

OUR 27TH YEAR!

EPARA BEACON



VOL. 7, NUMBER 6 THE OFFICIAL NEWSLETTER OF THE EASTERN PENNSYLVANIA AMATEUR RADIO ASSOCIATION JUNE 2023

NEXT CLUB MEETING: JUNE 8TH

Monroe County Public Safety Center, 100 Gypsum Rd Stroudsburg, PA 18360

Welcome to the EPARA Beacon! This newsletter is published monthly and is the official newsletter of the Eastern Pennsylvania Amateur Radio Association. EPARA has served the amateur radio community in the Pocono Mountains for over 25 years. We have been an ARRL affiliated club since 1995. We offer opportunities for learning and the advancement of skills in the radio art for hams and non-hams alike. EPARA supports Monroe County ARES/RACES in their mission of providing emergency communications for served agencies in Monroe County. Feel free to join us at one of our meetings or operating events during the year. The club meets on the second Thursday of every month, at the Monroe County 911 Emergency Control Center. The business meeting starts at 7:30 P.M. Anyone interested is invited to participate in our meetings and activities.

ZOOM Meeting Info: Meetings begin at 7:30PM!

<https://us02web.zoom.us/j/85463346031?pwd=bU1KcVZoaVZiVEUvdjRsUXlNNHkZkZz09>

Meeting ID: 854 6334 6031 Password: 244632



BLUE ANGELS IN THE POCONOS

From The President



It's June! So that means it's time for Field Day, this year Field Day weekend is June 24th and 25th. As usual we will start setup on Friday the 23rd at 2PM. Everyone is invited to visit the site in Big Pocono State Park. The details for the weekend will be discussed at our June 8th meeting. I invite everyone to stop at the top of the mountain and join in the fun.

MCARES has a new EC, John Victor K3WH. I want to thank John for stepping up to fill this vacancy. MCARES held its first meeting with John as our EC on Friday May 26th and I can tell already this is going to be a very active group having fun as we learn the skills to be effective emcomm operators. If you never really thought about being part of ARES, I urge you to consider it.

At the end of our last meeting, I announced that I would not be taking another term as EPARA president. I want to take this opportunity to let the membership know why. I will have served as President for 6 years at the end of my current term and in that time we have completely turned this club around. We are organized with accountability to the membership, we are now registered as a 501c3 nonprofit. The membership has grown, and we are very active with educational activities and exploration of new and cutting-edge aspects of amateur radio. I have just about completed what I set out to do when I took this leadership role. My work and family obligations prevent me from really doing much more. I have taken EPARA as far as I can, and I know it's time for someone else to take things to the next level. I hope you all understand, and I want to thank every one of you for the pleasure of being your President.

Well, that's it for now.
Our next meeting will be on June 8th, hope to see you then.

Chris, AJ3C

CONTACT INFORMATION

President Chris Saunders AJ3C: aj3c@gmx.com	Vice President Bob Matychak W3BMM: w3bmmqth@gmail.com
Secretary Kevin Forest W3KCF: w3kcf@outlook.com	Treasurer Scott Phelan KC3IAO: kc3iao@hobbyguild.com
Member at Large Eric Weis N3SWR: n3swr@ptd.net	ARES EC : Vacant

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EPARA Net list

Monroe county ARES-RACES – Sunday's 8:30 PM, 146.865 MHz, PL -100 Hz

The Monday Night Pimple Hill repeater 8:30 PM (Repeater freq = 447.275 with a - 5MHz offset) DMR TECH Net on TG314273* Time Slot 2

SPARK Information/Swap Net – Tuesday's 8:30 PM, 147.045 MHz, PL 131.8 Hz

The Wednesday Night EPARA Hot Spot DMR Rag Chew net at 8:30 PM, TG 3149822* Time Slot 2 (N3IS Talk Group)

EPARA Tech Net – Friday's 8:30 PM, 147.045 MHz, PL +131.8 Hz

*TG = Talk Group

President
Chris Saunders AJ3C

Vice President
Bob Matychak W3BMM

Secretary
Kevin Forest W3KCF

Treasurer
Scott Phelan KC3IAO

Member at Large
Eric Weis N3SWR

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John Victor K3WH

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Field Day Coordinator
Chris Saunders AJ3

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Martin Gonzalez KC3TOE

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Hamfest Coordinator
Walter Koras W3FNZ

Technical Program Coordinator
Bill Carpenter AB3ME

Lead VE
Chris Saunders AJ3C

Webmaster
Chris Saunders AJ3C



Announcements

AND UPCOMING EVENTS

EPARA Club Dues!

Club dues are now past due. Contact Scott KC3IAO via his email: KC3IAO@hobbyguild.com and you can send him a check or pay via PayPal.

Rookie Roundup!

Rookie Roundup is a contest aimed at Amateurs licensed for three years or less. This six-hour event is held three times per year (April, August and December). Rookies can contact anybody, while "Old Timers" make contact with only Rookies. Mentoring is a big part of this event!

All events run for 6 hours (from 1800 to 2359 UTC) on the dates shown below.

- Sunday, August 20, 2023, using RTTY.
- Sunday, December 17, 2023, using CW

West End Fair!

The West End Fair is coming August 20th, 2023!



2023 ARRL Field Day is June 24-25

Field Day is ham radio's open house. Every June, more than 40,000 hams throughout North America set up temporary transmitting stations in public places to demonstrate ham radio's science, skill and service to our communities and our nation. It combines public service, emergency preparedness, community outreach, and technical skills all in a single event. Field Day has been an annual event since 1933, and remains the most popular event in ham radio.

Murgas ARC 44th annual Hamfest and Computerfest

Event will be held Sunday July 2nd. For more info go here: <https://murgasarc.org/hamfest.htm>

Sussex County Hamfest!

Event will be held July 16th.. For more info please go here: <http://www.scarcnj.org/hamfest.html>



- Rule #1 of Amateur Radio, it is a hobby, unless you figured out a way to fashion a living out of it.
- Rule #2 of Amateur Radio, life is not a hobby and typically carries heavy responsibilities of everything that is not a hobby.
- Rule #3 of Amateur Radio, never give up a LIFE event for a Ham event. You may make some great memories at the Ham event, but the guilt you may carry missing a LIFE event can be a terribly heavy millstone.
- Rule #4 of Amateur Radio, as technology moves forward, so does Ham Radio - do what makes you happiest, experiment with other elements of Ham Radio as LIFE allows.
- Rule #5 of Amateur Radio, it is only Ham Radio, when confused always refer to Rule #1 through #4.



EPARA GENERAL MEMBERSHIP MEETING AGENDA

EPARA Membership Meeting Minutes May 11th 2023 General Membership Meeting 7:30Pm

Open meeting:

Meeting called to order at 7:30 pm on May 11th, 2023 by Chris AJ3C

Declaration of Quorum.

Total attending 23. Present at 911 Center 21. Present on Zoom 2. Visitors present

Pledge of Allegiance / Moment of silence:

Membership Meeting – Minutes April 13th 2023

Secretary - W3KCF:

Meeting minutes for April 13th 2023 were posted on the EPARA website. Chris – AJ3C asked members if they had seen and read the minutes from our previous meeting. He then asked if there were any questions or objections to the minutes as they were presented. With no objections, Chris asked for a motion to accept the minutes as presented:

Motion to accept minutes as read: By Ruth Ann – W9FBO 2nd by Al – KB3OVB Motion Passed

Treasurer's report:

Treasurer's report: For May 2023
Read by Scott – KC3IAO

Bank Account 4/30/2023 statement Opening Balance.: \$5517.83.

Income:

50/50: \$26.00
KC3NAO, KB2YED, KN6CW, KC3VQT

Interest: \$0.21

Expenses:

\$487.59 (Coax cable for 911 Center)

Closing Balance: \$5056.45

Our PayPal Account: 4/30/2023 statement opening balance: \$344.26

Income:

Dues: \$20.00 (KC3VIO)

Expenses

PayPal Fee: \$0.89

Closing Balance: \$364.37.

Motion to accept by Alex - KD2FTA Secoded by Brad – KF6FOX Motion Passed



EPARA GENERAL MEMBERSHIP MEETING AGENDA

Correspondence: None

Reports of officers and committee's:

Bill AB3ME – Program Committee

Alex KD2FTA is scheduled to make a presentation on Leo/Sat after the meeting.

Chris -AJ3C stated that those interested in giving a presentation, please contact him or Bill – AB3ME.

Walt – W3FNZ: EPARA Hamfest: (Absent)

Chris – AJ3C filled in for Walt and mentioned the Hamfest will be held again at the Moose Lodge on September 17th, 2023. He said many radios and gear have already been donated, and the club will not have to pay anything. In addition, Chris mentioned the Hamfest has been registered with ARRL.

ARES/RACES: Vote to Remove Charlie Borger – KB3JUF

Charlie Borger, KB3JUF expulsion from membership for inappropriate use of EPARA equipment while acting in an official capacity.

These actions caused damage to the reputation of EPARA. The matter was opened for debate with the membership.

Chris AJ3C made a motion for expulsion of KB3JUF, the motion was seconded by Brad – KF6FOX
A vote was conducted resulting in the removal Charlie Borger from EPARA Membership.

The vote tally for removal: Total Yes votes were 23. No Votes were 0. The vote was unanimous by all members present.

Chris has been in touch with Bob Wilson and our new EC (Emergency Coordinator will be John Victor - K3WH)

John – K3WH mentioned there would be a **Simplex Test Net** conducted on May 13th at 1300. The frequencies being utilized are as follows:

- VHF – 146.550 UHF – 446.000

The net control location will be the William Penn Fire Station in Reading, Pa.

Ruth Ann, W9FBO – PIO:

RuthAnn commented on the West End Fair. This year's event will begin on the 20th and end on the 26th. We will be looking for volunteers (2 shifts a day) to man the booth between 1400 and 2200 on each day. We discussed setting up a special event station, but it most likely won't happen until next year. Chris said he would check with West End regarding tickets. He believes we will be able to secure about 32 tickets. He also mentioned that the weekly nets would be broadcast from the fair.

RuthAnn then asked Chris, if it would be possible to set up a station, so kids could get some hands on experience with our CW simulator. If we have CW volunteers, all present thought it was a good idea.



EPARA GENERAL MEMBERSHIP MEETING AGENDA

Chris AJ3C -- Instruction and Training:

VE sessions began on the 4th Friday of each month at 6:00pm. Training classes will be postponed until after field day. There will be no VE session in June, as we will be up on the mountain for field day.

Chris AJ3C -- Website:

No Updates

Chris AJ3C -- Field Day

Chris mentioned that the 4th weekend in June (23rd -25th) we will be on Camelback Mountain for field day. Setup will begin on Friday the 23rd around 1300 for all those wishing to get their gear in place. The actual event will begin on Saturday the 24th at 1400 and conclude on Sunday the 25th at 1400. We will be setting up a CW station, HF station Satellite station and a 2m station. We are looking for all club members interested in participating in this event to please join us. In addition, we are inviting the local Boy Scouts to join in.

Martin KC3TOE - QuarterMaster

April felt like a very productive first month as Quartermaster. The radio room has been thoroughly cleaned and substantially upgraded. More upgrades are taking place as we speak. An initial inventory of radio room has been completed but subject to continued equipment updates.

A hat tip to the large crew involved in repairing the HF ladder line. Thank you to Rose KR1ALV for radio room cleaning and inventorying. Thank you to John K3WH for his substantial upgrades to the radio room. Many thanks to Sam KC3UTB for his truly deft demonstration of radio room capabilities to the public -- young and old -- during the Office of Emergency Service's Open House.

The radio room now has state-of-the-art capabilities including SDRUno control of the Yaesu FTDX10. The UHF/VHF radios have been reprogrammed. Both the EPARA and ARES/Races laptops have been completely upgraded and scrubbed -- new solid state drives, new batteries, and completely new install of software.

Besides the substantial equipment upgrades, there are two notable "service" improvements for club members.

First, we now are able to program over a dozen popular radios for local repeaters through the combined use of RT Systems and Repeater Book software. That is, we now have the necessary RT Systems programs and cables to program any of these radios. The list of radios we can program will be emailed separately.

Second, the radio room now has a webcam, so the radio room can now be used for instruction via Zoom. For example, last month's demonstration of SDRUno (aka a software front end) to the club's HF radio could now be presented with one operator-instructor in the radio room and a room full of attendees in conference room or at home.

Much is still pending to be done.

- Inventorying of the trailer and equipment will take place in the coming month, before it gets too sweltering hot in the parking lot.
- Inventorying of club equipment at members' homes will also take place in the coming month.
- Proposals on how to tag equipment and safeguard equipment are being hashed out now.
- All the equipment still needs to be tested to ensure that it is functioning properly.
- Clarify the distinction between EPARA and ARES/RACES equipment, if any.



EPARA GENERAL MEMBERSHIP MEETING AGENDA

Guidance on an "asset management" strategy will be sought:

1. For example, of all the functioning equipment, which equipment do we keep and which equipment do we dispose and how?
2. For example, if there is any equipment in disrepair, do we fix it or do we dispose of it as-is?
3. For example, what is the protocol or process to request software updates to the now pristine club computers?
4. For example, will members be able to borrow club equipment, and if so, for how long and under what conditions?
5. For example, should the club accept any donated equipment without first knowing how it will be stored and terms of the equipment's use.
6. For example, how to think through equipment storage – whether at member's home or paid storage – given radio room and trailer are at capacity.

One final reminder, we are guests -- very privileged guests -- to be able to use the Office of Emergency Services facility for our meetings, for our radio room, for our antennas, for our electricity & internet usage, and for our trailer. Unlike less well funded Counties, my sense is the Monroe County's OES and 911 Center don't really need us because they are so well funded, so well equipped, and so well staffed for emergencies. It's imperative that we behave as grateful and polite guests at their facility and eventually prove our value to them.

Bob W3BMM – Social Media:

EPARA Groups IO -- the club's new bulletin board on the cloud and group email service -- has been well received and quite active. Members are welcome to post any and all amateur radio-related questions and topics.

Al, KB3OVB: Membership:

As of the start of tonight's meeting, forty-nine (49) members have paid their 2023 dues. Those having failed to pay there 2023 dues will be removed from the membership roster. Annual dues are past due.

Eric N3SWR – Newsletter:

Eric wanted us to know that everything is well with the newsletter. Keep sharing content with him.

Sat-Com / EME Group: No updates

GOES Group: (Geostationary Satellite Server)

Alex – KD2FTA had set up a zoom presentation on April 27th at 1930 regarding satcom communications. He invited all that were interest in Satellite communications to join him. Alex was elected chairman of the group and plans on conducting meetings in the near future. At the end of the presentation, Alex asked all participants, if they had any suggestions for a group name. G.O.E.S. was thrown out there and it stuck. Thus, the name of our new group.

Old Business:

911 Center Antenna Repair:

Complete. Antenna has been tested and has good SWR



EPARA GENERAL MEMBERSHIP MEETING AGENDA

New business: None

Any other new business:

Martin asked what the club planned to do with any old or nonfunctional equipment? The question was tabled for a later date.

Votes/New Members: None

Announcements:

Club dues for 2023 are past due. If you would like to pay your 2023 EPARA dues using PayPal, please email Scott and include your Call Sign, Name, and Age. Scott will send you a PayPal invoice you can use to pay your dues.

KC3IAO@hobbyguild.com

Any Additional Announcements

Chris – AJ3C informed the members that this would be his last year as club president and he would not be running again.

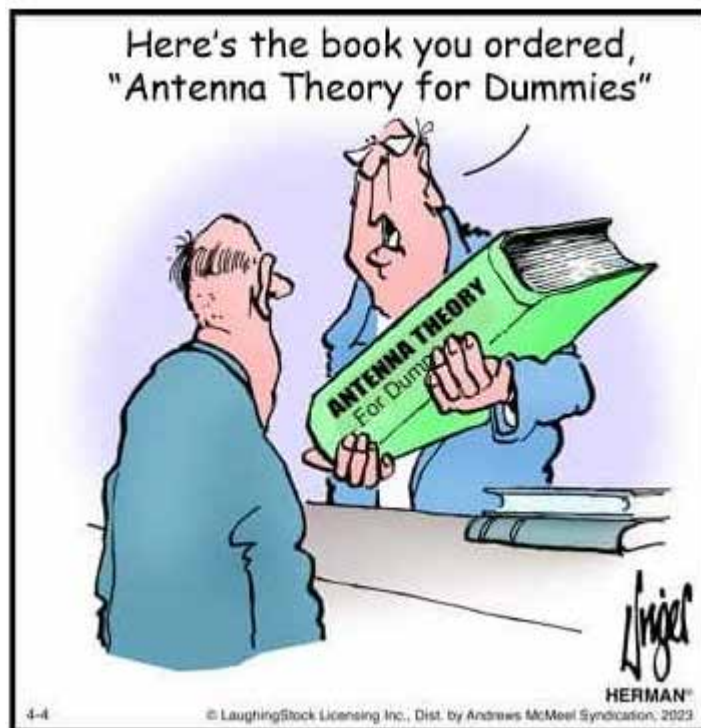
50/50 Raffle: Tonight's 50/50 Raffle was won by Len and he received \$36.00, which he donated back to the club.

Adjournment...

Meeting was adjourned at 2055:

Motion to close by RuthAnn – W9FBO and 2nd by Mike KC3PPB Motion Passed.

Secretary
Kevin Forrest
W3KCF



TEST YOUR KNOWLEDGE!

What is the effect of a terminating resistor on a rhombic antenna?

- A. It reflects the standing waves on the antenna elements back to the transmitter
- B. It changes the radiation pattern from bidirectional to unidirectional
- C. It changes the radiation pattern from horizontal to vertical polarization
- D. It decreases the ground loss

Last months answer was C. Packet information is organized in a specific order so the message may be reassembled and decoded. Each packet contain a header, which contains routing and handling information.

What is Digital Mobile Radio (DMR)?

- A European Telecommunications Standards Institute (ETSI) standard first ratified in 2005 and is the standard for "professional mobile radio" (PMR) users. Motorola designed their MotoTrbo line of radios based upon the DMR standards
- Meets 12.5kHz channel spacing and 6.25kHz regulatory equivalency standards
- Two slot Time Division Multiple Access (TDMA)
- 4 level FSK modulation
- Cutting edge Forward Error Correction (FEC)
- Commercial ETSI/TIA specs mean rugged performance and excellent service in RF congested urban environments (no intermod and other RF "hash")
- Equipment interoperability is certified by the DMR Association



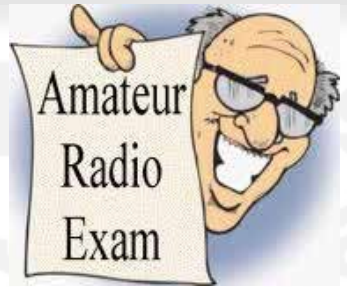
The EPARA HOT SPOT Wednesday night DMR rag chew is here!

Wednesday evenings at 8:30 PM local, 0:30 UTC!

***Tune your DMR radios to Talk Group 3149822 TS2 to join the
N3IS EPARA Hot Spot rag chew DMR net.***

Listen to the Tech Net Friday nights on the 147.045 repeater to learn more about joining this net and for upcoming ZOOM meetings announcements to learn more about programing your radios and hot spots!

Anyone looking to take an exam is encouraged to contact Chris AJ3C to preregister at least one (1) week in advance of the test date. If you have any questions or to register, Chris can be reached via email AJ3C@GMX.COM. VE sessions are being held the 4th Friday of each month at 6pm at the Monroe County 911 training center. Seating is limited for the time being so we can follow the health guidelines set forth by the county and state.



VE sessions are back - contact Chris AJ3C for further information!





ARES/RACES meetings are now being held on the fourth Friday of each month at 7PM. The meetings are once again being held at the 911 call center. These meetings will serve as training sessions covering several aspects of amateur radio emergency communications. We will start with traffic handling and the use of Radiograms and the ICS 213 general message form. Future sessions will cover the use of several ICS forms and the setup and use of digital communication modes including Winlink, Packet Radio, APRS, and the FLDIGI software program. Meeting are open to all, you do not need to be an ARES/RACES team member to attend.

Want to Put Your Ham Radio Skills to Good Use? Get Involved in EmComm!

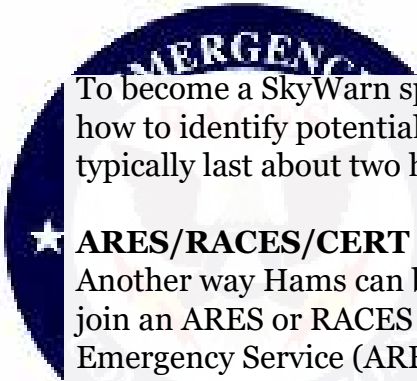
One of the missions of the Amateur Radio Service is for amateur radio operators to provide public service and emergency communications (EmComm) when needed. We act as a voluntary noncommercial communication service and pitch in to help our communities and first responders.

So, what organizations are out there for community-minded amateur radio operators and what can we do to help?

Join In

One good entry point into public service and emergency communications is to join SkyWarn, a volunteer program run by the National Weather Service (NWS) with more than 290,000 trained severe weather spotters. These volunteers help keep their local communities safe by providing timely and accurate reports of severe weather to the NWS.

Not all of these weather spotters are amateur radio operators, but many are. Amateur radio communications can report severe weather in real time. When severe weather is imminent, SkyWarn spotters are deployed to the areas where severe weather is expected. A net is activated on a local repeater and SkyWarn spotters who are Hams check into that net. The net control advises the spotters when they might expect to see severe weather, and the spotters report conditions such as horizontal winds, large hail, rotating clouds, and even tornadoes.



To become a SkyWarn spotter, you must attend a class that teaches you the basics of severe weather, how to identify potentially severe weather features, and how to report them. The classes are free and typically last about two hours. Check your local NWS website for class schedules.

★ ARES/RACES/CERT ★

Another way Hams can become involved in public service and emergency communication is to join an ARES or RACES group. Technically, these are two separate services—the Amateur Radio Emergency Service (ARES) is run by the ARRL, while the Radio Amateur Civil Emergency Service (RACES) is a function of the Federal Emergency Management Agency (FEMA). Amateur radio operators who typically take part in one also take part in the other.

To participate in RACES, you'll need to take some self-study FEMA courses in emergency preparedness and emergency-response protocols. Classes may or may not be required to participate in ARES. These requirements are set by each individual ARES group. To get involved with either ARES or RACES, ask your local club members when they meet. You can also contact the Section Manager or Emergency Coordinator for your ARRL section. To contact them, [click here](#) and find the section that you live in.

Amateur radio operators belonging to ARES (and its predecessor, the Amateur Radio Emergency Corps) have responded to local and regional disasters since the 1930s, including the 9/11 attacks, and Hurricane Katrina and Hurricane Michael, among others.

The Community Emergency Response Team (CERT) program trains volunteers—both Hams and non-hams—how to be prepared for disasters that may impact their area. They provide basic disaster response skills, such as fire safety, light search and rescue, team organization, and disaster medical operations. CERT offers a nationwide approach to volunteer training and organization that first responders can rely on during disaster situations, allowing them to focus on more complex tasks.

What Gear Do You Need?

For most local needs, a 5-watt VHF/UHF handheld transceiver is sufficient for utilizing local repeaters to relay messages and report on conditions as they exist. Replacing the radio's stock antenna with a higher gain antenna or connecting it to a magnetic mount on a vehicle will increase range significantly.

Even better is a VHF/UHF mobile radio installed in your vehicle with 25 or more watts output and a good mobile antenna. In the event the repeater loses power, you can talk over a considerably larger area in simplex mode with the extra power and a good mobile antenna.

If you work with an ARES or RACES group, you may be asked to act as a county control station. In this capacity, you'd need both HF and VHF transceivers in a fixed location, such as your house, with a good antenna system and emergency power capabilities like a generator or batteries. This allows you to make contacts within your state and throughout the U.S.

Helping Hams

Ham radio can play a key role in emergency situations. Here are a few examples:

- Ham radio connected firefighters and police departments, Red Cross workers, and other emergency personnel during the 2003 blackout that affected the northeast United States.
- In 2017, fifty amateur radio operators were dispatched to Puerto Rico to provide communications services in the wake of Hurricane Maria.
- Amateur radio operators provided communications in the aftermath of the Boston Marathon bombing when cellphone systems became overloaded.

- During Hurricane Katrina, more than one thousand ARES volunteers assisted in the aftermath and provided communications for the American Red Cross.
- During the devastating Oklahoma tornado outbreak that began in May 1999, amateur radio operators—giving timely ground-truth reports of severe weather—played a critical role in the warning and decision-making processes at the NWS Weather Forecast Office in Norman, Oklahoma.

Credit: <https://www.onallbands.com/want-to-put-your-ham-radio-skills-to-good-use-get-involved-in-emcomm/>





Looks like summer has come early this year. The rain is totally missing from the forecast and our lawns and gardens are turning brown. This is the weather I would expect in August. The one thing that concerns me is we could be in for one heck of a hurricane season right around the corner. The heat buildup in the ocean will add energy to the storms. Take a good glance over your gear - batteries, emergency kits, flash lites, test your generators, etc. Now is the time!

Field Day is four weeks away too and I think we will be in for some fun up on the mountain. We do have some interesting nw equipment to try out for sure - especially in the satellite department. Thanks to all those involved for making that happen!!

I hope to meet you all there and maybe I'll have those beer brats once again :)

That's it for now, see you all at the next meeting.

Eric N3SWR, 73



“Common sense is like deodorant. The people who need it most never use it.”
—Anonymous

Topics of Interest

Have an idea you would like to share with your fellow hams? Interested in one of the new exotic digital modes and would like to get others interested in it too? Found a blog somewhere that you think others would find interesting? Members are encouraged to submit items of interest for publication. Submitted articles (are suggested) to be no more than a page or two in length and may be edited for content and grammar. The EPARA officers and newsletter editor reserve the right to determine which items will be included in The Beacon. The deadline for publication is the 15th of the month. The publication date will be at the end of each month. Copyrights are the property of their respective owners and their use is strictly non-profit/educational and intended to foster the spirit of amateur radio.



If you've taken pictures at an event and would like to submit them for possible inclusion in the newsletter, forward them to the newsletter editor. Please send action shots, if possible. Faces are often preferable over the backs of heads. Many hams may be way too overweight, so please consider using a wide-angled lens.

Disclaimer

The Beacon is not representative of the views or opinions of the whole organization, and such views and opinions expressed herein are of the individual author(s).

Contest Corral

June 2023

Check for updates and a downloadable PDF version online at www.arrl.org/contest-calendar.

Refer to the contest websites for full rules, scoring information, operating periods or time limits, and log submission information.

Start - Finish	Date-Time		Bands	Contest Name	Mode	Exchange	Sponsor's Website
	Date-Time	Date-Time					
1	1700	1 2100	28	NRAU 10m Activity Contest	CW,Ph,Dig	RS(T), 6-char grid square	nrau.net/nrau-contests-in-general
1	2000	1 2200	1.8-28.50	SKCC Sprint Europe	CW	RST, SPC, name, mbr or "none"	www.skccgroup.com
2	0000	4 2359	1.8-28.50	PODXS 070 Club 3 Day Weekend Contest	Dig	Mbr or "0000"	www.podxs070.com
2	1900	2 1959	3.5.7	HAGNS Sprint Memorial Contest	CW	RST, mbr or "NM"	radioamator.honlapepites.hu/?p=1280
3	0000	4 2359	28	10-10 Int'l Open Season PSK Contest	Dig	Name, SPC, mbr	www.ten-ten.org
3	0200	3 1459	1.8-28	Tisza Cup CW Contest	CW	RST, CQ zone	www.tiszacup.eu
3	0600	3 0800	7.14	Wake-Up! QRP Sprint	CW	RST, serial, suffix of previous QSO	qrp.ru/contest/wakeup
3	1300	4 0100	1.8-28, 50,144	Kentucky QSO Party	CW,Ph,Dig	RS(T), KY county or SPC	www.kyqsoparty.org/rules
3	1300	4 1300	50	UKSMG Summer Contest	not specified	RST, serial, 6-char grid square	uksmg.org/summer-contest-rules.php
3	1500	4 1459	1.8-28	IARU Region 1 Field Day, CW	CW	RST, serial	www.darc.de
3	1500	4 1500	1.8-28	RSGB National Field Day	CW	RST, serial	www.rsgbcc.org
3	1800	4 2359	1.8-28.50	ARRL Int'l Digital Contest	Dig (no RTTY)	4-char grid square	contests.arrl.org/dig
5	1900	5 2030	3.5	RSGB 80m Club Champ, Data	Dig	RST, serial	www.rsgbcc.org
6	0100	6 0300	3.5-28	ARS Spartan Sprint	CW	RST, SPC, pwr	arsqrp.blogspot.com
7	1700	7 2100	144	VHF-UHF FT8 Activity Contest	FT8	4-char grid square	www.ft8activity.eu
8	1900	8 2000	3.5.7	EACW Meeting	CW	RST, nickname, mbr or DXCC prefix	www.eacwspain.es/eacwmeeting
10	0000	10 2359	1.8-28	VK Shires Contest	CW,Ph	RS(T), VK shire, or CQ zone	www.wia.org.au
10	1100	10 1300	14.21	Asia-Pacific Sprint, SSB	Ph	RS, serial	jstc.org/apsprint/aprule.txt
10	1200	11 1200	3.5-28	Portugal Day Contest	CW,Ph	RS(T), CT district or serial	portugaldaycontest.rep.pt/rules.php
10	1200	11 2359	1.8-28.50	SKCC Weekend Sprintathon	CW	RST, SPC, name, mbr or "none"	www.skccgroup.com
10	1400	10 1800	144,432	AGCW VHF/UHF Contest	CW	RST, serial, pwr, 6-char grid square	www.agcw.de/contest/vhf-uhf
10	1500	11 1500	3.5-28	GACW WWSA CW DX Contest	CW	RST, CQ zone	gacw.ar
10	1600	11 1600	50	REF DDFM 6m Contest	CW,Ph	RS(T), serial, 4-char grid square	concours.r-e-1.org
10	1800	12 0259	50 and up	ARRL June VHF Contest	CW,Ph,Dig	4-char grid square	www.arrl.org/june-vhf
11	1700	11 2200	All, no WARC	Cookie Crumble QRP Contest	CW,Ph,Dig	RS(T), SPC, cookie number, name	w3atb.com/cookie-crumble
12	0000	12 0200	1.8-28	4 States QRP Group 2nd Sun Sprint	CW,Ph	RS(T), SPC, mbr or pwr	www.4sqrp.com
14	0030	14 0230	3.5-14	NAQCC CW Sprint	CW	RST, SPC, mbr or pwr	naqcc.info
14	1700	14 2100	432	VHF-UHF FT8 Activity Contest	FT8	4-char grid square	www.ft8activity.eu
14	1900	14 2030	3.5	RSGB 80m Club Champ, CW	CW	RST, serial	www.rsgbcc.org
15	1900	15 2000	3.5-14	NTC QSO Party	CW	Max 25 WPM: RST, mbr, or "NM"	pi4ntc.nl/ntcqp
16	1200	16 1300	7	SARL Youth QSO Party	Ph	RS, age	www.sarl.org.za
17	0000	17 2359	3.5-28	Pajajaran Bogor DX Contest	Ph	RS, serial	pbdx-contest.com/rules
17	0000	18 2359	1.8-28	All Asian DX Contest, CW	CW	RST, 2-digit age	www.jarl.org/English
17	0000	18 2359	50	SMIRK Contest	CW,Ph	4-char grid square, mbr (optional)	smirk.info/contest.html
17	1400	18 1400	50	IARU Region 1 50 MHz Contest	CW,Ph	RS(T), serial, 6-char grid square	www.iaru-r1.org
17	1500	18 1500	1.8	Stew Perry Topband Challenge	CW	4-char grid square	smirk.info/contest.html
17	1600	18 0400	3.5-28	West Virginia QSO Party	CW,Ph,Dig	RS(T), WV county or SPC	www.qsl.net/wvsarc
17	1800	17 1959	1.8-28.50	Feld Hell Sprint	Dig	mbr, SPC, grid square	sites.google.com/site/feldhellclub/Home
17	1800	17 2359	3.5-14.18, 21,24,28, 2 rpts	ARRL Kids Day	Ph	name, age, QTH, favorite color	www.arrl.org/kids-day
18	0800	18 1400	50	WAB 50 MHz Phone	Ph	RS, serial, WAB square or country	wab.intermip.net
21	0030	21 0230	3.5-14	NAQCC CW Sprint	CW	RST, SPC, mbr or pwr	naqcc.info
21	1700	21 2100	1.2G	VHF-UHF FT8 Activity Contest	FT8	4-char grid square	www.ft8activity.eu
22	1900	22 2030	3.5	RSGB 80m Club Champ, SSB	Ph	RS, serial	www.rsgbcc.org
24	0600	24 1700	3.5-28	UFT QRP Contest	CW	RST, QRP/QRO, mbr or "NM"	www.uft.net/concours-qrp-uft
24	1200	25 1200	1.8-28	His Maj, King of Spain Contest, SSB	Ph	RST, EA province or serial	concursos.ure.es
24	1800	25 2100	All, no WARC	ARRL Field Day	CW,Ph,Dig	Number of transmitters, operating class, ARRL/RAC Section or "DX"	www.arrl.org/field-day
26	1900	26 2030	3.5-14	RSGB FT4 Contest	FT4	Signal report	www.rsgbcc.org/hf
28	0000	28 0200	1.8-28.50	SKCC Sprint	CW	RST, SPC, name, mbr or "none"	www.skccgroup.com

There are a number of weekly contests not included in the table above. For more info, visit: www.qrpfoxhunt.org, www.ncccsprint.com, and www.cwops.org. All dates and times refer to UTC and may be different from calendar dates in North America. Contests are not conducted on the 60-, 30-, 17-, or 12-meter bands. Mbr = Membership number. Serial = Sequential number of the contact. SPC = State, Province, DXCC Entity. XE = Mexican state. Listings in blue indicate contests sponsored by ARRL or NCJ. The latest time to make a valid contest QSO is the minute listed in the "Finish Time" column. Data for Contest Corral is maintained on the WA7BNM Contest Calendar at www.contestcalendar.com and is extracted for publication in QST 2 months prior to the month of the contest. ARRL gratefully acknowledges the support of Bruce Horn, WA7BNM, in providing this service.

AMATEUR RADIO SPECIAL EVENT STATIONS!

05/31/2023 | 1889 Johnstown Flood Anniversary May 31-Jun 4, 1000Z-1800Z, N3N*, Johnstown, PA. Cambria County Dept. Emergency Services. 1.870 3.850 7.073 7.240; 20 15 meters and tech portion 10 meters . Certificate. Des Warzel, PO Box 116, Twin Rocks, PA 15960. *KC3ULO, ND3L, and N3YFO also operating. Certificate via operator's QRZ email; will send back via E-MAIL; or direct with SASE. dustydes@aol.com

06/01/2023 | D-Day Commemoration Jun 1-Jun 14, 1300Z-2200Z, W2W, Hunt Valley, MD. Amateur Radio Club of the National Electronics Museum. 14.244 14.044 7.244 7.044. Certificate & QSL. K3NY, 108 Brent, Arnold, MD 21012. Amateur Radio Club of the National Electronics Museum (ARCNEM) will operate W2W in commemoration of the anniversary of D-Day and the role of electronics in WWII. If the Museum station is not available, operators may operate from their home stations. Primary operation will be June 3-June 6 with additional operation possible during the June 1-2 and 7-14 periods as operator availability permits. Operation on 80M (3.544, 3.844), additional bands and digital modes possible during event. Frequencies +/- according to QRM. QSL and Certificate available via SASE; details at ww-2.us ww-2.us

06/02/2023 | U.S.C.G. Auxiliary 84th Anniversary Jun 2-Jun 4, 1600Z-1800Z, N3G, Middletown, DE. U.S.C.G. Auxiliary 5th Northern District Sector Delaware Bay. 21.059 14.059 21.325 28.310. QSL. William Girard Begley SR, 3 PANCOAST AVE, Aston, PA 19014. Operating from Augustine Beach Delaware

06/02/2023 | 84th Anniversary of the Coast Guard Auxiliary and safe boating awareness Jun 2-Jun 4, 1200Z-0400Z, W8C, Rochester, MI. US Coast Guard Auxiliary 9th Central . 28.3400 14.2870 7.272 local VHF/UHF FM repeaters. QSL. USCGAUX 84th Anniversary Special Event, 1853 Willowood Rd, Rochester, MI 48307. <https://www.qrz.com/db/W8C>

06/02/2023 | Celebrating the 84th anniversary of the US Coast Guard Auxiliary.

Jun 2-Jun 4, 0001Z-2359Z, N6Z, Santa Cruz, CA. US Coast Guard Auxiliary, District 11N, Division 6.. 7.074 21.074 28.074 28.430. QSL. Alan Stanton, 716 California Street, Santa Cruz, CA 95060. wow.uscgaux.info/content.php?unit=113

06/02/2023 | Salvation Army Donut Day Jun 2, 1500Z-2200Z, K0SAL, Lincoln, NE. Salvation Army Team Emergency Radio Network. 14.265 7.240. Certificate & QSL. C/o Charles Bennett, KD0PTK, PO Box 67181, Lincoln, NE 68506. kd0ptk@gmail.com

06/02/2023 | Ships On The Air Jun 2-Jun 4, 0400Z-2359Z, W4A, K4D, K4T, Jacksonville, FL. USS Orleck Radio Club/NORTH FL AMATEUR RADIO SOCIETY. 14.275 7.250 3.940. Certificate. USS Orleck, 5547 LOFTY PINES CIR S, Jacksonville, FL 32210. Ist activation of the Radio Communications Central aboard the USS Orleck now home-ported in Jacksonville Florida. johnr1000@aol.com

06/02/2023 | U.S. Coast Guard Auxiliary 84th Anniversary and Boating Safety Jun 2-Jun 4, 0400Z-2359Z, N2S, Marlton, NJ. United States Coast Guard Auxiliary. 7.250 14.250. QSL. Mike Slepian, 12 Continental Lane, Marlton, NJ 08053. Recognizing the 84th anniversary of the United States Coast Guard Auxiliary, the volunteer component of the US Coast Guard, providing support for boating safety, patrols, Helo-Ops, Communications, watch standing and much more. wow.uscgaux.info/content.php?unit=053-18-08

06/02/2023 | US Coast Guard Auxiliary 84th Anniversary Jun 2-Jun 4, 0000Z-0000Z, W2K, Merchantville, NJ. US Coast Guard Auxiliary District 5NR. 28.330 14.270 7.70. QSL. David J King Sr, 4618 Arrison Crt, Merchantville, NJ 08109. dave0644@hotmail.com

06/03/2023 | 64th Anniversary of Lancaster - Fairfield County Amateur Radio Club Jun 3-Jun 4, 1300Z-0300Z, K8QIK, Lancaster, OH. Lancaster & Fairfield Cty Amateur Radio. 28.400 14.280 7.240. QSL. Guy Ingram, 8870 Golden Leaf Court

AMATEUR RADIO SPECIAL EVENT STATIONS!

Northwest, Pickerington, OH 43147. k8qik.org
06/03/2023 | Audie Murphy

Jun 3, 1400Z-2100Z, W2A, Christiansburg, VA.
New River Valley Amateur Radio Club. 14.240
7.200 3.860. QSL. Danny Wylam, 710 McDaniel
Dr, Christiansburg, VA 24073-3848. Remembering
Audie Murphy, America's most decorated WW2
soldier. Operating near the site of the 1971 plane
crash on Brush Mt. VA that took Audie's life
dannywylam@gmail.com

06/03/2023 | Museum Ship Weekend Jun 3-Jun
4, 1500Z-2030Z, W5KID, Baton Rouge, LA. Baton
Rouge Amateur Radio Club. 7.040 7.250 14.040
14.250. QSL. USS Kidd Amateur Radio Club, 305 S.
River Rd., Baton Rouge, LA 70802. CW, SSB, FT8
Operation aboard the USS Kidd (DD-661), a World
War II Fletcher-class destroyer. www.qrz.com/db/
w5kid

06/03/2023 | Museum Ship Weekend/Abraham
Crijnsen Jun 3-Jun 4, 0000Z-2359Z, PA37AC,
Den Helder, NETHERLANDS. Dutch Navy Radio
Amateur Club. All bands, all modes. Certificate. See
website, for information on receiving a certificate,
NETHERLANDS. pa3cni@hotmail.com or www.
marac-radio.nl

06/03/2023 | Museum Ships Weekend Jun
3-Jun 4, 0000Z-2359Z, NI6IW, San Diego, CA. USS
Midway Museum Ship. 14.320 8.250 14.070 PSK31
DSTAR on Papa system repeaters. QSL. USS Midway
Museum Ship COMEDTRA, 910 N Harbor Drive,
San Diego, CA 92101. www.qrz.com/db/ni6iw

06/03/2023 | Museum Ships Weekend Jun 3-Jun
4, 1400Z-2030Z, K8E, Toledo, OH. Toledo Mobile
Radio Association and National Museum of the
Great Lakes. 7.074 7.260 14.074 14.260. QSL. Col.
James M. Schoonmaker K8E, P.O. Box 9673, Toledo,
OH 43697. Please Include a Self Addressed Stamped
Envelope tmrahamradio.org

06/03/2023 | Museum Ships Weekend - Nuclear
Ship Savannah Jun 3-Jun 4, 1300Z-2100Z, K3SAV,
Baltimore, MD. Nuclear Ship Savannah ARC. 7 14 21
28. QSL. ULIS FLEMING, 980 PATUXENT ROAD,

Odenton, MD 21113. Please check spotting networks
since we may be operating anywhere on 40, 20, 15,
or 10m SSB or CW. qrz.com/db/k3sav

06/03/2023 | Museum Ships Weekend - USS
Tennessee Jun 3-Jun 4, 0000Z-0359Z, W4BSF,
Oneida, TN. Big South Fork Amateur Radio Club.
14.315. QSL. USS Tennessee QSL Coordinator,
PO Box 5029, Oneida, TN 37841. Big South Fork
Amateur Radio Club and The USS Tennessee
Battleship Museum will be operating on both 20 and
40 meters with other bands to be determined based
on availability of volunteers and equipment. QSL:
BSFARC W4BSF, PO Box 5029, Oneida, TN 37841
requires SASE before July 31st. More information
at <https://bsfarc.org/museum-ship-weekend> [https://](https://bsfarc.org/museum-ship-weekend)

06/03/2023 | Museum Ships Weekend 2023
NAUTILUS Jun 3-Jun 4, 0000Z-2359Z, N1S,
Groton, CT. Generations ARC. 7.225 14.250; all
bands, all modes. QSL. Via bureau to K3LBD, or
direct to Generations ARC, 110 Vinegar Hill Road,
Gales Ferry, CT 06335-1713. Nuclear Submarine
USS NAUTILUS SSN 571. NAUTILUS info [http://](http://www.usnautilus.org/)
www.usnautilus.org/. Event Info: [www.qrz.com/db/](http://www.qrz.com/db/k3lbd)
k3lbd www.qrz.com/db/n1s

06/03/2023 | Museum Ships Weekend Event
(MSWE) Jun 3-Jun 4, 1500Z-1900Z, N7F, Athol,
ID. Kootenai Amateur Radio Society. SSB/CW/FT8;
28.350, 14.320, 14.040, 7.250, 7.035, 3.535. QSL.
KARS MSWE, PO Box 1765, Hayden, ID 83835.
www.qrz.com/db/N7F, <http://nj2bb.org/museum> or
www.k7id.org

06/03/2023 | MUSEUM SHIPS WEEKEND
EVENT 2023 Jun 3-Jun 4, 0001Z-2359Z, NJ2BB,
Camden, NJ. Battleship New Jersey Amateur Radio
Station. 7.272 14.262 7.044 14.044. QSL. Margaret
Burgess, 150 Schooner Avenue, Barnegat, NJ 08005.
nj2bb.org

06/03/2023 | NB9QV USS Cobia Special Event
Jun 3-Jun 4, 1400Z-2100Z, NB9QV, Manitowoc,
WI. USS Cobia Amateur Radio Club. 7.240 14.240.

DATE	GMT	RS	2WAY	MHZ	QSL	on _____ MHz RST _____ QRM _____ QRN _____
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AMATEUR RADIO SPECIAL EVENT STATIONS!

Certificate. kc9yl@arrl.net, kc9yl@arrl.net, n/a. We will be participating in the Museum Ships Weekend as NB9QV on June 3-4, 2023 from 1400z-2100z each day, on 7.240 and 14.240. We will be operating aboard the WWII submarine, the USS Cobia SS-245, docked next to the Wisconsin Maritime Museum in Manitowoc, WI. Electronic QSL certificates are available upon request. Please contact kc9yl@arrl.net and provide your call sign, name, band, date and time of contact. For more information, please check our QRZ page - <https://www.qrz.com/db/NB9QV> <https://www.qrz.com/db/NB9QV>

06/04/2023 | Lewis and Clark Trail on the Air Jun 4-Jun 19, 0000Z-0000Z, W7AIA, Vancouver, WA. Clark County Amateur Radio Club. 14.255 14.325 14.074 21.040. Certificate. LCTOTA, P.O. Box 1424, Vancouver, WA 98668. 20 clubs from over 16 states will be active covering the route that Lewis and Clark took on their cross country journey. For more information: info@lctota.org or www.ctota.org

06/05/2023 | BSA Order of the Arrow Section E20 Conclave Jun 5-Jun 12, 0000Z-2359Z, W1C, Russell, MA. Western Massachusetts Council, BSA. 7.190 14.290 21.360 28.390. Certificate. Mike DeChristopher, N1TA, 130 Park Dr., Westfield, MA 01085. CW, SSB, WSJT-modes; all HF bands; all hours

06/09/2023 | Dept. of Transportation Special Event Jun 9-Jun 11, 0000Z-0000Z, W1T, Prospect, CT. KB1FGC. 7.040 14.040 14.300 21.040. Certificate. Rich Guerrero, 19 Terry Rd, Prospect, CT 06712. Band frequencies are a rough estimate. marzo7088@yahoo.com

06/09/2023 | Greater Gardner Relay For Life Jun 9-Jun 10, 2200Z-1800Z, N1C, Gardner, MA. Mohawk Amateur Radio Club . 14.227 7.227 3.927. QSL. Kevin Erickson, 194 Conant Street, Gardner, MA 01440. Special event station promoting the local American Cancer Society Relay For Life event and cancer awareness. nation wide. Frequencies will be plus or minus QRM or nets as necessary. Please send inquiries and QSL card requests to

mohawkarc@gmail.com with N1C in subject line. www.mohawkarc.com

06/10/2023 | Appleton 72nd Flag Day Parade Jun 10, 1900Z-2030Z, W9ZL, Appleton, WI. Fox Cities Amateur Radio Club. 14.250. QSL. FCARC, P.O. Box 2345, Appleton, WI 54912. The Fox Cities Amateur Radio Club will be participating in the Appleton Flag Day Parade. While on the parade route they will operate club station W9ZL on 14.250MHz. In addition they will be monitoring the club 146.76 repeater. The repeater has a PL tone of 100 and negative offset. QSL can be sent to FCARC PO Box 2346 Appleton WI 54912 www.fcarc.club

06/17/2023 | Audie Murphy's birthday celebration Jun 17-Jun 23, 0000Z-2359Z, W5M, Greenville, TX. Sabine Valley Amateur Radio Association. 7.235 14.280 21.400 28.450. QSL. K5GVL Sabine Valley Amateur Radio Association, PO Box 843, Greenville, TX 75403-0843. Celebrating the life of Audie Murphy, Hunt County Texas' war hero and Congressional Medal of Honor recipient. We will be operating CW, FT8, SSB from locations around the county and from the Audie Murphy American Cotton Museum grounds. www.k5gvl.com/audie-murphy

06/17/2023 | Find Your Voice Jun 17, 1700Z-2100Z, K6L, Ridgecrest, CA. Sierra Amateur Radio Club/Ridgecrest Branch Library . 28.405. QSL. SARC/K6L, P.O. Box 1442, Ridgecrest, CA 93556-1442. If you would like a QSL card, please send your QSL card with an appropriately sized self-addressed envelope to: SARC/K6L, PO Box 1442, Ridgecrest, CA, 93556-1442. wa6ybn@gmail.com or www.wa6ybn.com

06/17/2023 | Kearney Nebraska Sesquicentennial Jun 17, 1300Z-2200Z, W0KY, Kearney, NE. Midway Amateur Radio Club. 14280 7235 21300 28345. Certificate. Henry Angle, 307 E 35th St, Kearney, NE 68847. w0ky.org

06/24/2023 | 82nd National Speleological Society Annual Convention Jun 24-Jun 30, 1800Z-1800Z, K8C, Elkins, WV. National Speleological Society

AMATEUR RADIO SPECIAL EVENT STATIONS!

Radio Club, K7NSS. 14.285 14.050 7.195 7.050.
 QSL. Sam Rowe, KG9NG, 2749 Commercial Ave,
 Madison, WI 53704-4868. K8C@NSSCES.ORG

06/24/2023 | ARRL Field Day Jun 24-Jun 25,
 1400Z-2200Z, K4PAR, Eatonton, GA. Piedmont
 Amateur Radio Club. 20m 40m. QSL. Larry Gage,
 1081 Dockside Place, Greensboro, GA 30642. The
 PARClub/K4PAR Red Top tower site is open to
 the public during the 2023 ARRL Field Day. Come
 for the friends, food, technology, and contesting.
 Starting 2:00pm, Saturday, June 24. k4par.org

06/24/2023 | Field Day 2023 Jun 24-Jun 25,
 1800Z-1800Z, N6R, Thousand Oaks, CA. Ventura
 County Amateur Radio Society (VCARS) &
 joined by Simi Settlers ARC (SSARC) & Others
 TBA. 21.320 14.255 7.260 3.810. QSL. Peter Heins,
 1559 norwich ave, Thousand Oaks, CA 91360.
 Special Events Station, N6R, shall operate from
 the Grounds of the Ronald Reagan Presidential
 Library & Museum, California during Field Day
 2023. "N" commemorates Nancy Reagan; "6" refers
 to California; "R" refers to President Reagan. The
 Ventura Co. Amateur Radio Society (VCARS) has
 operated Field Day as N6R from this site since year
 2020. [https://www.reaganfoundation.org/programs-
 events/events-calendar/american-radio-relay-
 leagues-field-day/](https://www.reaganfoundation.org/programs-events/events-calendar/american-radio-relay-leagues-field-day/) or cvars.org

06/24/2023 | South Lyon Area ARC 50th
 Anniversary / ARRL FD Jun 24-Jun 26,
 0000Z-0000Z, N5O, Howell, MI. South Lyon
 Area ARC. 50.313 FT8 All HF Bands and Modes.
 Certificate & QSL. SLAARC, 510 Highland Ave PMB
 412, Milford, MI 48381. slaarc.com

06/28/2023 | WWI Code Talkers Honored at
 Choctaw Youth Day Camp Jun 28, 1500Z-2100Z,
 W5D, Tuskahoma, OK. Vm Okla Nan Ola ARC.
 7.217 14.317 21.317 28.317. Certificate. Jeff Sharrock,
 AF4CM, 12715 N 410 Road, Hulbert, OK 74441. In
 late June of 1917 the first U.S Divisions arrived in
 France to join the allied effort to (as those putting
 their lives on the line believed) 'make the world safe
 for democracy' and to put an end to the horrors

and enduring stalemate of WWI. With this initial
 group of American soldiers was Choctaw native
 Cpl. Otis W. Leader, the first of a massive contingent
 of Native Americans who joined the AEF; and one
 of a select group who would later be called upon
 to use their native language as a secret weapon to
 safeguard communications in the front lines. On
 the anniversary of their arrival, this Special Event
 honors the WWI Code Talkers, and in particular
 the nineteen men from the Choctaw nation who
 were tasked with that mission. The event coincides
 with a Choctaw youth day camp for ages 11-14
 years at the capitol grounds, which is also the site
 of the museum, housing a code talker exhibit, and
 monuments honoring these men. Much like an
 ARRL Field Day GOTA station, young people will
 be on the radios, getting a baptism in amateur radio,
 and will have a chance to learn and talk about the
 legacy of these heroes. We invite and encourage
 those who love American history or care about the
 future of the Amateur Radio Service to have a QSO
 with W5D during this single day event and help
 leave a lasting impression. Please look up callsign
 W5D on QRZ.com for information on receiving the
 Certificate. VmOklaNanOlaARC@gmail.com

06/30/2023 | Engineers Day Sault Ste Marie
 Michigan Soo Locks Jun 30, 1300Z-2300Z, W8S
 , Sault Sainte Marie, MI. Eastern Upper Peninsula
 Amateur Radio (EUPAR) . 7.227 14.285. QSL.
 Robert Donaldson, 1616 W Mulligan Dr, Sault Sainte
 Marie, MI 49783. robert.jklschool@gmail.com or
www.facebook.com/EUPARCLUB

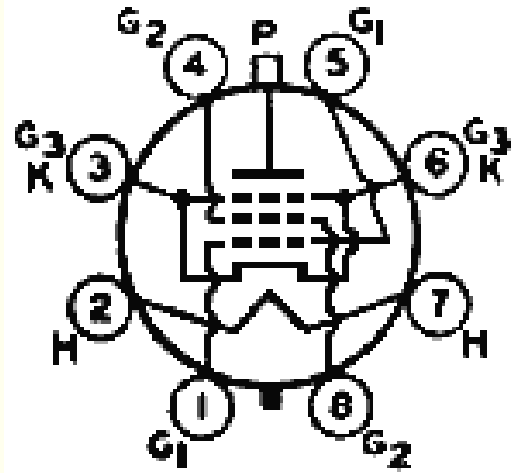
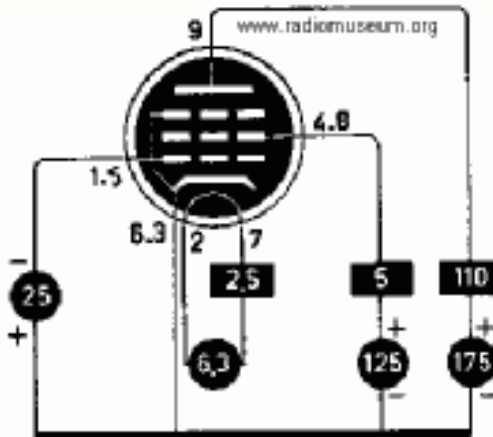
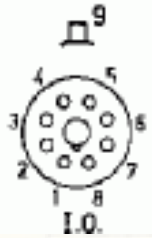
06/30/2023 | Granite Mountain Hotshots Memorial
 Event Jun 30-Jan 1, 1600Z-0000Z, N7GMH, Prescott,
 AZ. Yavapai Amateur Radio Club. 21.319 14.319
 28.319. Certificate. Don Bauer, WB7TPH, 7150 E
 Acre Way, Prescott Valley, AZ 86314. Frequencies
 listed are approximate, ±QRM/N. We sill attempt
 to operate as close to these listed frequencies as
 possible, however. This event is open to the public.
 Certificate/QSL info can be found at:[https://www.
 qrz.com/db/N7GMH](https://www.qrz.com/db/N7GMH), near the center/bottom of
 the page. [https://www.w7yrc.org/granite-mountain-
 hotshots](https://www.w7yrc.org/granite-mountain-hotshots)



6DQ5 or ID4776, Beam Power Tube

$S = 10,5 \text{ mA/V}$
 $R_i = 5,5 \text{ k}$
 $P_a = \text{max. } 24 \text{ W}$

6DQ5



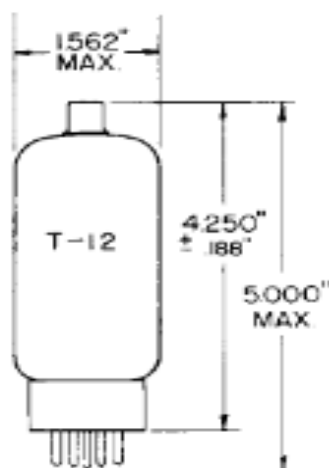
High perveance beam power pentode for use as a horizontal deflection amplifier in color TVs. MFR: RCA, Lindel(Japan), GE, Amperex



6DQ5

TUNG-SOL

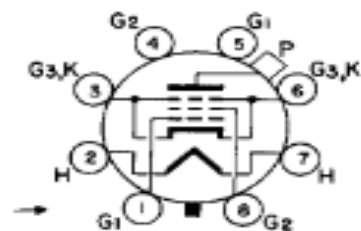
BEAM POWER PENTODE



GLASS BULB
SMALL CAP
SMALL MEDIUM-SHELL
8 PIN OCTAL BB-118
WITH EXTERNAL BARRIERS
STYLE 8
OUTLINE DRAWING
JEDEC 12-22

UNIPOENTIAL CATHODE
HEATER
6.3 ± 0.6 VOLTS 2.5 AMP.
AC OR DC

ANY MOUNTING POSITION



BOTTOM VIEW
WIRING DIAGRAM
JEDEC 8JC

THE 6DQ5 IS A HIGH-PERVEANCE BEAM POWER PENTODE DESIGNED FOR USE AS A HORIZONTAL-DEFLECTION AMPLIFIER IN COLOR TELEVISION RECEIVERS.

DIRECT INTERELECTRODE CAPACITANCES - APPROX.
WITHOUT EXTERNAL SHIELD

GRID #1 TO PLATE	0.5	μμF
GRID #1 TO: (P+G ₃ +H & G ₂)	23	μμF
PLATE TO: (K+G ₃ +H & G ₂)	11	μμF

RATINGS^A

INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM
HORIZONTAL DEFLECTION AMPLIFIER

MAXIMUM PLATE VOLTAGE:		
DC (INCLUDING BOOST)	990	VOLTS
PEAK POSITIVE-PULSE (ABS. MAX.) ^B	6 500 ^C	VOLTS
PEAK NEGATIVE-PULSE ^B	1 100	VOLTS
MAXIMUM DC GRID #2 (SCREEN-GRID) VOLTAGE	190	VOLTS
MAXIMUM PEAK NEGATIVE-PULSE GRID #1 (CONTROL-GRID) VOLTAGE	250	VOLTS
MAXIMUM CATHODE CURRENT:		
DC	315	MA.
PEAK	1 100	MA.
MAXIMUM GRID #2 INPUT	3.2	WATTS
MAXIMUM PLATE DISSIPATION ^D	24	WATTS

CONTINUED ON FOLLOWING PAGE

→ INDICATES A CHANGE.

This reporting week, May 11-17, average daily sunspot number was nearly the same as last week, 118.6 compared to 119.3, only marginally lower.

But average daily solar flux dropped from 167.8 to 143.2.

Geomagnetic indicators were quieter, both planetary and middle latitude A index at 9.6. Last week the two numbers were 15.1 and 11.9, respectively.

What is the outlook for the next few weeks?

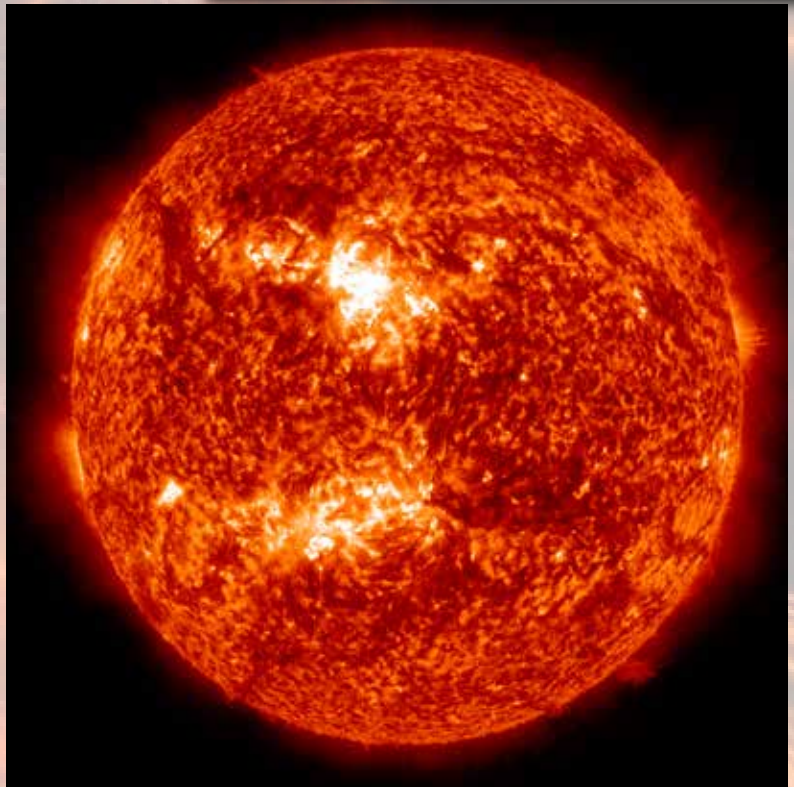
10.7 cm solar flux is forecast to have a peak of 165 on June 8.

The predicted numbers are 145 on May 19, 140 on May 20-21, 135 on

May 22-24, 140 on May 25-26, 145 on May 27, 155 on May 28-30, 160 on May 31 and June 1, 155 on June 2-3, 160 on June 4-7, then 165, 160, 150, 145, and 150 on June 8-12, then 155 on June 13-17, 150 on June 18, 145 on June 19-21, 140 and 145 on June 22-23, and 155 on June 24-26 then 160 on June 27-28.

Predicted planetary A index is 5, 8, 12, 15 and 5 on May 19-23, 12 on May 24-25, 15 on May 26, 10 on May 27-28, 8 on May 29, 5 on May 30 through June 1, then 16, 12, 16 and 12 on June 2-5, 8 on June 6-8, then 5 on June 9-18, 12 and 20 on June 19-20, 15 on June 21-22, 10 on June 23-24, 8 on June 25, and 5 on June 26-28.

These numbers are updated daily here: <https://services.swpc.noaa.gov/text/45-day-ap-forecast.txt>



AMATEUR RADIO



Ain't nuthin' wrong with us, Doc! VE1G TAPCC KRIGG 5183 G5TZ F8DP 492

AMATEUR RADIO



Ain't nuthin' wrong with us, Doc! VE1G TAPCC CRIGE 5183 G5TZ F8DP 492

AMATEUR RADIO





ARRL FIELD DAY 2023

ARRL Field Day Rules

Revised 5/3/2023

1. Eligibility: Field Day is open to all amateurs in the areas covered by the ARRL/RAC Field Organizations and countries within IARU Region 2. DX stations residing in other regions may be contacted for credit and may submit entries as check-logs.

2. Object: To work as many stations as possible on the 160-, 80-, 40-, 20-, 15- and 10-meter HF bands, as well as all bands 50 MHz and above, and in doing so to learn to operate in abnormal situations in less-than-optimal conditions. A premium is placed on developing skills to meet the challenges of emergency preparedness as well as to acquaint the general public with the capabilities of amateur radio.

3. Date and Time Period: Field Day 2023 will be held June 24-25. Field Day is ALWAYS the fourth full weekend, beginning at 1800 UTC Saturday and ending at 2059 UTC Sunday.

3.1. Class A and B (see below) stations that do not begin setting up until 1800 UTC on Saturday may operate the entire 27-hour Field Day period.

3.2. Stations who begin setting up before 1800 UTC Saturday may work only 24 consecutive hours, commencing when on-the-air operations begin.

3.3. No class A or B station may begin its set-up earlier than 0000 UTC on the Friday (Thursday afternoon or evening local time) preceding the Field Day period. Cumulative set-up time shall not exceed a total of 24 hours.

4. Entry Categories: Field Day entries are classified according to the maximum number of simultaneously transmitted signals, followed by a designator indicating the nature of their individual or group participation. The minimum number of transmitters that must be claimed is one (1). Twenty (20) transmitters maximum are eligible for the purpose of calculating bonus points (2,000 points maximum). However, additional transmitters which may legitimately be used simultaneously will determine your entry category classification, but will not earn additional bonus points (i.e. 22 transmitters = 22A). The use of switching systems that allow for lock-outs in order to use multiple transmitters (i.e., an "octopus") in an attempt to enter a lower-number-of-transmitters class are prohibited (i.e. using 2 transmitters that can transmit simultaneously, with two operators, and a lock-out system and entering class 1A). The use of simulcasting devices which allow a single operator to key and transmit on more than one transmitter at a time, is prohibited. **Bonus stations, such as the GOTA station and satellite station do not count towards determining the number of transmitters for the class and do not qualify for transmitter bonus points.**

4.1. (Class A) Club / non-club portable: Club or a non-club group of three or more persons set up specifically for Field Day. Such stations must be located in places that are not regular station locations and must not use facilities installed for permanent station use, or use any structure installed permanently for Field Day. A single licensee or trustee for the entry is responsible for the group entry. All equipment (including antennas) must lie within a circle whose diameter does not exceed 300 meters (1000 feet). To be listed as Class A, all contacts must be made with transmitter(s) and receiver(s) operating independent of commercial power mains. Entrants whom for any reason operate a transmitter or receiver from a commercial main for one or more contacts will be listed separately as Class A-Commercial.

4.1.1. Get-On-The-Air (GOTA) Station. Any Class A (or F) entry whose transmitter classification is two or more transmitters may also operate one additional station without changing its base entry category, known as the GET-ON-THE-AIR (GOTA) station. **This GOTA station may operate on any Field Day band, HF or VHF, but is limited to one GOTA station transmitted signal at any time.**

4.1.1.1. This station **must use a different callsign** from the primary Field Day station. The GOTA station must use the same callsign for the duration of the event regardless if operators change. **The GOTA station uses the same exchange as its parent.**

4.1.1.2. The GOTA station may be operated by any person licensed since the previous year's Field Day, regardless of license class. It may also be operated by a generally inactive licensee. Non-licensed persons may participate under the direct supervision of an appropriate control operator. A list of operators and participants must be included on the required summary sheet to ARRL HQ.

4.1.1.3. As per FCC rules, this station must have a valid control operator present at the control point if operating beyond the license privileges of the participant using the station.

4.1.1.4. The maximum transmitter output power for the GOTA station shall be 100 watts. If the primary Field Day group is claiming the QRP multiplier level of five (5), the maximum transmitter output power of the GOTA station may not exceed 5 watts.

4.1.1.5. **NEW FOR 2023: There is no limit to the number of contacts made by the GOTA station. All GOTA station contacts are worth five (5) points, regardless of mode.** In addition, bonus points may be earned by this station under rule 7.3.13.

4.1.1.6. The GOTA station may operate on any Field Day band. Only one transmitted signal is allowed from the GOTA station at any time.

4.1.1.7. The GOTA station does not affect the additional VHF/UHF station provided for under Field Day Rule 4.1.2. for Class A stations.

4.1.1.8. Participants are reminded that non-licensed participants working under the direction of a valid control operator may only communicate with other W/VE stations or with stations in countries with which the US has entered a third-party agreement.

4.1.1.9. The GOTA station does not qualify as an additional transmitter when determining the number of transmitters eligible for the 100-point emergency power bonus under Rule 7.3.1.

4.1.2. Free VHF Station: All Class A entries may also operate one additional transmitter if it operates exclusively on any band or combination of bands above 50 MHz (VHF/UHF) without changing its basic entry classification. This station does not qualify for a 100-point bonus as an additional transmitter. This station may be operated for the clubs Field Day period and all contacts count for QSO credit. **It is operated using the primary call sign and exchange of the main Field Day group** and is separate and distinct from the GOTA station.

4.2. (Class A - Battery) Club / non-club portable: Club or non-club group of three or more persons set up specifically for Field Day. All contacts must be made using an output power of 5 watts or less and the power source must be something other than commercial power mains or motor-driven generator (e.g.: batteries, solar cells, water-driven generator). Other provisions are the same for regular Class A. Class AB is eligible for a GOTA station if GOTA requirements are met; however, if a GOTA station is used in this class it must meet the 5 watts or less power requirement of this category. Class A - Battery entries will be listed separately.

4.3. (Class B) One or two persons portable: A Field Day station set up and operated by no more than two persons. Other provisions are the same for Class A except it is not eligible for a GOTA or free VHF station. One- and two-person Class B entries will be listed separately.

4.4. (Class B - Battery) One or two persons portable: A Field Day station set up and operated by no more than two persons. All contacts must be made using an output power of 5 watts or less and the power source must be something other than commercial mains or motor-driven generator. Other provisions are the same for Class A except it is not eligible for a GOTA or free VHF station. One- and two-person Class B - Battery entries will be listed separately.

4.5. (Class C) Mobile: Stations in vehicles capable of operating while in motion and normally operated in this manner. This includes maritime and aeronautical mobile. If the Class C station is being powered from a car battery or alternator, it qualifies for emergency power but does not qualify for the multiplier of 5, as the alternator/battery system constitutes a motor-driven generating system.

4.6. (Class D) Home stations: Stations operating from permanent or licensed station locations using commercial power. Class D stations can count contacts with any other station for QSO credit.

4.7. (Class E) Home stations - Emergency power: Same as Class D, but using emergency power for transmitters and receivers. Class E may work all Field Day stations.

4.8. (Class F) Emergency Operations Centers (EOC): An amateur radio station at an established EOC activated by a club or non-club group. Class F operation must take place at an established EOC site. Stations may utilize equipment and antennas temporarily or permanently installed at the EOC for the event. Entries will be reported according to number of transmitters in simultaneous operation. Class F stations are eligible for a free VHF station. At Class 2F they are also eligible for a GOTA station.

4.8.1. For Field Day purposes, an Emergency Operations Center (EOC) is defined as a facility established by:

- a) a Federal, State, County, City or other Civil Government, agency or administrative entity; or,
- b) a Chapter of a national or international served agency (such as American Red Cross or Salvation Army) with which your local group has an established operating arrangement;

4.8.1.1. A private company EOC does not qualify for Class F status unless approved by the ARRL Field Day Manager.

4.8.2. Planning of a Class F operation must take place in conjunction and cooperation with the staff of the EOC being activated.

4.8.3. Other provisions not covered are the same as Class A.

4.8.4. A Class F station may claim the emergency power bonus if emergency power is available at the EOC site.

4.8.4.1. The emergency power source must be tested during the Field Day period but you are not required to run the Class F operation under emergency power.

5. Exchange:

Stations in ARRL / RAC sections will exchange their Field Day operating Class and ARRL / RAC section. Example: a three transmitter Class A station in Connecticut which also has a GOTA station and the extra VHF station would send "3A CT" on CW or Digital, or "3 Alpha Connecticut" on Phone.

DX stations send operating class and the term DX (i.e. 2A DX).

6. Miscellaneous Rules:

6.1. A person may not contact for QSO credit any station from which they also participate.

6.2. A transmitter/receiver/transceiver used to contact one or more Field Day stations may not subsequently be used under any other callsign to participate in Field Day. Family stations are exempt provided the subsequent callsign used is issued to and used by a different family member.

6.3. Field Day contacts are allowed using Phone, CW and Digital (non-CW) modes. Stations can be worked once per band per mode under this rule.

6.4. **New for 2023:** Each contact must include contemporaneous direct initiation by both operators making a contact. Initiation of a contact may be by either local or remote control. Fully automated contacts are prohibited.

6.5. For any of the three event modes (CW, Phone, or Digital), only one transmitted signal (or data stream) per band is permitted at any time. Multi Streaming (eg. using Fox and Hound Mode; DX-pedition Mode, or MSHV) is prohibited.

6.6. All voice contacts are equivalent.

6.7. All non-CW digital contacts are equivalent.

6.8. Cross-band contacts are not permitted (Satellite QSOs cross-band contacts are exempted).

6.9. The use of more than one transmitter at the same time on a single band-mode is prohibited. Exception: a dedicated GOTA station may operate as prescribed in Rule 4.1.

6.10. No repeater contacts are allowed.

6.11. Batteries may be charged while in use. Except for Class D stations, the batteries must be charged from a power source other than commercial power mains. To claim the power multiplier of five, the batteries must be charged from something other than a motor driven generator or commercial mains.

6.12. All stations for a single entry must be operated under one callsign, except when a dedicated GOTA station is operated as provided under Field Day Rule 4.1.1. it uses a single, separate callsign.

7. Scoring: Scores are based on the total number of QSO points times the power multiplier corresponding to the highest power level under which any contact was made during the Field Day period plus the bonus points.

An aggregate club score will also be published, which will be the sum of all individual entries indicating a specific club (similar to the aggregate score totals used in ARRL affiliated club competitions). Participants from any Class can optionally include a single club name with their submitted results following Field Day. For example, if Podunk Hollow Radio Club members Becky, W1BXY, and Hiram, W1AW, both participate in 2023 Field Day -- Hiram from his Class D home station, and Becky from her Class C mobile station -- both can include the radio club's name when reporting their individual results. The published results listing will include individual scores for Hiram and Becky, plus a combined score for all entries identified as Podunk Hollow Radio Club.

7.1. QSO Points:

7.1.1. Phone contacts count one point each.

7.1.2. CW contacts count two points each.

7.1.3. Digital contacts count two points each.

7.2. Power multipliers: The power multiplier that applies is determined by the highest power output of any of the transmitters used during the Field Day operation. **NEW for 2023: Power output for classes A, B and C cannot exceed 500 watts Peak Envelope Power (PEP) transmitter output. Power output for classes D, E and F cannot exceed 100 watts Peak Envelope Power (PEP) transmitter output.**

7.2.1. If all contacts are made using a power of 5 watts or less *and* if a power source other than commercial mains or motor-driven generator is used (batteries, solar cells, water-driven generator), the power multiplier is five (5).

7.2.2. If all contacts are made using a power of 5 watts or less, but the power source is from a commercial main or from a motor-driven generator, the power multiplier is two (2). If batteries are charged during the Field Day period using commercial mains or a motor-driven generator the power multiplier is two (2).

7.2.3. If any or all contacts are made using an output power up to 100 watts or less, the power multiplier is two (2).

7.2.4. If any or all contacts are made using an output power greater than 100 watts, the power multiplier is one (1).

7.2.5. The power multiplier for an entry is determined by the maximum output power used by any transmitter used to complete any contact during the event. (Example: a group has one QRP station running 3 watts and a second station running 500 watts, the power multiplier of one (1) applies to all contacts made by the entire operation).

7.3. Bonus Points: All stations are eligible for certain bonus points, depending on their entry class. The following bonus points will be added to the score, after the multiplier is applied, to determine the final Field Day score. Bonus

points will be applied only when the claim is made on the summary sheet and any proof required accompanies the entry or is received via email or normal mail delivery.

7.3.1. 100% Emergency Power: 100 points per transmitter classification if all contacts are made only using an emergency power source up to a total of 20 transmitters (**maximum 2,000 points**). **GOTA station and free VHF Station for Class A and F entries do not qualify for bonus point credit and should not be included in the club's transmitter total.** All transmitting equipment at the site must operate from a power source completely independent of the commercial power mains to qualify. (Example: a club operating 3 transmitters plus a GOTA station and using 100% emergency power receives 300 bonus points.) **Available to Classes A, B, C, E, and F.**

7.3.2. Media Publicity: 100 bonus points may be earned for **obtaining publicity from the local media.** A copy of the actual media publicity received (newspaper article, social media post, etc.) must be submitted to claim the points. Any combination of bona fide media hits would qualify for the bonus points. For example, posting the details of your upcoming or ongoing Field Day activity, or your Field Day results, as posted on a news media site (which could include the media site's Facebook, Twitter, or Instagram) would meet the bonus criteria. **Available to all Classes.**

7.3.3. Public Location: 100 bonus points for physically locating the Field Day operation in a public place (i.e., shopping center, park, school campus, etc.). The intent is for amateur radio to be on display to the public. **Available to Classes A, B and F.**

7.3.4. Public Information Table: 100 bonus points for a Public Information Table at the Field Day site. The purpose is to make appropriate handouts and information available to the visiting public at the site. A copy of a visitor's log, copies of club handouts or photos is sufficient evidence for claiming this bonus. **Available to Classes A, B and F.**

7.3.5. Message Origination to Section Manager: 100 bonus points for origination of a formal message to the ARRL Section Manager or Section Emergency Coordinator by your group from its site. You should include the club name, number of participants, Field Day location, and number of ARES operators involved with your station. **The message must be transmitted during the Field Day period and a copy of it must be included in your submission in either standard NTS or ICS-213 format (or have the equivalent content) or no credit will be given. The message must leave or enter the Field Day operation via amateur radio RF.**

The Section Manager message is separate from the messages handled in Rule 7.3.6. and may not be claimed for bonus points under that rule. **Available to all Classes.**

7.3.6. Message Handling: 10 points for each formal message originated, relayed or received and delivered during the Field Day period, up to a maximum of 100 points (ten messages). Copies of each message must be included with the Field Day report. The message to the ARRL SM or SEC under Rule 7.3.5. does not count towards the total of 10 for this bonus. **Messages claimed under this bonus must be in either standard NTS or ICS-213 format (or have the equivalent content). All messages claimed for bonus points must leave or enter the Field Day operation via amateur radio RF. Available to all Classes.**

7.3.7. Satellite QSO: 100 bonus points for successfully completing at least one QSO via an amateur radio satellite during the Field Day period. "General Rules for All ARRL Contests" (Rule 3.7.2.), (the no-repeater QSO stipulation) is waived for satellite QSOs. Groups are allowed one dedicated satellite transmitter station without increasing their entry category. Satellite QSOs also count for regular QSO credit. Show them listed separately on the summary sheet as a separate "band." You do not receive an additional bonus for contacting different satellites, though the additional QSOs may be counted for QSO credit unless prohibited under Rule 7.3.7.1. The QSO must be between two Earth stations through a satellite. **Available to Classes A, B, and F.**

7.3.7.1 Stations are limited to one (1) completed QSO on any single channel FM satellite.

7.3.8. Alternate Power: 100 bonus points for Field Day groups making a minimum of five QSOs without using power from commercial mains or petroleum driven generator. This means an "alternate" energy source of power, such as solar, wind, methane or water. This includes batteries charged by natural means (not dry cells). The natural power

transmitter counts as an additional transmitter. If you do not wish to increase your operating category, you should take one of your other transmitters off the air while the natural power transmitter is in operation. A separate list of natural power QSOs should be submitted with your entry. **Available to Classes A, B, E, and F.**

7.3.9. W1AW Bulletin: 100 bonus points for copying the special Field Day bulletin transmitted by W1AW (or K6KPH) during its operating schedule during the Field Day weekend (listed in this rules announcement). An accurate copy of the message is required to be included in your Field Day submission. (Note: The Field Day bulletin must be copied via amateur radio. It will not be included in Internet bulletins sent out from Headquarters and will not be posted to Internet BBS sites.) **Available to all Classes.**

7.3.10. Educational activity bonus: One (1) 100-point bonus may be claimed if your Field Day operation includes a specific educational-related activity. The activity can be diverse and must be related to amateur radio. It must be some type of formal activity. It can be repeated during the Field Day period but only one bonus is earned. For more information consult the FAQ in the complete Field Day packet. **Available to Classes A & F entries and available clubs or groups operating from a club station in class D and E with 3 or more participants.**

7.3.11. Site Visitation by an elected governmental official: One (1) 100-point bonus may be claimed if your Field Day site is visited by an elected government official as the result of an invitation issued by your group. **Available to all Classes.**

7.3.12. Site Visitation by a representative of an agency: One (1) 100-point bonus may be claimed if your Field Day site is visited by a representative of an agency served by ARES in your local community (American Red Cross, Salvation Army, local Emergency Management, law enforcement, etc.) as the result of an invitation issued by your group. ARRL officials (SM, SEC, DEC, EC, etc) do not qualify for this bonus. **Available to all Classes.**

7.3.13. GOTA Bonus (UPDATED FOR 2023): Class A and F stations operating a GOTA station may earn the following bonus points:

7.3.13.1. Any successfully completed contacts made by an operator at the GOTA station are worth five (5) points, regardless of mode used. There is no limit to the number of contacts a single GOTA operator can make.

7.3.13.2. If a GOTA station is supervised full-time by a GOTA Coach, a single 100-point bonus will be earned.

7.3.13.2.1. The GOTA Coach supervises the operator of the station, doing such things as answering questions and talking them through contacts, but may not make QSOs or perform logging functions.

7.3.13.2.2. To qualify for this bonus, there must be a designated GOTA Coach present and supervising for at least 10 contacts.

7.3.14. Web submission: A 50-point bonus may be claimed by a group submitting their Field Day entry via the <https://field-day.arrl.org/fdentry.php> web app. **Available to all Classes.**

7.3.15. Field Day Youth Participation:

7.3.15.1. A 20-point bonus (maximum of 100) may be earned by any Class A, C, D, E, or F group for each participant age 18 or younger at your Field Day operation that completes at least one QSO.

7.3.15.2. For a 1-person Class B station, a 20-point bonus is earned if the operator is age 18 or younger. For a 2-person Class B station, a 20-point bonus is earned for each operator age 18 or younger (maximum of 40 points.) Keep in mind that Class B is only a 1- or 2-person operation. This bonus does not allow the total number of participants in Class B to exceed 1 or 2.

7.3.16 Social Media: 100 points for promoting your Field Day activation to the general public via an active, recognized and utilized social media platform (Facebook, Twitter, Instagram, etc). This bonus is available to bona fide amateur radio clubs and Field Day groups that welcome visitors to their operation. Individual participants do not qualify for this bonus. Club websites do not qualify for this bonus. **Available to all classes.**

7.3.17 Safety Officer Bonus: A 100-point bonus may be earned by having a person serving as a Safety Officer for those groups setting up Class A stations. This person must verify that all safety concerns on the Safety Check List (found in the ARRL Field Day Packet) have been adequately met. This is an active bonus – simply designating someone as Safety Officer does not automatically earn this bonus. A statement verifying the completion of the Safety Check List must be included in the supporting documentation sent to ARRL HQ in order to claim this bonus. **Available to Class A entries only.**

8. Reporting:

8.1. Entries may be submitted to the ARRL via:

8.1.1. Field Day Web App at <https://field-day.arrl.org/fdentry.php> or

8.1.2. USPS or other delivery service to (tracking highly recommended): Field Day Entries, 225 Main St, Newington, CT 06111.

8.2. Entries must be postmarked or submitted by Tuesday July 25, 2023. Late entries cannot be accepted.

8.3. A complete Field Day Web Applet Submission site entry consists of:

8.3.1. An official ARRL summary sheet which is completed via web app at <https://field-day.arrl.org/fdentry.php>;

8.3.2. Supporting information uploaded via web app. Supporting information must include:

8.3.2.1. An attached list of stations worked by band/mode during the Field Day period ([dupe sheet](#) or an alpha/numeric list sorted by band and mode – a Cabrillo log can be submitted in lieu of a [Dupe Sheet](#)/Calls list by band/mode); and

8.3.2.2. Proof of all bonus points claimed (copies of visitor logs, press releases, NTS messages handled, photographs, etc).

8.3.2.3 The web app will display a confirmation number and email a confirmation of your Field Day entry to the email address entered via the app. Please be sure to record this confirmation number and/or save the confirmation email.

8.4 While the preferred method of submitting entries is via the Web Applet, entries and/or supporting documentation may alternately be submitted via email to fieldday@arrl.org. A complete non-web-app email submission consists of:

8.4.1. An electronic copy of an ARRL summary sheet completely and accurately filled out;

8.4.2. An attached list of stations worked by band/mode during the Field Day period ([dupe sheet](#) or an alpha/numeric list sorted by band and mode); and

8.4.3. Proofs of bonus points claimed (copies of visitor logs, press releases, NTS messages handled, photographs, etc).

8.5. A complete land/postal-mail or delivery non-electronic submission consists of:

8.5.1. A complete and accurate ARRL summary sheet;

8.5.2. An accompanying list of stations worked by band/mode during the Field Day period ([dupe sheet](#) or an alpha/numeric list sorted by band and mode); and

8.5.3. Proofs of bonus points claimed (copies of visitor logs, press releases, NTS messages handled, photographs, etc).

8.6. Complete station logs are NOT required for submission, and ARRL does not use the logs. The club should maintain log files for one year in case they are requested by ARRL HQ. However, a list of stations worked sorted by band and mode ([dupe sheet](#)) is required.

8.7. Cabrillo format log files are NOT required for Field Day entries, but they will be accepted in lieu of the [dupe sheets](#) (but do not constitute an entry unless the web app (or a corresponding summary sheet with complete mailed entry) is also submitted).

8.8. Digital images of proof of bonus points are acceptable.

8.9. Electronic submissions are considered signed when submitted.

9. Miscellaneous:

9.1. The schedule of bulletin times for W1AW is included in this announcement. While W1AW does not have regular bulletins on weekends, the Field Day message will be sent according to the schedule included with this announcement. The W1AW bulletins will be transmitted on the regular W1AW frequencies listed in QST. The PSK31 bulletin will be transmitted on the W1AW teleprinter frequencies. The special Field Day bulletin will be transmitted from station K6KPH on the West Coast as included in the bulletin schedule.

9.2. Decisions of the ARRL Awards Committee are final in adjudicating Field Day problems.

9.3. The complete Field Day information package may be obtained by:

9.3.1. Sending a SASE with 5 units of postage to: Field Day Information Package, ARRL, 225 Main St., Newington, CT 06111; or

9.3.2. By downloading from the Field Day home page at: www.arrl.org/field-day

9.4. For more Field Day information/questions contact: fdinfo@arrl.org or phone (860) 594-0232.



Electrician wanted. Experience required, this time.



ARRL Helps Radio Amateurs Comply with New RF Exposure Evaluation Rules

05/05/2023

ARRL The National Association for Amateur Radio® provides free, comprehensive resources to help radio amateurs ensure they are compliant with the new RF exposure rules.

On May 3, 2021, new FCC rules governing RF exposure evaluations went into effect. While the exposure limits were not changed, the requirement to conduct an evaluation was made more broadly applicable to amateur licensees. A 2-year transition period was implemented to allow existing amateur licensees to conduct evaluations and make any changes necessary to ensure that their station complies with the exposure rules. On May 3, 2023, the transition period ended. All licensees must now conduct evaluations of their current station and reassess compliance when making changes to their stations that would affect exposure going forward.

As detailed in a May 2023 QST article by Greg Lapin, N9GL, the rules now require amateur radio operators to perform station evaluations. The Amateur Radio Service is no longer categorically excluded from certain aspects of the RF exposure rules, and licensees can no longer avoid performing an exposure assessment simply because they are transmitting below a given power level.

The ARRL website features an [RF Exposure landing page](#) with resources, such as an RF exposure calculator, the entire RF Safety section from the 100th Edition of the ARRL The Handbook, a video explaining the topic, FAQs about the subject, and more. These tools and resources are available to the public without an ARRL membership or website account.

For further assistance with technical matters, ARRL members enjoy the additional resources of the [ARRL Technical Information Service](#), and access to the experts within the ARRL Lab.

Updated Radio Frequency Exposure Rules Become Effective on May 3

04/12/2021

The FCC has announced that rule changes detailed in a lengthy 2019 [Report and Order](#) governing RF exposure standards go into effect on May 3, 2021. The new rules do not change existing RF exposure (RFE) limits but do require that stations in all services, including amateur radio, be evaluated against existing limits, unless they are exempted. For stations already in place, that evaluation must be completed by May 3, 2023. After May 3 of this year, any new station, or any existing station modified in a way that's likely to change its RFE profile — such as different antenna or placement or greater power — will need to conduct an evaluation by the date of activation or change.

“In the RF *Report and Order*, the Commission anticipated that few parties would have to conduct reevaluations under the new rules and that such evaluations will be relatively straightforward,” the FCC said in an April 2 *Public Notice*. “It nevertheless adopted a 2-year period for parties to verify and ensure compliance under the new rules.”

The Amateur Service is no longer categorically excluded from certain aspects of the rules, as amended, and licensees can no longer avoid performing an exposure assessment simply because they are transmitting below a given power level.

“For most amateurs, the major difference is the removal of the categorical exclusion for amateur radio, which means that ham station owners must determine if they either qualify for an exemption or must perform a routine environmental evaluation,” said Greg Lapin, N9GL, chair of the ARRL RF Safety Committee and a member of the FCC Technological Advisory Council (TAC).

“Ham stations previously excluded from performing environmental evaluations will have until May 3, 2023, to perform these. After May 3, 2021, any new stations or those modified in a way that affects RF exposure must comply before being put into service,” Lapin said.

The December 2019 RF *Report and Order* changes the methods that many radio services use to determine and achieve compliance with FCC limits on human exposure to RF electromagnetic fields. The FCC also modified the process for determining whether a particular device or deployment is exempt from a more thorough analysis by replacing a service-specific list of transmitters, facilities, and operations for which evaluation is required with new streamlined formula-based criteria. The *R&O* also addressed how to perform evaluations where the exemption does not apply, and how to mitigate exposure.

Amateur radio licensees will have to determine whether any existing facilities previously excluded under the old rules now qualify for an exemption under the new rules. Most will, but some may not.

The ARRL Laboratory staff is available to help amateurs to make these determinations and, if needed, perform the necessary calculations to ensure their stations comply. ARRL Laboratory Manager Ed Hare, W1RFI, who helped prepare ARRL's *RF Exposure and You* book, explained it this way. “The FCC did not change any of the underlying rules applicable to amateur station evaluations,” he said. “The sections of the book on how to perform routine station evaluations are still valid and usable, especially the many charts of common antennas at different heights.” Hare said ARRL Lab staff also would be available to help amateurs understand the rules and evaluate their stations.”

RF Exposure and You is [available for free download](#) from ARRL. ARRL also has an [RF Safety page](#) on its website.

The ARRL RF Safety Committee is working with the FCC to update the FCC's aids for following human exposure rules — *OET Bulletin 65* and *OET Bulletin 65 Supplement B for Radio Amateurs*. In addition, ARRL is developing tools that all hams can use to perform exposure assessments.

TOP FIVE GET-ON-THE-AIR-QUICKLY ANTENNAS

I must admit I fall into this class of sorts. Being licensed for 23 years and only getting on the air for the first time about 6 weeks ago made me laugh when I came across this article I've included below. I had to laugh as there really was no excuse but life takes over and everyone has their reasons no doubt. With spring being a few months away I'm giving some serious thought as to what antenna(s) will be installed. So when I stumbled across this simple guide to get on the air without killing your budget I felt the need to share. I included images I felt would explain the concepts a little easier for those that are new to the hobby too. Enjoy! KB3BFR

Some of us give up too easily. Or we are too timid to give something new a try. I have seen several examples of this lately. One was a new amateur who got all excited after he upgraded, acquired a perfectly adequate HF station, but then so far has not gotten around to erecting any kind of decent antenna to use with it. I don't know if it is because he is intimidated due to lack of knowledge about antennas or if he simply is not sure what type of antenna to put up. Maybe he hesitated, thinking he should wait until he had the perfect choice, or something that would elicit "ooohs" and "aaahs" from stations he worked. Think back a hundred years ago when you first got your ticket. All this stuff was a lot to take in at the beginning.

I also know of a long-time ham who came back from a period of inactivity, dragged the old gear out of the closet, and then, for whatever reason, never quite got around to the most important part of the station—the antenna! He threw some wire out the window but could hardly hear anything, and his radio just hissed at him when he tried to tune up that mess.

I confess I am a procrastinator. I tend to spend a long time getting ready to start to begin to commence to think about launching a project until I inevitably forget what it was I wanted to do. And, by the way, what did I buy those parts and rope and wire and fiberglass and aluminum for in the first place?

But this is different. People who may be otherwise enthusiastic about starting or resuming the hobby are allowing fear or hesitancy to keep them on the sidelines. I'm afraid that some of us who attempt to Elmer them sometimes contribute to the problem by pushing antenna ideas that are beyond their means, knowledge or geography. Or even sometimes beyond their interest level or desire for learning. Not everyone wants to be an RF engineer. They just want to work some DX or conjure up a rag chew. There is nothing wrong with that!

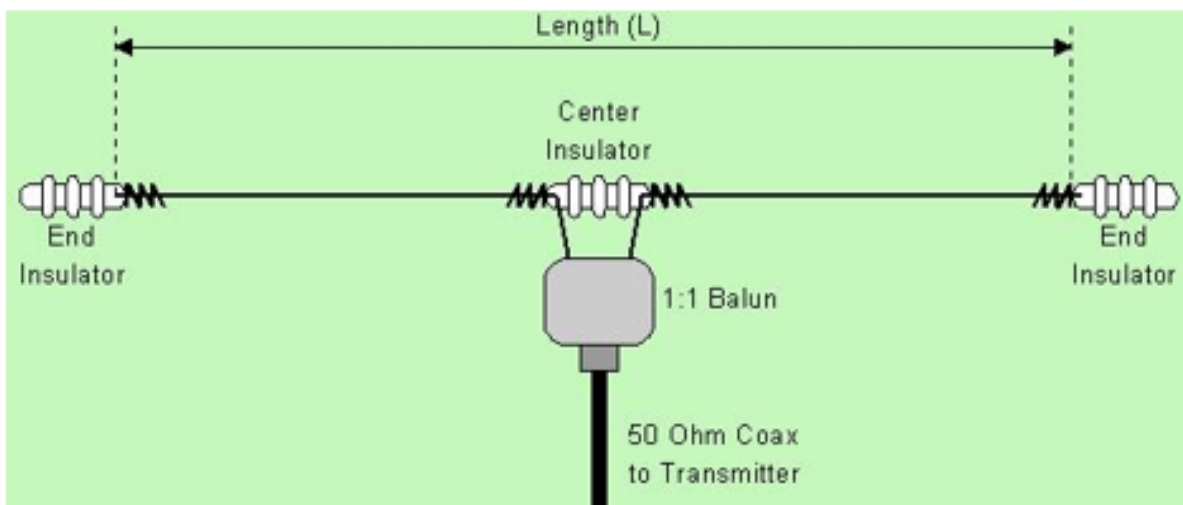
In that spirit, I'd like to list below what I would recommend as the five best get-on-the-air-quickly-and-easily antenna ideas. Maybe you have other suggestions, but understand that I am applying the following logic in picking these particular ones:

- They are easy to build for most anyone who is willing to try and do not require any special tools or test equipment.
- They may be crafted from easily available materials and cost very little, so there is not much downside if you mess them up.

- They are not necessarily the be-all, end-all of RF radiators but they do work well enough to give a good experience to the user.
- They are not necessarily the best for all situations, including for use in antenna-restricted neighborhoods or in condos and apartments. That's another article.
- And if someone attempts to construct one of these bad boys, he or she will possibly learn a little antenna theory by osmosis and, just maybe, will become curious enough about the subject to learn more and try more challenging projects.

Now, in no particular order of preference, here are N4KC's Top Five Get-on-the-Air-Quickly Antennas:

#1 - The half-wave wire dipole



It is about as basic as it gets and it can work quite well on any HF band. It consists of two pieces of conductive wire stretched end-to-end, and joined together in the middle with a short insulator. We call that the feed point. Insulators and lengths of rope are attached to each of the opposite ends to support the antenna. Some call this a “flat top” antenna or a “doublet.”

It can be hung between two supports—often trees—parallel to the ground. It can also be supported in the middle with the ends sloping downward in an inverted “vee” configuration. For some reason, this is often called an “inverted vee” antenna. If you remember geometry, it might be obvious to you that the inverted vee takes less space than the flat top.

This antenna can be fed with coax, such as the popular and relatively inexpensive RG-8X, which is easy to run from the middle of the dipole to your shack. The center conductor of the coax is soldered or clamped to one leg of the dipole and the shield is attached to the other. There are several commercially available center insulators that allow you to simply screw your coax onto the insulator.

Copper wire is usually used for a number of reasons. The gauge of the wire is not that important so long as it is big enough to adequately support the antenna but not so big that it becomes too heavy and droops. The support ropes should be weather and UV resistant unless you enjoy reattaching them often and tossing them back over the limb.

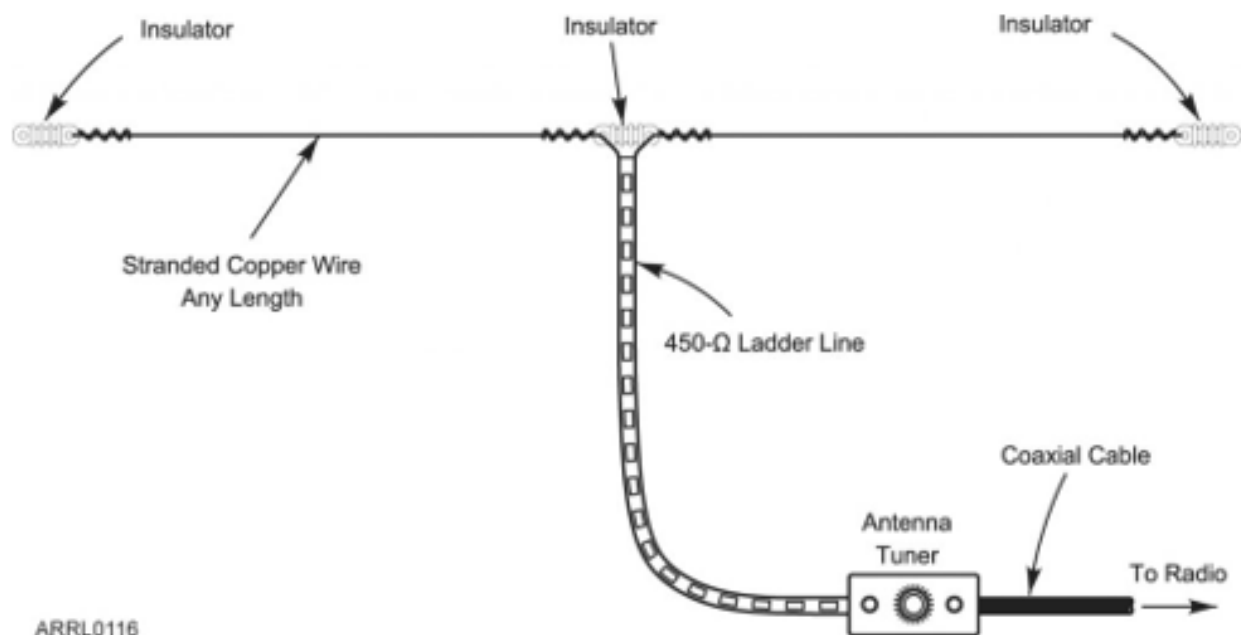
As with most antennas, the higher in the air you can get a dipole, the better, if you want to work distant stations. You will make contacts, though, if it is just above head high, and in some cases it actually works better over closer range than if it was in the clouds.

The overall length is determined by the formula $468/\text{frequency in megahertz}$. Results are in feet. That means a dipole cut for 3.8 megahertz will be about 123 feet long, or each leg will be about 61 feet 6 inches. You would need supports (trees) about 130 feet apart with no obstacles between, although you can bend the legs around stuff if you really need to.

PROS: Cheap, easy to put up, works well on the band for which it is cut, and if it falls down, just put it back up. If it breaks, splice it and put it back up. You can bend the legs to fit on your lot, too. It is also relatively stealthy since it is difficult to see among trees. You could probably fit one for 30 meters or higher in an attic or beneath an eave on the house.

CONS: Needs to be high in the air for DX, is directional to some extent but with little or no gain on its fundamental frequency, and will only be close to resonant on odd multiple harmonics. That means your 3.8 megahertz antenna will probably only be useable on that band without a wide-range antenna tuner. A dipole cut for 7.1 megahertz would work okay on the high end of 15 meters but would be problematic on other bands. Coax feed line can have lots of loss in high SWR conditions, so even if your tuner makes it work, you may have noticeable loss of power.

#2 - The doublet with parallel feed line

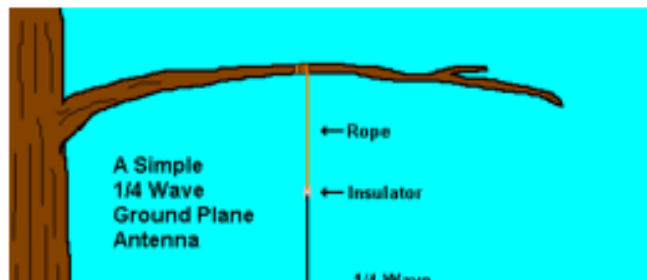


An effective radiator since the beginning of the hobby, this antenna is really just a dipole, as described above, but fed with open-wire feed line, ladder line, or window line—feed line in which the two conductors are kept the same distance apart from antenna to shack. Since the dipole is a “balanced” radiator and parallel feed line is a pair of parallel conductors, they really like each other.

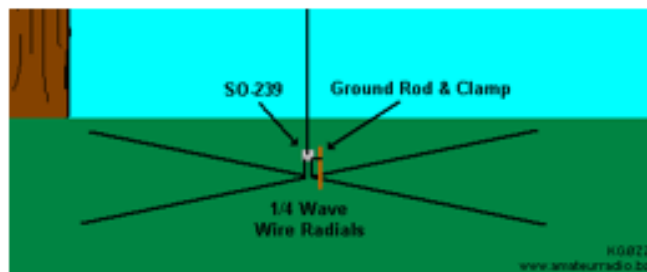
PROS: In addition to the pros above, this antenna also works well on most bands above the one for which you cut it. Since the parallel feed line typically has very little loss even when the SWR is high, the antenna becomes a good multi-band antenna when fed with this type line and used with a wide-range antenna tuner. A balanced tuner is even better.

CONS: Open wire feed line must be kept at least a few inches away from metal or other conductors, including the ground. That makes it problematic running the stuff into some shacks alongside coax or near gutters. Since most modern radios have 50-ohm unbalanced outputs, you will need a balun to make the transition from balanced antenna and feed line to unbalanced radio. (Read up on baluns. They can make life easier or more difficult, depending on whether or not you understand them and how they work.) The length of your feed line is also a factor in how the antenna tunes and you may need to experiment to get the correct length for best results on the most bands.

#3 - The quarter-wavelength vertical



A vertical radiator has several advantages over horizontal antennas, including being omni-directional, having a low-angle of radiation (trust me, this is a good thing for DX), and taking minimal space. And it can be as simple as hanging a piece of zip cord from a tree limb.

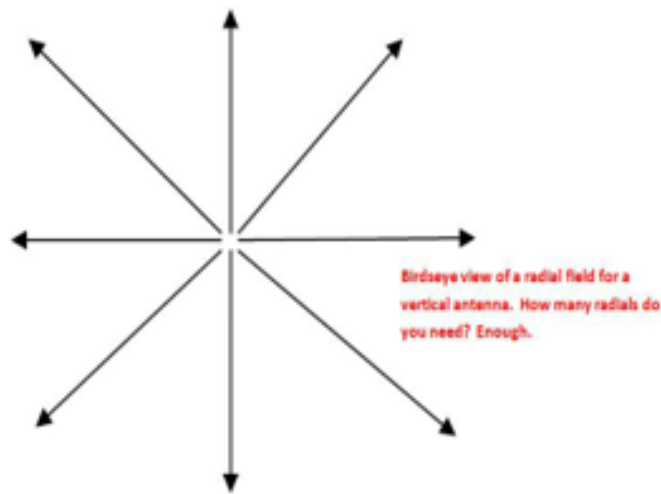


Of course, the wire needs to be insulated from the tree and run some distance away from any other metallic object like an aluminum mast, tower, or supporting structure. The formula for the antenna's length is $234/\text{frequency}$ in megahertz. That's right. Half as much as the half-wave dipole above. For 40 meters, the vertical radiating element (wire, aluminum, a flag pole...anything you can hook one side of

coax to) is about 33 feet.

Got a tree limb 35 feet off the ground? Tie a knot in a 33-foot-long piece of copper wire, run a rope through the knot, and throw the rope over the limb, tying it off to the trunk. Pull the wire up until the lower end of the wire is three to six inches from the ground. Now lay out pre-cut pieces

of wire that are approximately 33 feet long, stretching each one outward from where the bottom of the vertical wire hangs, arraying them in a radial pattern.



Use 20 or 30 wires, which we will call "radials." Are 20 or 30 enough? Can you get by with 4 or 8? Yes and yes. But getting at least 20 is a good thing and then you begin to get diminishing returns. Getting more short radials is also better than fewer long ones. Tie the radials together where they all come together in the middle, beneath the vertical. Now solder the shield side of some RG-8X to where the radials are twisted together. Solder the center conductor of the coax to the bottom of the hanging wire. Weatherproof it as best you can.

Trench out a shallow ditch and bury the coax (make sure that is approved for burial beneath the ground) to a point where you can run it into your shack. Note: you may need to put a balun or some toroids on the feed line to keep RF from traveling along the shield. Sometimes the feed line looks like another radial and can pick up stray RF and conduct it into the shack. Once there, it can cause cussing and angst.

There are several commercially made verticals that offer more strength and, through the use of traps or other technology, make them multi-banded. I use a Hustler 4BTV and it is a good antenna. I bought it used for \$50. But note that you still need a radial field under any quarter-wavelength-long vertical antenna that is ground-mounted, no matter what the sales pitch says.

Yes, a vertical can be mounted above ground, usually on a mast, and this has its benefits as well. You still need at least two radials for each band you will operate on, cut to be a quarter wavelength for each band. You may even need to do some tuning on those radials, cutting or lengthening them to get the lowest SWR. (But do not worry about 1.5- or 1.7-to-1 and spend hours of perfectly good operating time trying to get it flat!)

If you have a multi-band vertical mounted above the ground, there should be a set of radials for each band that you use (a 40-meter radial will suffice for 15). Getting the antenna up and tying off those radials can be a chore, though.

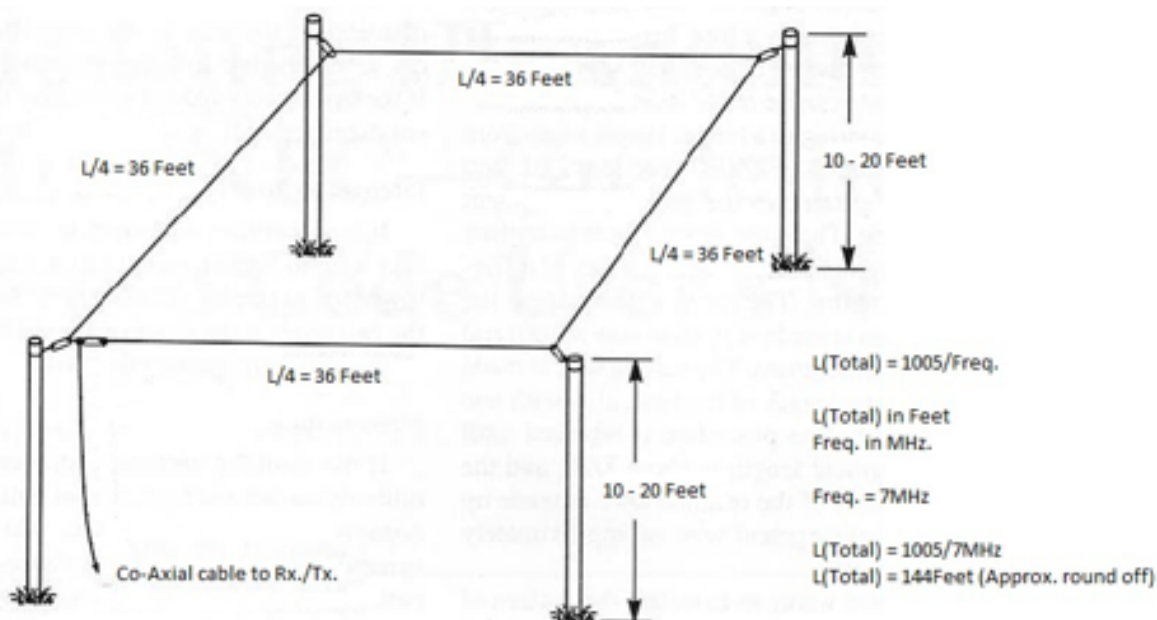
PROS: A simple and effective antenna, it is omni-directional. Since it is vertical, it takes very little space to erect. Many hams raise them when they want to operate and lower them when not on the air. The angle of radiation is most conducive to working longer distances. Commercially made verticals are available and are quite inexpensive.

CONS: It is omni-directional, so you reel in signals from and cast out RF into all directions, not just the one in which the station you want to work happens to be. It is also more susceptible to

manmade noise than a horizontal antenna. It requires a radial field...the more wire the better...so you may not have enough real estate to stretch out radials in all directions that are equal to the height of the vertical radiator. That can be quite a bit of wire! The feed line also needs to be buried, and it can pick up stray RF and ferry it right into your house.

#4 - The horizontal loop

One of my personal favorites, the horizontal loop can be a good performer, stealthy, and will fit on many smaller lots that a full-size, half-wavelength dipole won't. A loop is just what it sounds like: a big loop of wire, supported by anything you can find to hold it up as it makes its way around the backyard or the entire lot. Many hams tack the wire beneath the eaves of their house all the way around. Others erect poles or masts at four corners and make a square loop.



When you bring the ends of the wire together at the feed point, you use a short insulator to tie them together, leaving a gap. One conductor of the feed line is attached to one end, the other side to the other end. You can feed with coax or open wire feed line, but open wire is a much better choice if you want to use the antenna on bands where it is not resonant. Good news: the loop will be resonant on all harmonic frequencies, not just the odd ones. That means a loop cut for 7.1 megahertz will be close to resonant on 14.2, 21.3, and 28.4 megahertz.

For a resonant loop, the wire length should be calculated using the formula $1005/\text{frequency}$ in megahertz. A loop cut for 3.8 megahertz is about 264 feet long. A perfect loop is arrayed in a circle, but a square, diamond or rectangle shape is fine, so long as the rectangle is not too "skinny." If you plan to use the loop on multiple bands, simply make sure it is cut at least as long as needed for the lowest frequency on which you intend to operate.

Like the dipoles, a loop performs for DX better if it is higher in the air.

PROS: One of the quieter choices for an antenna, it ignores much manmade noise. It can often fit on real estate that a dipole will not, especially considering its shape does not necessarily have to be round. It can be supported by whatever trees or other structures you happen to have. You do not have to rely on trees or other supports being strategically placed on your lot. And if you use insulated wire, you can run it through trees and bushes with little effect. It also has useable gain, especially above the fundamental frequency, with lobes that increase in number as you go higher in frequency. Use open wire or ladder line to feed the loop, employ a wide-range antenna tuner, and it becomes a wonderful multi-band antenna.

CONS: That much wire can be heavy, causing it to droop. It also requires maintenance since lots of things can happen to a stretch of wire that long (a 160 meter full-wavelength loop is almost 560 feet long!). It can certainly snag lightning, too, and blowing dust, rain or snow can create a lethal voltage static charge at the end of your feed line. Make sure it is grounded—outside—in such weather. With those gain lobes mentioned above, you also get nulls. If the station you want to work is in the middle of a nice lobe, super! If he is in one of those deep nulls, “Sorry, old man, you’re down in the mud!”

#5 - The G5RV



The most discussed, maligned and misunderstood of all the simple antennas! Introduced by a British ham with the call sign G5RV, it has gotten a bad rap because so many manufacturers claim it to be an all-band antenna, “using only your rig’s internal tuner!” Well, no.

By generally accepted definition today, the G5RV is a 102-foot-long dipole, fed with a matching section of 450-ohm window line, and then it uses coax the rest of the way to the shack. My authority on this is none other than the ARRL’s *Antenna Book*. Take it up with them if you disagree.

In my experience, the G5RV will work fine on 40 and 20 meters, is not bad on 17 or 10, and might work okay on a narrow portion of 80/75. I can tune it with a good tuner on other bands but it is mediocre at best and the internal tuner in my rig merely fusses and refuses to even try on those bands. (In all fairness, my G5RV is a derivative version that is 6 feet shorter than the classic version.)

Google “G5RV” for several construction articles. There are also G5RVs available that are commercially made but I cannot vouch for any of them. I would be leery of any that claim “all bands with your rig’s internal tuner!”

To get on the air the same day I bought my transceiver several years ago, I purchased a kit from The Wireman for less than the wire, ladder line and insulators would have cost. It has been up ever since and is sometimes my best antenna on 40. And unlike some recommend, I do not use a balun at the crossover point from window line to coax.

PROS: Makes a good antenna on several ham bands, yet it is shorter than a dipole for 80/75. On 20, it produces four gain lobes in a cloverleaf pattern, which gives you a very good signal in those four directions. It is cheap and, if you follow measuring instructions precisely, it is easy to build and hang. It can be used in an inverted vee configuration, too, if you lack the room or end supports.

CONS: It is not an all-band antenna, any more than any length of random wire and feed line is an all-band antenna. You could create some problematic mismatches, even for a good tuner, if you do not follow recommended measurements closely. The window line should hang down vertically as far as possible so you need to be able to get the feed point up at least 45 feet or so. And since a portion of the feed line is coax, it will be lossy if you have a high SWR. Keep the coax as short as possible.

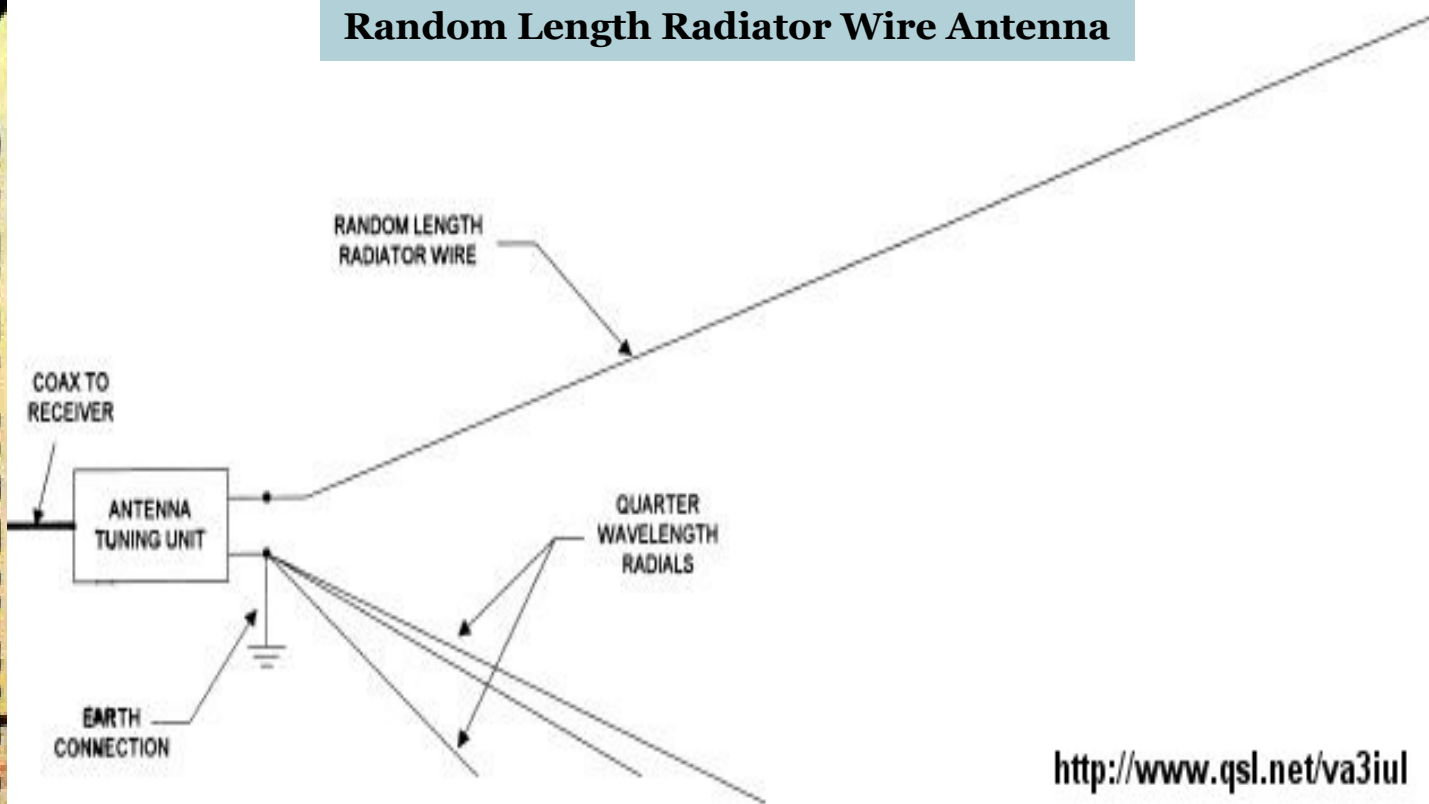
So there they are. As mentioned, the main reason for this exercise is to give the new ham or someone who is returning to the hobby a bit of inspiration and some choices to consider for an antenna. And to urge them not to be too ambitious—ambitious to the point they never get around to putting *anything* up!

I think many of you will find a great deal of satisfaction in building your own aerial and then seeing how it works. There is certainly more satisfaction in that for many of us than there is in buying something already built and simply draping it over something in the backyard.

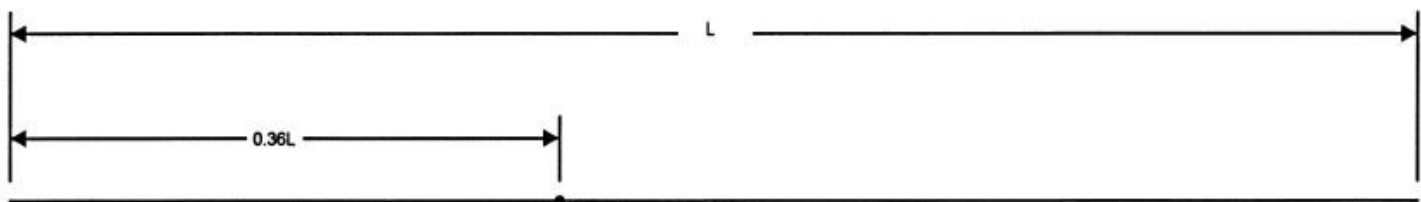
I do encourage you to play with your design. Try things. If they help, keep them. If they make your antenna a dummy load, toss it and start over. But most of all, have fun. And tell us about your experiences.

1. *Top Five Get-On-the-Air-Quickly Ham Radio Antennas*, www.donkeith.com/n4kc/article.php?p=22.
2. *Martin E. Meserve - K7MEM - Center-Fed Half-Wave Dipole (3-30 MHz)*, www.k7mem.com/Electronic_Notebook/antennas/dipole.html.
3. <http://www.arrl.org/random-length-multiband-dipoles>
4. *The 10/11 Meter Ground Plane Antenna*, www.amateurradio.bz/10-11m_ground_plane_antenna.html.
5. <http://hamrmipl.blogspot.com/2013/02/loop-skywire-antenna.html>

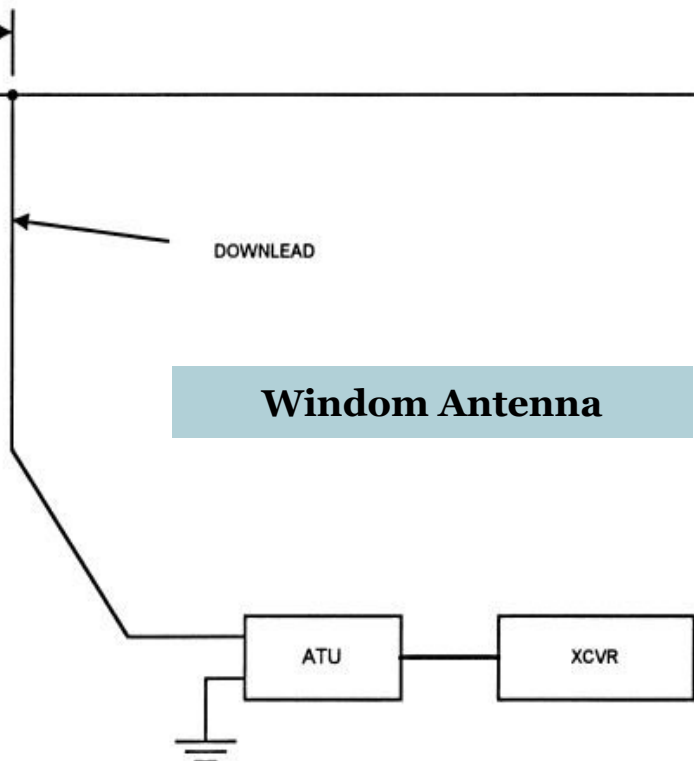
Random Length Radiator Wire Antenna



<http://www.qsl.net/va3iul>



Windom Antenna



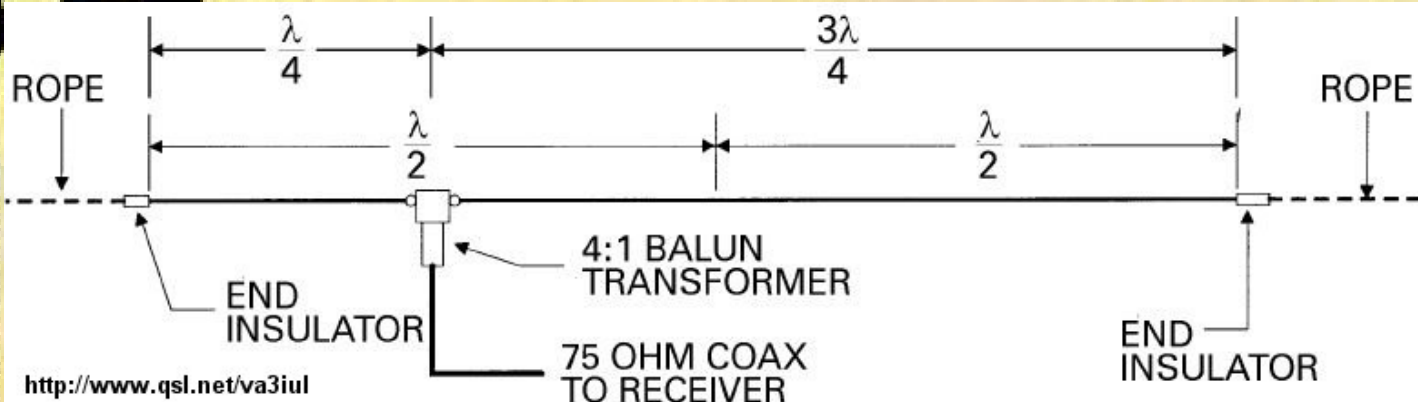
<http://www.qsl.net/va3iul>

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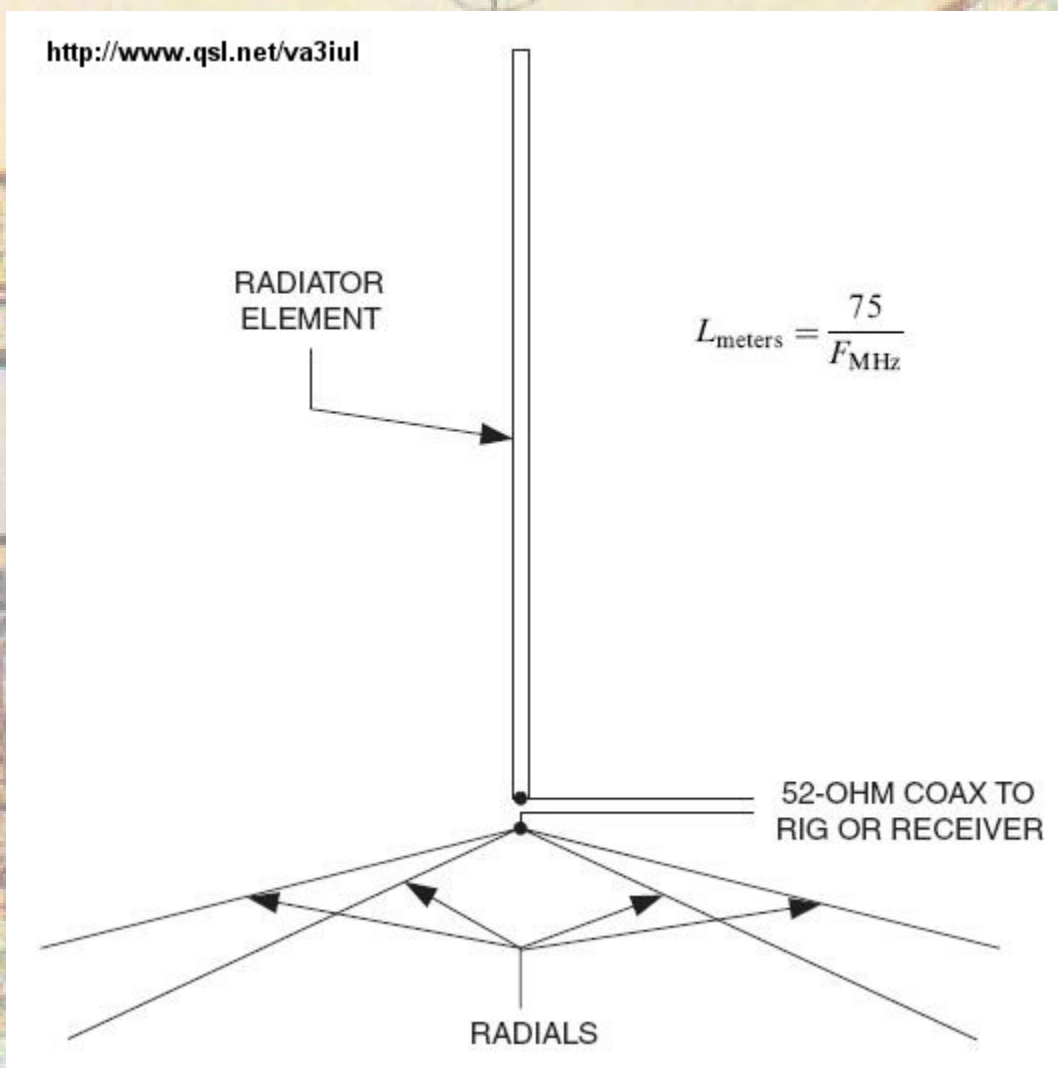
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