wiki/Discone_antenna). The antenna has a separate parking lot with lots of space for you to try out antenna projects. The antenna is always available and as a club, we can reserve it for a day. I have gotten to know Yvonne Morris, director of the museum, over the years and she's glad to have us.

The museum tour is well worth the price and I recommend it. Details on the antenna: <https://titanmissilemuseum.org/museum/ham-radio-operators/>

Life is good in the desert! Again.
73 de W8TK

Most DXpeditions to distant islands have used a ship called the Braveheart, including the proposed expedition to Bouvet Island in 2023. Here's the bad news:

3Y0J DXPEDITION CANCELLED

To the global DX community.

We regret to inform you of the following news.

The global pandemic has impacted the expedition charter vessel business very hard; this includes the venerable RV Braveheart which has provided outstanding safety and service to many DXpeditions. As you know, we had signed a contract with Braveheart for 3Y0J.

Today, we were informed that Braveheart will be sold. As a result, Nigel Jolly will no longer be associated with the ship, our contract with the ship has been cancelled and our deposit will be refunded. This is a very disappointing development to all involved.

At this time, we are cancelling the 3Y0J Dxpediton. We have ceased accepting donations and we will begin refunding 100% of the donations using the same method they were received, i.e., PayPal, cash or check. This process will take several weeks to sort out, so please be patient.

We wish to thank our team for putting their trust in us. We wish to thank all of the donors and sponsors that gave generously to this project. We will continue to research other ships and possibly find another suitable vessel for a future project.

73,
Paul Ewing, N6PSE
Kenneth Opskar LA7GIA



YOUR QSL CARD: DEFICIENT OR INORDINATE?

Andy Smith - KK7AC

One thing that is a frequent source of irritation for those like myself that have an interest in confirming U.S. counties is the lack of the station's county on their QSL card. Often, a QSL card has too much information or is unnecessary. I would like to take a moment to suggest to those who are about to create a QSL card for the first time, or are about to make some changes to your current, what info should and should not be on the card.

Aside from the obvious (and required) date, UTC, RST, band and mode boxes, the inclusion of your COUNTY (along with state) should be considered just as much minimum. Your GRID location is another necessary piece of information your card should display along with ZONE and ITU region printed somewhere. If you cover these few items on your card, you are addressing 99% of what other hams truly want to collect.

Even your street address should probably be avoided for a few reasons. One of which is the fact that you may not live there in the future. Its information that is transient in nature. This way, you most likely won't have to print new cards if this changes. Having the address had a necessary propose on cards of yesteryear, but has greatly diminished with the advent of QRZ...If I want your current address I will simply make a couple clicks on the mouse and type in your call. After all, I have yet to know a ham who is collecting the ever-elusive "Worked all U.S. streets award"! Even printing your email address should be avoided for the same reasons cited above.

Other items such as your wife's name, ARRL membership, previous call signs, honorary member of the Desert Museum, "I like turtles", past vice-president of the Amateur Wicker Basket Makers of America, WAS and DXCC accreditations, should be considered frivolous and carefully evaluated prior to printing as to not clutter up the card with stuff that no one other than yourself cares about, or has a chance of changing and becoming outdated. Leave this information to your QRZ or other web page that can be updated over time. Plus, you can use this extra found space (while making every attempt to maintain the standard size of 3.5 x 5.5") by including your name, city or other incidentals such as Ten-Ten or OMISS numbers to those that may need this for their award chasing endeavors. Keep it focused to the radio related *essentials*.

Bear in mind, these simple requirements apply to your HOME QSL card; if you are conducting some other special event or location such as POTA, grid chase, mobile/portable, SOTA, county line operation in a location other than home, you should produce cards specific to this new location/event. Another great point of frustration in relation to this is when a station is QRV from one of these desired locations but fails to acknowledge this on their card. For instance, W9ABC is in the Illinois QSO Party from his summer place in Effingham County during the contest. Effingham is a county you need, so you send him a QSL wanting confirmation of it, only to receive his home card from Champaign County that you have confirmed 8 other times! Don't be that guy! These times may require the deployment of a Mobile Reply Card (MRC) which is another topic for a later date.

73 and happy QSL'ing! KK7AC

From ARRL.org today:

WSJT-X version 2.4.0 Now Generally Available, Version 2.5.0 on the Horizon

06/10/2021

WSJT-X version 2.4.0 now is available in general release. According to co-developer Joe Taylor, K1JT, *WSJT-X* version 2.4.0 includes a new digital mode, Q65. This protocol is designed for two-way contacts over especially difficult propagation paths, including ionospheric scatter, troposcatter, rain scatter, TEP, EME, and other types of fast-fading signals.

“On paths with Doppler spread more than a few Hertz, the weak-signal performance of Q65 is the best among all *WSJT-X* modes,” the [Quick Start Guide](#) asserts.

WSJT-X version 2.5.0-rc1 (beta) version has been released. According to the [Release Notes](#), in version 2.5.0 “the Q65 decoder has been enhanced to measure and compensate for linear frequency drift in Q65 signals.”

Q65 uses 65-tone frequency-shift keying and builds on the demonstrated weak-signal strengths of QRA64, a mode introduced to *WSJT-X* in 2016. Q65 offers user message and sequencing identical to that in FST4, FT4, FT8, and MSK144. It includes a unique tone for time and frequency synchronization. As with JT65, this “sync tone” is readily visible on the waterfall spectral display. In addition, Q65 provides a sensitive “sync curve” near the bottom of the waterfall window. Testing showed that Q65 will enable stations with a modest Yagi and 100 W or more and to work one another on 6 meters at distances up to ~2000 kilometers on most days of the year, in dead band conditions.

“An excellent example of targeted uses of Q65 is ionospheric scatter on the 6-meter band,” the documentation states. “Extensive tests on the 1,150-kilometer path between K1JT and K9AN have shown that with 300 W power output, nearly every Q65-30A transmission is copied correctly by the other station.” The 30A refers to the transmit-receive period and spacing width.

For the complete announcement and to download the latest version, visit the [WSJT-X website](#).



From ARRL newsletter 2021-05-15:

Wooden Satellite to Launch by Year's End

The WISA Woodsat project, being sponsored by plywood supplier WISA in an unconventional PR initiative, is poised to place a wooden satellite into orbit by the end of the year. The idea is to test the suitability of treated wood as a low-cost and widely available material for space applications. The [IARU posting](#) for Woodsat indicates that several amateur radio experiments



will be on board as well as photo downlinking, including selfies.

The wooden satellite is based on a basic, versatile CubeSat format, Kitsat, which is designed with educational use in mind. It retails for just \$1,500. Based in Finland, the Woodsat project began with students across the country contributing parts to a CubeSat launched by balloon. The satellite will be a 10-centimeter cube weighing 1 kilogram, covered on all sides by coated birch plywood from WISA Plywood. Nine small solar cells will power the

satellite, which will orbit at an altitude of 500 - 550 kilometers.

As the sponsor explained, "WISA Woodsat will go where no wood has gone before. With a mission to gather data on the behavior and durability of plywood over an extended period in the harsh temperatures, vacuum, and radiation of space in order to assess the use of wood materials in space structures."

Once in orbit, Woodsat will be able to extend a selfie stick to capture photographs of the wooden box as it hurtles through space at 40,000 kilometers (24,800 miles) per hour. This will allow the mission leaders to monitor the impact of the environment on the plywood.

The satellite would downlink its telemetry and images from two cameras using amateur radio frequencies.

"The wooden satellite with a selfie stick will surely bring laughter and goodwill," added mission manager Jari Mäkinen of Arctic Astronautics. "Essentially, this is a serious science and technology endeavor. In addition to testing plywood, the satellite will demonstrate accessible radio amateur satellite communication; host several secondary technology experiments; validate the Kitsat platform in orbit, and popularize space technology."

An April 23 *Engineering and Technology* [article](#) has more information. -- Thanks to AMSAT News Service via JoAnne Maenpaa, K9JKM; E&T, and the IARU

TIPS AND TRICKS

[What Is the Bash Shell, and Why Is It So Important to Linux?](#)

- The Bash shell is over 30 years old and still going strong. What does it do, where did it come from, and why is it still the most common shell on Linux systems?

[How to Detect Hidden Surveillance Cameras With Your Phone](#)

- A family recently discovered a rude surprise at their Airbnb: a hidden camera disguised as a smoke detector in the living room. Here are two ways to check for cameras—in an Airbnb or elsewhere—using only an iPhone or Android phone.

[How to Password Protect Your Google Search History](#)

- It's no secret that Google tracks your activity in its products, but you have some control over your information. This data can be automatically wiped clean, and it can be put behind a password to protect it from prying eyes.



If you're looking for a HF radio, you should consult Rob Sherwood's receiver tests at: www.sherweng.com

And you can find his transmitter testing data and opinions on the Contest University 2021 youtube video: <https://www.youtube.com/watch?v=q-esob7BPtc>

His presentation starts at 6:39.

His data is gospel and will not steer you wrong!

73 de W8TK

<https://www.youtube.com/watch?v=q-esob7BPtc>

Here's what's on it: <https://www.contestuniversity.com/course-outline/>

The video is over 8 hours, but with the course outline above, you can approximate when the topic you are interested will appear. Good stuff!

73 de W8TK



You may have seen some of these before - still fun!

- Don't be worried about your smartphone or TV spying on you. Your vacuum cleaner has been collecting dirt on you for years.
- If you can't think of a word say "I forgot the English word for it." That way people will think you're bilingual instead of an idiot.
- I'm at a place in my life where errands are starting to count as going out.
- I'm getting tired of being part of a major historical event.
- I don't always go the extra mile, but when I do it's because I missed my exit.
- My goal for 2020 was to lose 10 pounds. Only have 14 to go.
- I just did a week's worth of cardio after walking into a spider web.
- I don't mean to brag, but I finished my 14-day diet food supply in 3 hours and 20 minutes.
- A recent study has found women who carry a little extra weight live longer than men who mention it.
- Kids today don't know how easy they have it. When I was young, I had to walk 9 feet through shag carpet to change the TV channel.
- I may not be that funny or athletic or good looking or smart or talented, but... I forgot where I was going with this.
- I love approaching 80, I learn something new every day and forget 5 other things.
- A thief broke into my house last night. He started searching for money so I got up and searched with him.
- I think I'll just put an "Out of Order" sticker on my forehead and call it a day.
- Just remember, once you're over the hill you begin to pick up speed.
- Having plans sounds like a good idea until you have to put on clothes and leave the house.
- It's weird being the same age as old people.
- When I was a kid I wanted to be older...this is not what I expected.
- Life is like a helicopter. I don't know how to operate a helicopter.
- It's probably my age that tricks people into thinking I'm an adult.



- **Never sing in the shower! Singing leads to dancing, dancing leads to slipping, and slipping leads to paramedics seeing you naked. So remember...Don't sing!**
- **If 2020 was a math word-problem: If you're going down a river at 2 MPH and your canoe loses a wheel, how much pancake mix would you need to re-shingle your roof?**
- **I see people about my age mountain climbing; I feel good getting my leg through my underwear without losing my balance.**
- **So if a cow doesn't produce milk, is it a milk dud or an udder failure?**
- **Coronacoaster: noun; the ups and downs of a pandemic. One day you're loving your bubble, doing work outs, baking banana bread and going for long walks and the next you're crying, drinking gin for breakfast and missing people you don't even like.**
- **I'm at that age where my mind still thinks I'm 29, my humor suggests I'm 12, while my body mostly keeps asking if I'm sure I'm not dead yet.**
- **You don't realize how old you are until you sit on the floor and then try to get back up.**
- **We all get heavier as we get older, because there's a lot more information in our heads. That's my story and I'm sticking to it.**

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The RADIOGRAM June 2021

You know you are getting old if you fall down and can't get up and someone calls 911. TRUE STORY



Getting on the Air - How to Avoid G.A.S.

From John, NJ4Z York County Amateur Radio Society

We all come into this hobby not knowing, what we don't know. Some of us purchase a radio before we take the test, some of us wait until we earn our ticket.

Unless we are lucky enough to have an experienced Ham guide us into the hobby, most of us end up purchasing an inexpensive handheld. That is fine, nothing wrong with it, it is a means to an end. It gets you something to operate with and gets you on the air.



As we progress in the hobby, our goals change, skills improve and we begin to experiment with new equipment and modes. Once we earn our ticket, we quickly discover that a 5-watt handheld is fine for some things, but may not be footing the bill for what we are trying to do currently. We may have learned that to make contact we must exit our home, or the pizza pan/pie plate mag mounted antenna just doesn't cut it. We may have also discovered the joy of attempting to operate a handheld while driving, not an easy task in traffic.

Thus, begins the saga of acquiring gear. The handheld or multiple handhelds, and whip antennas become mobile rigs, mag mounts, 1/4 waves, 5/8 waves, etc. At the home shack we have a power supply, base antenna(s), cross-needle meters, desk mics, and so forth.

With so many choices of rigs, antennas and accessories, and being in experimentation mode, the equipment begins to pile up. At this point, a condition known as G.A.S. can occur; talk about sexy, right? What is **G.A.S.**, you ask? It is horrible, debilitating condition, **Gear Acquisition Syndrome** – the insane need to acquire gear at an alarming rate. This condition can cause our shacks to become cluttered, cause our bank accounts to drain, cause us to develop regret and possibly cause stress in our relationships. So, how do we avoid G.A.S.? No, it is not as simple as Tums or Gas-x. But there is hope, a simple yet deliberate three part solution. Planning, Budgeting and Research, These are the keys to avoid G.A.S., regardless of what piece of equipment you are purchasing.

Step one of avoiding G.A.S., “The Planning”. There are a few key questions to ask your self, what is the goal for any piece of equipment? If you building a base station, a mobile station or a portable-ops in a go box and buying a rig here are some great questions. What bands do I want to cover; HF, VHF, UHF? Do you want to operate on one of the digital modes, D-Star, System Fusion, DMR? Do you want to do SSB, Weak Signal (FT8/4), Work Satellites, EME (Earth-moon-Earth), Grid square chasing? All of these and so much more are possible just with a Technicians License. Maybe you are already down the road studying for your general and want a combined UHF/VHF/HF rig. The major step here is to decide what you want to do or may want to accomplish in the short term and write that down. Also make sure to include the must haves for your purchase.

Step two of G.A.S. avoidance, “The Budget”. Now we know what we are trying to accomplish, we need to set a budget. Everyone's lifestyle and disposable income is different. Do not, I repeat, DO NOT, try to compete with other Hams on purchasing gear. To steal a line and rewrite as my own, “Gear Envy leads to the dark side, Gear Envy leads to spending, spending leads to broke and

broke leads to suffering. Grave danger you are in, if you follow this path. Set a realistic budget for yourself, you know your finances better than

anyone else. Quite frankly, if another ham runs down your gear, you are hanging out with the wrong hams. One other fine point, there is a rig for you at your price point. It may not be new, the latest and the greatest, with all the bells and whistles or it just could be the best on the market. All that matters is it gets your goals accomplished, that is the point.

Step three of G.A.S. avoidance, “The Research”. Now you know what you want to do, and you know what you can spend. You are off to the races looking at what is out there, new and pre-loved. Which bells and whistles are must haves? Check <https://www.eham.net> for reviews of gear, it is great place to start. eHam has a huge database of equipment reviews and most have several, if not tens and hundreds of reviews. QST and CQ magazine also do great in-depth product reviews. An ARRL membership really comes in handy here, so you can search the achieves. YouTube has thousands of video reviews, keep in mind some those reviews can be biased, and are only one persons’ opinion of the gear. QRZ is also a good place to look for reviews of gear. The resellers websites, DX Engineering, Ham Radio Outlet, Gigaparts, R&L electronics, MTC, Buy Two Way Radios, etc. all have reviews by folks who have purchased the gear, and many do their own reviews in print and video. NEVER, NEVER, NEVER be afraid or hesitant to ask an Elmer, fellow club member, or other ham about their experience with a certain piece of equipment. We are here to help; It is what Ham’s do, we pass our knowledge down. It should be our goal as Hams to help others to have a joyful and successful journey in thishobby of ours.

Once you decide on a piece of equipment, purchase it and get it set up... one last step... read the manual to learn how to operate it, then “GET ON THE AIR.” We will be looking for you!!! Until the next time, Stay PASSIONATE about Ham Radio!!!!

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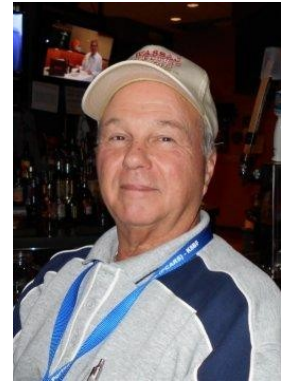
The RADIOGRAM June 2021



Battery Powered Portable Power Generators

Jeff, WA8SAJ

At the April 2021 PCARS meeting, I gave a presentation on Battery Powered Portable Generators and there were a number of links that you may want get more information, Here are those links:



- 1) Gas Power, Guaranteed—Browse all Cordless Outdoor Tools | EGO
- 2) EGO 145-Watt Power Inverter in the Power Inverters department at Lowes.com
- 3) Reliance 306LRK 6-Circuit Transfer Switch Kit P2 in the Generator Transfer Switch Kits department at Lowes.com
- 4) Amazon.com: Parkworld 886115 Combiner, Household (2) 5-15 Plug Male to Generator Twist Lock L14-30 Receptacle Female Y Adapter Cord: Home Audio & Theater
- 5) Inergy Technologies - Power For Life
- 6) Portable Solar Battery Charger | Portable Solar Panels | Off-Grid Solar Generators | Goal Zero - Extreme Portable Power
- 7) Renogy Official Site | All-in-one Solar Kit | solar panel kits | Portable Solar Generator
- 8) EcoFlow | Portable Power by EcoFlow | EcoFlow RIVER | EcoFlow DELTA
- 9) Bluetti AC200
- 10) Bluetti EP500 Power Station-The Future Of Home Backup Power
- 11) Titan Solar Generator | Point Zero Energy
- 12) Nature's Generator Store - All Products
- 13) Solar Generators | Wagan Corporation
- 14) Solar Power - 4Patriots
- 15) Go Anywhere with Portable Power - Lion Energy
- 16) Generac Power Systems - Power Equipment and Generator Manufacturer
- 17) Mobile Power Systems and Solutions for RV, Utility, Fleet and Marine Application
- 18) 100 Watt Solar Panel Kit
- 19) Portable Power Station, Power Outdoors - Jackery
- 20) Solar & Portable Power | Powerwerx

- 21) LDSreliance Store - Your source for off grid solar power products
- 22) Zamp Solar - US Manufacturer of Solar Panels and RV Kits
- 23) Bougerv rv parts solar panels generator parts | Bougerv — BougeRV
- 24) Foldable solar kit
- 25) Ampacity Charts
- 26) AC WORKS | Medical Grade Power Supplies - AC Connectors
- 27) Guide to Home Electrical Wiring: Fully Illustrated Electrical Wiring Book
- 28) CAMCO L14-30P to 3 x 15A Adapter 12-in in the Power Adapters department at Lowes.com
- 29) BigBattery.com - Your Source For Power
- 30) Shenzhen Montek New Energy Co., Limited - power station, solar generator, (Just announced) !
- 31) 2021 Ford® F-150 Truck | Tougher Than Ever, (Just announced)!
- 32) The Best American-Made Lithium Batteries | Battle Born Batteries |
- 33) Best Portable Power from 200Wh to 6,000Wh - PECRON
- 34) U.S electricity generation by source: Natural gas vs coal - Washington Post
- 35) The Largest Offshore Wind Farm in America - Coastal Virginia Offshore Wind - YouTube
- 36) Powerpack - Commercial & Utility Energy Storage Solutions | Tesla
- 37) Projects & Facilities | Dominion Energy
- 38) Portable Power Station for Storing Solar Energy

MFJ SUPERLOOP MFJ-1786 PERFORMANCE

by Ron Herring W7HD

Amazing performance is my experience after two days of operating. After a false start with a shorted coax jumper, I ran the RG-8X direct from the antenna to the tuner. Now I could easily adjust the SWR for minimum reflected power and maximum forward power, essentially 1.0:1. For the first time on 20M I am getting signal reports equivalent to my sent reports. I worked N6XG on 20M FT8, who was in the main lobe of the loop, sending him a -11 and receiving a -02 from him! On 20M FT8 I worked W4NTA giving him a -05 and receiving a -18 due to the fact that he was off my main lobe. The antenna is oriented for NE/SW coverage. It tunes easily on everything from 30M thru 10M. And this antenna is **quiet** when there is little atmospheric noise.

The antenna itself is mounted vertically about 15 feet off the ground on a tilt-up pole on the back of my fifth-wheel camper. NE of the house. From there I ran about 50 feet of RG8X into the ham shack to the MFJ tuner, then to an Icom IC-7100 running 10 watts output power. This provided vertical polarization oriented NE/SW in the plane of the loop, although I can manually rotate the pole to orient it in any desired direction. It is set to reject noise from two of my other antennas that are multi-band dipoles.

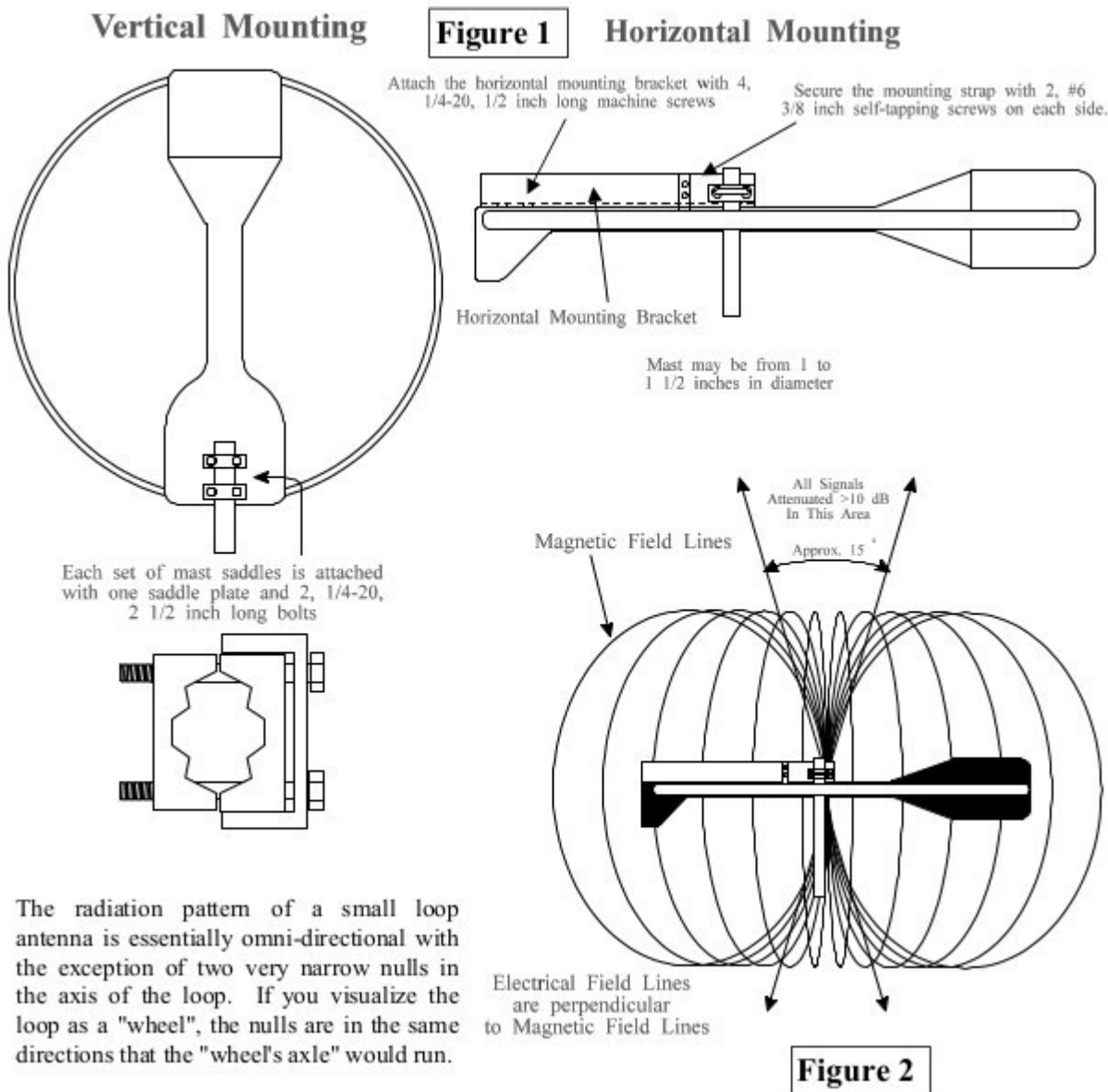
Snip From the PDF manual:

The MFJ "Super Hi-Q Loop" is the best performing and most convenient small space antenna available to amateurs today. The MFJ-1786 covers 10 MHz to 30 MHz. The MFJ-1788 covers 7 MHz to 21 MHz. The antenna is only 36 inches in diameter and features an indoor semi-automatic tuning unit with a built-in cross needle wattmeter. All tuning and control voltages are coupled to the antenna through the coaxial feedline for simple, neat, one wire installation.

The loop antenna element is constructed from thick walled aluminum pipe. Every current carrying joint is welded to eliminate high resistance pressure contacts that reduce efficiency. The loop element is tuned with a low-resistance, high current, variable capacitor. The outdoor electrical and mechanical components are protected by an attractive weather resistant molded cover.



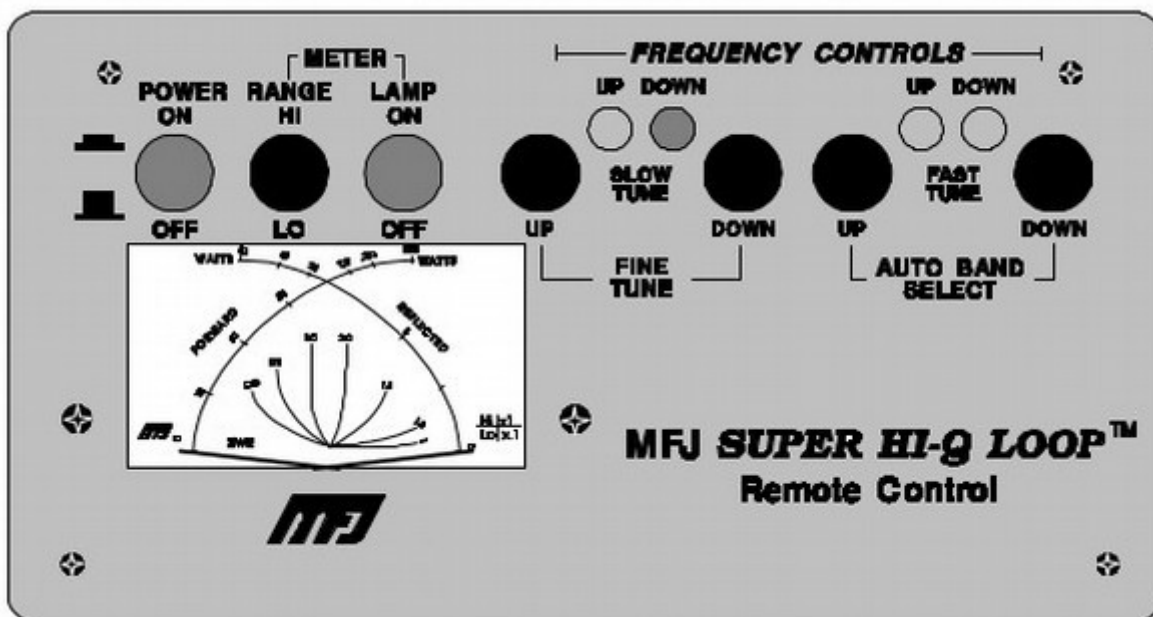
Begin snip



The radiation pattern of a small loop antenna is essentially omni-directional with the exception of two very narrow nulls in the axis of the loop. If you visualize the loop as a "wheel", the nulls are in the same directions that the "wheel's axle" would run.

Super easy-to-use! Only MFJs super remote control has Auto Band Selection. It auto-tunes to desired band, then beeps to let you know. No control cable is needed.

End snip



In actual use, the AUTO BAND SELECT functions in this manner:

- Press AUTO BAND SELECT UP button (left button) to latch it on.
- Wait until the LED goes out, then release the up button. This should take less than 40 seconds.
- Then press the DOWN button to latch it on for auto-detecting the frequency band. When the LED blinks rapidly, you are in the correct tuning range for your frequency.
- Now release the DOWN button and use the SLOW TUNE UP and DOWN buttons to finalize the minimum SWR reading on the meter. THE LEDS will blink to indicate tuning. This is a very sharp null, so may have to tap the up and down buttons to get the minimum SWR.

NEXT STEP: get an MFJ-1788 40-15M loop up to a height of 25 feet AGL and use it horizontally on the SW corner of the house!

<https://mfjenterprises.com/products/mfj-1786>

Price: \$499.95

FOR SALE

Alpha Antenna AL-705 Manually tuned Loop antenna for 20-6M complete with 40/80m addon, tripod, bags and mounting parts for \$250 OBO.

Ron Herring W7HD w7hd.torc@gmail.com

* OBO Or Best Offer

PURPOSE

TORTOLITA RADIO CLUB TORC
A group of amateur radio operators aiming to just have fun
located south of the Tortolita mountains near Marana
Serving the greater northwest Tucson area and beyond.
<ul style="list-style-type: none"> • No formalities • No regular meetings - just occasional weekend outings • Occasional newsletters will cover items of interest to the group • NO DUES • No repeaters • Emphasis is on having fun • No bureaucracy



Newsletter editor: Ron Herring W7HD

Material in this newsletter is public domain and may be freely shared.

Credit may be given as follows: ***Courtesy of Tortolita Radio Club***

Your feedback and articles are very much wanted. Please feel free to email me with **suggestions and articles** at w7hd.torc@gmail.com ...

If you are contributing an article, please include a photo of yourself as an attachment. The members would really like to be able to recognize you if they see you out in public (should that ever happen).

The word *tortolita* means little dove and is used here as a reference to the Tortolita Mountains north of Tucson, AZ USA.

The flag photo is courtesy of Ron Herring W7HD and was taken from my front porch.