



VOLUME 74 ISSUE 1
Jan. 2023

PPRAA Club Officers

President	Kyle Damon KD0TRD *
Vice President	Derek Brown KØATV *
Secretary	LD Steiner W0XLD *
Treasurer	Dick Kohlhaas W5UDM *
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Board	George Shaiffer KEØQCC *
Board	Dave Molter AD0QD *
Board	Jon Cashatt KJ0CFW
Board	Craig Walker KEØRGP
Board	Ken Hook K0KWJ
Board	Michael Walter KEØTWK

* In final year of 2-year term

+ One year officer position

All officers can be contacted at: boardmembers@ppraa.org

I received an email from Jim Bishop saying he will not complete his two-year term as board member.

We have recruited Dave Phillips, NØDMP, to fill the vacancy.

Monthly Ham Breakfast

**Omelets Etc, 1337 Interquest Pkwy
Saturday, 4 Feb. 2023**

PPRAA Board Meeting (Jan. 11) at Golden Coral, 1970 Waynoka Rd. Colorado Springs, Colorado Springs, CO

– There will be both an online meeting via Zoom and in the restaurant. The business meeting starts at 7 PM, but get your dinner and beverage of choice and check in any time after 6 PM for a social hour. Club members check your email for info or email [Officers](#) to receive the Zoom information.

Postponed to 2025: 2020 ARRL Rocky Mountain Division Convention – Hamcon Colorado 2020

– More info [here](#).

PPRAA Fox Hunt

- Sunday, 15 Jan 2023
- Mobile Fox Hunt, Colorado Springs
- More info TBD.

Winter 2023 Hamfest

- Saturday January 21, 2023 (0800-1300)
- Thomas M. McKee 4H Building at The Ranch
- Loveland, Colorado
- More info [here](#).

Winter Field Day 2023

- January 28-29, 2023
- PPRAA location: Northrop Grumman Parking Lot, 3535 Northrop Grumman Pt.
- More info [here](#).

The Swapfest

- Sunday February 22, 2023 (0900-1300)

- Adams County Fairgrounds
- Brighton, Colorado
- More info [here.](#)

Field Day

- Saturday, 24 June 2023 1200 to Sunday, 25 June 2023 1200
- See Field Day tab above

Albuquerque Duke City Hamfest and Convention

- September 15-17, 2023
- More info [here.](#)

2022-12 PPRAA Board Meeting Minutes

Date/Time: 2022-12-12, 1830 local

Location: IHOP, 3090 N Chestnut St, Colorado Springs CO 80907

Attendees: Ken/K0KWH, Derek/K0ATV, Jerre/WA0BCM, Kyle/KD0TRD, Dave/N0DMP, Dick/W5UDM, LD/W0XLD, David/AD0QD, Anthony/KE0LQK, Jon/KJ0CFW, Mike/WV7T, John/KD0SFY, Craig/KE0RGP, Doug/N7LEM

- Silent Keys
 - Steve/KT0DX's XYL
- Secretary report: LD/W0XLD
 - Volunteer list
 - Falcon AeroLab
 - David/AD0QD
 - Tom/KF0FOF
 - Elmering and radio assistance
 - Derek/K0ATV
 - David/AD0QD
 - LD/W0XLD
 - Membership report
 - 239 voting/licensed; 16 currently free; 8 unlicensed; 134 ARRL members
 - November membership meeting
 - 38 attendees in person; 10 on Zoom
 - David moved to accept report; Ken seconded; vote passed.
- Treasurer report: Dick/W5UDM
 - Reimbursements made for Megafest and Christmas party prizes
 - Requesting \$440 to renew liability insurance policy. Derek moved; Jon seconded; vote passed.
 - Requesting \$150 to renew raffle registration (Colorado state license). Derek moved; Doug seconded; vote passed.
 - Dick received correspondence from ARRL on our unspent scholarship money. Dick will revise terms of preference for the award of scholarship to be in line with what the ARRL typically follows, then email to the board.
 - Dick will start uploading treasurer's reports to the members' section of the webpage.
 - LD moves to accept report; David seconded; vote passed.
- VE team report: Jon/KJ0CFW

- Webmaster report: Doug/N7LEM
 - Doug has placeholders on the webpage for the winter workshop and winter field day event details.
- Zero Beat report: Jerre/WA0BCM
 - Location of membership meeting has been updated to Golden Corral.
- PPARES report: John/KD0SFY
 - ARES is supporting the Salvation Army distribution of meals on Christmas day. They have enough volunteers at this time.
- VP report: Derek/K0ATV
 - Prizes for the Megafest have been procured; door prizes for the Christmas party too. Slideshow for 2022 retrospective will be the presentation.
- President report: Kyle/KD0TRD
 - Winter workshop Thu. Dec 29 1700-1930 (5:00 pm - 7:30 pm)
 - Tape measure yagi antennas: price is \$26 for materials, \$30 if an SMA-to-BNC adapter is needed
 - LD volunteered to take signups at membership meeting
 - Other winter workshop volunteers? Ideas? Kits?
 - Board members suggested TNC, ham clock, foxes.
 - NCARC Hamfest: 2023-01-21, Larimer County Fairgrounds, Loveland CO
 - Get-on-the-air sessions?
 - Ideas from the board: help with programming HTs, make repeater and simplex contacts, demonstrate an HF station, LD volunteers to print up repeater lists
 - Classified (for sale) section on website: Doug mentioned maintenance of listings as a potential issue
- Volunteer opportunities
 - Winter fox hunt: 2023-01-15 (changed from 14th previously, to avoid conflict with VE session)
 - Derek/K0ATV, Kyle/KD0TRD, LD/W0XLD to be foxes
 - Ken/K0KWH and Dave/N0DMP to be facilitators
 - Start planning for Winter Field Day (2023-01-27 - 2023-01-29)
 - Volunteers
 - Dave/N0DMP
 - Derek/K0ATV: Half-wave antenna
 - Ken/K0KWH: Hex beam antenna
 - Kyle/KD0TRD
 - LD/W0XLD: G5RV antenna
 - David/AD0QD
 - Craig/KE0RGP
 - Location: Northrop Grumman (David confirmed)
- No other new business

- Adjourn: Ken moved; Doug seconded; vote passed.

Addendum: 2022-12 PPRAA Membership Meeting and Christmas Party

Date/Time: 2022-12-14, 1900 local

Location: Golden Corral, 1970 Waynoka Rd, Colorado Springs CO 80915

- Treasurer Dick/W5UDM requested \$2000 to be sent to ARRL for their scholarship, as he has been working to remove the barriers for our scholarship donations to be awarded by bringing the terms of preference into alignment with ARRL's usual awards.
 - Paul/K6IG moved; Jim/KD0KQL seconded; vote passed.

Scholarship Fund 2022:

Balance 12/31/21 \$1073.54

Income \$1338.61

Outgo \$2000.00 (to ARRL Foundation)

Balance 12/31/22 \$ 412.15

Amanda Alden, K1DDN, recently posted this:

Announcing the ARRL Colorado section net beginning in 2023.

Fellow Colorado Section Amateur radio enthusiasts,

As section manager I desire to have a better connection to ARRL members and non-members in the Colorado section. I visit as many in person events as time allows and also make myself available for attending virtual meetings (i.e. Zoom). This "net" will hopefully be a place that Colorado hams can ask questions of ARRL leadership, request help, guidance, club support and technical support. This can also be a place where Colorado hams can ask why is the ARRL important and why should I join?

The net will meet on the second Monday of each month at 7:30 pm Mountain time. Our first net will be on January 9th 2023.

I've chosen an ARRL Affiliated Club/Repeater system to host this net each month. The Fun Machine WE0FUN was chosen as it is a Colorado based system that has dedicated links in Colorado with little "regular" traffic. WE0FUN provides paths into the net via analog RF, Echolink, DStar, YSF, NXDN, P25, DMR and M17.

See http://www.we0fun.com/?page_id=304 for analog repeaters and locations.

The digital reflectors are as follows;

Allstar - Node 28368

Echolink - *CANONCTY* 363976

DStar - XRF815B, XLX815B, DCS815B or REF815B

TGIF - DMR 815

Brandmeister DMR - 310815

YSF - US CO WE0FUN 53927

P25 - Talkgroup 10209

NXDN - Talkgroup 31081

M17 - 815B

I look forward to hearing you all.

Feel free to forward to other clubs as well.

John Bloodgood, KD0SFY

PIC, Colorado Section - ARRL

My PPRAA Field Day 2022

By Derek / K0ATV

It was a dark and stormy night... No, actually that's not how it started at all. Although that might be a tad bit of foreshadowing.

Friday morning I arrived onsite at Northrop Grumman, between the COS airport and the new Amazon Megaplex, at approximately 9am. Ken / K0KWH was already there landing the mothership (his super huge 5th wheel RV) and a few others were onsite starting to get our vehicles staged and the layout finalized. Kyle / KD0TRD had made a breakfast burrito run that morning to ensure that we had fuel in our tanks for the activities to come. The name of the game was to get all our RVs staged along the transition from parking lot to the field where the antennas would go, set up antennas and feed lines, radios, and our version of "tent city" to house the eating and information tables. It was sunny with a few small puffy clouds and very seasonable. We knew what was to come, and embraced our future destiny full of lightning and rain.

Setting up the antennas and radios was a straightforward affair. Having had a prior summer field day and a winter field day under my belt (and a few POTA and SOTA activations) I felt quite at home with the guys getting everything set up. We knocked it out and moved forward to the next tasks. I did a little testing with my radio in LD's / W0XLD trailer on FT8 and SSB and realized that for once, I had not forgotten anything. Best feeling in the world. Lesson #1, in hindsight, one must listen to Jim / KD0KQL when he says "I'm going to put some sunscreen on" and take that as sage advice to be heeded. I got a little too much sun from the day's activities! Later, a little bit of standard issue afternoon wind kicked up and we realized that our anchoring system for "tent city" needed beefed up. Trucks were moved into position, straps put in place, and various lengths of rope utilized. Lesson #2, if you use a pop up canopy in Colorado you better be sure how you deploy it can withstand some winds. Rope and cargo straps are a must! Saturday morning was still looking pretty dang sweet. Partly cloudy and nice. We chowed down on some of the left over breakfast burritos, coffee, and other necessities. I had slept in my pop up tent trailer, felt great, and was fully ready for Summer Field Day 2022. Soon after breakfast the winds started up again and there was an increased number of clouds. Yeah, it's coming eventually. We had quite a time getting Dave's / AD0QD carport tent set up for the Boy Scout's merit badge class shelter. I believe we had 6 or so guys fighting for our lives to keep that thing on the ground while we were putting the roof on as it was trying to fly to Pueblo. We got it handled and secured the structure to Dave and Ken's trucks. Another checklist item completed! John Bloodgood / KD0SFY got his go box and other informational goodies all set up, banners were hung, Doug / N7LEM got the kitchen all sorted out and staged. Things were looking good and on track.

12 noon was upon us! The official start for the event. We had my radio running out of LD's trailer, Ken's radio in his RV along with Jim / K3ILC and his rig (set up for heavy CW action), as well as Dave's radio set up as a GOTA station. We were running as 3A, which is three stations on emergency power. Generators and solar were utilized. We started off mic's and paddles blazing and had lots of folks willing to jump in and operate. It was truly a team effort from everyone who showed up. We had veteran operators, new operators, and even folks who had never even operated at all. Lesson #3, LD's laminated print outs of the contest exchange, section map, etc were absolutely invaluable. It is so easy to try and give your own callsign while we are supposed to be using AF0S, the club call. I do it too sometimes and those sheets help greatly.

Shortly after start up we were all loaded up with an outstanding lunch provided by Doug's efforts. Burgers, brauts, chips, and a slew of other goodies. If anyone onsite was hungry it was their own dang fault. If anyone thought lunch was good, they were wow'd again with supper. Some fantastic brisket and some member provided potluck items sealed the deal. Oooh, and those mini cupcakes! I immediately realized that it would take some serious operating to burn off those meals!

Remember that nasty weather that was slated to be in our futures? It arrived shortly after dinner. The winds kicked up, the sky gave rain, and lightning was dancing around our location. Pretty much everyone had their phones on some sort of weather / radar site at all times. Luckily no lightning came to visit us directly. That was a fantastic perk. We could see that the folks up in Monument and Pueblo were getting absolutely hammered, we got lucky. What do you do when it's raining and windy but the show must go on? Be very thankful that you have RV's to hide out in and keep going! LD and Ken's mobile abodes were cranking well into the wee hours. I packed it in at around 12:30pm and had callsigns dancing in my head until I finally drifted off to sleep. CQ CQ CQ This is AF0S, We are 3A in Charlie Oscar, AF0S, AF0S...

Sunday morning! It started off ok, and then the drizzly cold rain kicked in. When it wasn't raining, it was a horizontally driven thick wet mist. Weather happens and we still have an event to finish up. In chatting with Ken that morning apparently Jim had been cranking away on CW all night long. That man is a machine, and our final numbers would show it. Plus, CW contacts have a x2 multiplier which greatly helped our showing. Lesson #4, I saw this at the prior summer field day I was a part of as well. CW operators are the backbone of your field day points. Want to be a hero? Be a CW operator on field day. We continued rotating out operators and keeping the mic's hot until the final bell rang. Everyone then gathered in the "tent city" and we exchanged the attaboys and motivational speeches that were truly earned due to our efforts. After a group sigh of relief, we all jumped onto the next task and the site teardown was fast and furious. We were all cold, tired, and it was time to pack it in. While taking down the telescoping masts Kyle found that they were full of water, all the way to the top. Seems we got quite a bit of rain! I think it was around 2pm that I pulled chocks and started heading home.

All in all, weather included, this PPRAA Summer Field Day was an absolute blast. We had equipment challenges to overcome, insanity level weather, familiar faces, new faces, Boy Scouts earning merit badges, amazing food, a new location, as well as hard and fast radio operating. I can think of few better ways to spend a weekend, I absolutely love field ops. As I write this we don't yet have our final numbers for the event. That matters (it is a contest of sorts after all!), but the experience and hanging out with my friends and fellow club members will be what sticks with me in my memories, and was why I was there in the first place. I can't wait for Winter Field Day in January. It's going to be EPIC.

PS: There were a great many of folks who contributed to making this awesome event happen. I can't list everyone but here's a few extra shout outs to Craig / KE0RGP, Jon / KJ0CFW, Tom / KF0FOF, George KE0QCC, James / KN4UDV, and to anyone and everyone who came out to learn, operate, support, or just stop in to say hi. Thank you all!

73

Derek / K0ATV / PPRAA VP



PPRAA

Pikes Peak Radio Amateur Association

All,

All,

Here are the quick statistics from our latest VE session and a 2022 annual report.

10 December, 2022 PPRAA VE Session - 13 Applicants:

- 6 New Technician
- 1 New General
- 3 Upgrade to General
- 2 Upgrade to Amateur Extra
- 1 Unsuccessful Upgrade

2022 statistics for the entire year:

106 Applicants and 125 Exams taken

- 50 New Technicians
- 7 New Generals
- 3 New Amateur Extras
- 16 Upgrades to General
- 14 Upgrades to Amateur Extra

- 11 Unsuccessful Technician exams
- 9 Unsuccessful General exams
- 3 Unsuccessful Amateur Extra exams

Our next VE session will be in 2023 on January 14th

All this is possible thanks to our great group of Volunteer Examiners!

73

Jon Cashatt, KJØCFW

VE Team Leader

Pikes Peak Radio Amateur Association

Laurel VEC

AARRL Clean Signal Initiative on the horizon

By Dan Romanchik, KB6NU

In recent message to his Northwest Division membership, Mike Ritz, W7VO, described a new program that he's gotten the ARRL to take on—the Clean Signal Initiative. He writes:

“After a few months gathering support from the amateur community for the project, the ARRL Clean Signal Initiative (CSI) is finally getting off the ground. The Board's Programs and Services Committee approved the concept several months ago, and since then I have been canvassing some of the best known RF engineers in amateur radio to get their support and input. As a result, the team will be conducting our first Zoom call next week to lay out the next steps for the project. All I can say at this time is that there are some amateur radio “heavy hitters” behind this, and I believe will be a game changer for the ARRL.

For those that may be unaware of this project, here is a synopsis (or at least my vision):

1. The CSI gets the ARRL formally in the “technical standards” business. (Other technical organizations already do it: IEEE, UL, ASTM, and SAE, and others.) The ARRL currently tests new products to informal standards, with no real hard benchmarks for manufacturers to meet, other than the minimal standards outlined in FCC Part 97.307.
2. Creates and incorporates documented “best practice” standards and testing methodologies to ensure commercial amateur radio transmitters and amplifiers meet not only minimum FCC requirements for signal cleanliness, but push the envelope.
3. These new standards can be “home grown”, or passed through the IEEE, but I think it's important they be also branded as “ARRL Technical Standards.”
4. Test new commercial transceivers and amplifiers against these standards.
5. Certify the transmitters and amplifiers that pass the standards: “CSI certified by the ARRL.”
6. Work with manufacturers to ensure compliance of those that don't. (Market pressure will drive this.)
7. Market the program to the amateurs through QST.
8. Work with manufacturers and social media experts to create training materials to teach hams how to set up their equipment to ensure the cleanest transmitted signals. (This education part is key!)”

Rob Sherwood, NC0B, of Sherwood Engineering, who is most well-known for his [ranking of receiver performance](http://www.sherweng.com/table.html) (<http://www.sherweng.com/table.html>), is part of this effort. You can see a video of a talk that he gave recently to the Sutton & Cheam Radio Society by going to <https://youtu.be/IioApKRecrI>**Error! Hyperlink reference not valid.**

Based on my knowledge of how IEEE standards committees work, I stressed that the initiative should make every effort to get as many stakeholders—including manufacturers and users—involved as possible. Involving so many people may be cumbersome at times, but standards require consensus for them to be effective, and the only way to do that is to get everyone involved. I'd suggest that if you feel that you have something to contribute that you contact Mike directly. His email address is w7vo@arrl.org**Error! Hyperlink reference not valid.**

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Dan Romanchik, KB6NU, is the author of the KB6NU amateur radio blog (KB6NU.Com), the "No Nonsense" amateur radio license study guides (<https://KB6NU.Com/study-guides/>), and often appears on the ICQPodcast (<https://icqpodcast.com>). When he's not worry about how clean his signal is, he operates CW on the HF bands and teaches ham radio classes.

Apply for a grant from the ARRL or ARDC

By Dan Romanchik, KB6NU

In our division director's September missive to the membership yesterday was this nugget:

ARRL IS CURRENTLY OFFERING GRANTS to fund amateur radio projects. This program, sponsored by the ARRL Foundation, is specifically for organizations and aimed primarily for education, licensing and support of ham activities. A special focus is on youth-related plans. We are now entering the last phase of this year's grant cycle, so the opportunity exists for your club or organization to submit a grant request. You can find the full details on the grant page of the ARRL web pages, check: <http://www.arrl.org/amateur-radio-grants>.

The ARRL accepts grant requests three times a year:

- February 1 – February 28
- June 1 – June 30
- October 1 – October 31

Since this is September 1, you have two months to get your request in. As I've written before, our club was awarded \$1,500 to help us put up a tower for a club station at the Ann Arbor Hands-On Museum. The money is available. Go get it!

Get money from ARDC, too!

You can also get a grant for amateur radio projects from Amateur Radio Digital Communications (ARDC), the outfit I'm currently working for. ARDC grants money for projects that fall into one of the following three categories:

- Support and growth of amateur radio,

- Education, and
- Technical innovation.

ARDC has, for example, awarded grants to:

- An amateur radio club in Wisconsin (<https://www.ampr.org/grants-old/grant-chippewa-valley-arc-emergency-trailer-and-equipment/>) for upgrading their repeater systems and building an emergency communications trailer that they will also use to promote amateur radio in their area.
- A California high school (<https://www.ampr.org/grant-incorporating-constructivism-and-the-maker-mentality-at-california-high-school/>) whose computer science teacher will use the funds to purchase microcontrollers and transform his classroom into a maker space. With this equipment and facility, students will learn computer science by building their own projects.
- The M17 Project (<https://www.ampr.org/grant-m17-open-protocol/>), whose goal is to develop a new, open-source digital radio protocol by hams, for hams, and that is easy to understand and build on.

To be eligible for an ARDC grant, an organization must be a 501(c)(3) public charity or be sponsored by a 501(c)(3) public charity. Other eligible organizations include government entities, schools or universities, and international charities or nonprofits.

For more information on ARDC and how to apply for an ARDC grant, go to

<https://www.ampr.org/apply> **Error! Hyperlink reference not valid.**

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Dan Romanchik, KB6NU, is the author of the KB6NU amateur radio blog (KB6NU.Com), the "No Nonsense" amateur radio license study guides (<https://KB6NU.Com/study-guides/>), and often appears on the ICQPodcast (<https://icqpodcast.com>). He recently joined ARDC as their Content Manager. Among his responsibilities is spreading the word about all the cool things ARDC is doing for amateur radio.

EDITORS:

You can find an image of the ARRL Foundation logo at <https://www.kb6nu.com/wp-content/uploads/2019/07/arrl-foundation-425x174.png> **Error! Hyperlink reference not valid.**

An image of the ARDC logo is at <https://www.ampr.org/wp-content/uploads/square-512.png>

Double Fox Hunt

– On Saturday, Oct. 2, several PPRAA fox hunters used their radio direction-finding skills to track down two fox transmitters nestled in the foothills of northwest Colorado Springs. Kyle, KD0TRD, was the fox, and picked two locations with great views of the city. The weather was warm and sunny, and made this a great fall outdoor activity. Thanks to all participants for making this a fun event!

Subject: [V7ARC] 2M Cubic Antenna

Date: Oct 8, 2022 8:24 PM

Good Evening, everyone.

As recommended by Aaron, KCØLGX....

Check out Fuzz the Pi Guy on YouTube. He's got lots of antenna videos.

Doug



- Congratulations to Derek, K0ATV (right), for being the first fox hunter to locate both transmitters. He picked an SDRPlay receiver as his first-place prize, and here he receives the PPRAA fox hunt trophy from the previous champion fox hunter, Derek, N0DCW (left).





ISOTRON 40/20

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The Bands Are Finally Open.

<http://www.isotronantennas.com>

WHAT IS IN A TUNER?

Many stations use Antenna Tuners. From Amateur to AM Broadcast stations. What is this device made of? How efficient are they?

There are several variations of Tuners. However, there are 3 designs that are quite common. The "L" network, the "pi" network and the "T" network.

The "L" type tuner is quite simple. From the output of the transmitter you have a capacitor directly across to ground. After the capacitor there is an inductor (coil) in series to the antenna. Using the reactances of these components you can match an antenna to a transmitter where the antenna is not 50 ohms. Also you can match an antenna that is not resonant.

The math concerning the reactances can be quite complex. To keep it basic, the larger the C value indicates the antenna is of a higher impedance (Z) than the transmitter. The coil is used to cancel the reactance so the entire antenna system is resonant. The smaller the C the opposite occurs. The results also depends on the frequency of the transmitter.

A "pi" network is the same as the "L", with a capacitor added to ground after the coil. This type of tuner has more range and can handle larger mis-matches. Usually the capacitors are variable and the coil is switchable by the operator.

The "L" network is popular in the automatic tuners. Normally you can hear relays switching rapidly on the automatic tuners. It is selecting through a variety of "L" networks to make the match. This circuit is quite efficient and offers little loss to a mis-matched antenna when matched.

The "pi" network will do much the same, but you mainly use 3 components that are variable. Usually the operator does the adjusting. The circuit is also quite efficient.

When higher powers are used, the "L" and "pi" networks can get a bit large physically. Therefore, a "T" network or match is incorporated.

The circuit has 2 capacitors in series between transmitter and antenna. An Inductor is between the capacitors and connects to ground. With 2 reasonably sized (physically) variable capacitors and a variable coil, You can match a very wide range of values.

The "T" match is popular for the higher power tuners. The disadvantage is, it can have up to a 28% loss to the antenna. This is usually overcome with the higher power.

Tuners are an important device to have for any station. It actually matches the mis-match. It is not fooling the transmitter as some have thought. Used reasonably, the tuner will make your station more versatile and affective.

73,
Ralph WD0EJA

11-15

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OUR EMAIL LIST IS ACQUIRED BY PERSONS WHO HAVE CONTACTED US IN THE PAST.
IF YOU DESIRE NOT TO BE CONTACTED PLEASE EMAIL YOUR REQUEST.
mailto: wd0eja@isotronantennas.com

From ECHOLINK website:

What can I do with EchoLink?

EchoLink allows licensed Amateur Radio stations to connect to one another over the Internet. You can use EchoLink to connect your station (or your computer) over the Internet to other amateurs using the same software, and carry on a voice QSO. This greatly enhances the range and utility of mobile and portable VHF/UHF-FM stations, and also allows computer-equipped hams to access distant repeaters directly.

You can access EchoLink either with a radio or a computer. If you are in range of an FM repeater or simplex station equipped with EchoLink, you can use DTMF commands from your radio to access the EchoLink network. If you are a licensed amateur with an Internet-connected PC, you can access EchoLink stations directly from your PC.

How do I get started using it?

First, download the software from this Web site. Then, install the software on your PC, be sure you have a good Internet connection, and start it up to register your copy of the software. The final step is to provide proof of license so your callsign can be added to the system; see Validation for details. Then, you're ready to go.

Is EchoLink available for any platform other than Windows?

EchoLink is designed specifically to run under Microsoft Windows. Currently, there are no plans to offer versions of EchoLink for other platforms (except as noted below).

Is EchoLink available for smartphones and tables, such as an iPhone or an Android phone?

Yes! An edition of EchoLink for the Apple iPhone and iPad is available, free of charge, at the App Store. For Android devices, please install EchoLink from Google Play.

\$35 Application Fee

The majority of the FCC's revised Part 97 rules (adopted in December 2020) establishing new application fees become effective on April 19. The FCC announced on March 19 that the amateur radio application fees, including those associated with Form 605 filings, would not become effective

until the "requisite notice has been provided to Congress, the FCC's information technology systems and internal procedures have been updated, and the Commission publishes notice(s) in the *Federal Register* announcing the effective date of such rules."

The \$35 fee, when it becomes effective, would apply to new, modification (upgrade and sequential call sign change), renewal, and vanity call sign applications, as well as applications for a special temporary authority (STA) or a rule waiver. All fees will be per application. Administrative updates, such as a change of mailing, email address, or name, are exempt.

It is expected that such fees will not become effective before summer 2021. The FCC has stated that amateurs will have advance warning of the actual effective date, because it will publish such date in the *Federal Register*.

ARRL Volunteer Examiner Coordinator ([VEC](#)) Manager Maria Somma, AB1FM, said VECs and Volunteer Examiner (VE) teams will not have to collect the \$35 fee at exam sessions. Once the FCC application fee takes effect, new and upgrade applicants will pay the \$15 exam session fee to the VE team as usual, and pay the \$35 application fee directly to the FCC via the [Fee Filer System](#) or [License Manager System](#). Somma said this information was provided in a [VE Newsletter](#) distributed this past week. "Further news and instructions will follow when we have them," she said



PPRAA 2 Meter Net Script

Version date: 2021-10-17

At 1955 hours (7:55 pm), announce:

The Pikes Peak Radio Amateur Association 2 meter net will start in five minutes, at twenty hundred hours. This is [your call sign].

Begin the net at 2000 hours (8:00 pm):

Calling all radio amateurs. This is the Pikes Peak Radio Amateur Association Thursday evening 2 meter net. Tonight's net control station is [your call sign] and my name is [your first name].

The PPRAA 2 meter net meets each Thursday evening at 20:00 hours [20 hundred hours] local time on the CMRG repeater, 147.345 MHz, positive offset, CTCSS tone of 107.2 Hz. In case of repeater problems or failure, the net will move to the 146.970 PPFMA repeater using CTCSS tone of 100 Hz, negative offset.

All amateurs are warmly invited to check-in and participate in this net. This is a directed net, so please go through Net Control to contact another station.

The purpose of this net is to announce PPRAA club business, upcoming events and activities, to discuss technical topics, to disseminate general information of interest to the amateur radio community and to practice formal net procedures. Please listen closely and follow the net control station's instructions.

When checking into the net, please give your call sign, your name, your location and if you have traffic for the net. Please speak slowly and clearly, Use correct ITU phonetics. It helps to repeat your call sign at the end of your check-in. Please be patient as net check-ins usually have a few doubles.

Take check-ins:

PPRAA Club Officers and Board Members please check-in now. [Acknowledge all check-ins.]

Portable stations and mobiles please check-in now. [Acknowledge all check-ins.]

Now, stations with suffixes starting with Alpha through Foxtrot. [Acknowledge all check-ins.]

Stations with suffixes starting with Golf through Lima. [Acknowledge all check-ins.]

Stations with suffixes starting with Mike through Romeo. [Acknowledge all check-ins.]

Stations with suffixes starting with Sierra through Uniform. [Acknowledge all check-ins.]

Stations with suffixes starting with Victor through Zulu. [Acknowledge all check-ins.]

Now all stations, with suffixes starting with Alpha through Zulu. **[Acknowledge all check-ins.]**

This is the PPRAA Thursday evening two-meter net, with **[your call sign]** as net control. Now we'll go to stations with traffic. **[Call on stations with traffic and lead discussion.]**

Are there any additional stations wishing to check in? Please call now. **[Acknowledge all check-ins.]**

Round-robin discussion:

This part of the net is for round-robin discussion. We will take comments from each station in turn, and we'd like to hear: have you been doing anything on the air, or working on any ham projects? Or perhaps you've heard some amateur radio news, or watched a YouTube video, you'd like to share with the net? Tell us what's new in your ham shack. **[Call all checked-in stations in turn.]**

[At least once every ten minutes:] This is the PPRAA Thursday evening two-meter net, with **[your call sign]** as net control.

Does anyone have any questions, comments, or requests for the net? Please call now. **[Direct discussion.]**

Wrap-up:

Last call for late check-ins, please call now. **[Acknowledge all check-ins.]**

You are invited to attend the PPRAA club meetings on the second Wednesday of each month. Social hour begins at 1800 (6:00 pm); the meeting begins at 1900 (7:00) pm. You may attend online on a Zoom meeting, and the online invite is emailed out to all members, or you may now attend in person, at Billy's Old World Pizza, 308 South 8th Street in Colorado Springs. That's on the southwest corner of US-24 and 8th Street, and we look forward to seeing you there.

In addition, the PPRAA has an Amateur Radio Operator's breakfast meeting on the first Saturday of each month, at a location posted on the PPRAA.org website.

PPRAA VE exams are held on the second Saturday of each month. Location is the Pikes Peak Regional Office of Emergency Management building located at 3755 Mark Dabbling Blvd. Testing is at 1000 hours and the tests are currently free to take.

Our net control operator for next week will be **[call sign of following week's net control]**.

The Pikes Peak Radio Amateur Association wishes to thank all the stations that joined us this evening, and the CMRG for the use of their 147.345 and 448.100 repeaters. I hope to hear you all next Thursday evening at 2000 hours (8:00 pm) for our next PPRAA two-meter net.

This is **[your call sign]** closing the net at **[time]** with a total of **[number]** check-ins. We are now returning the repeater to regular amateur use. 73 everyone! **[Your call sign]**, clear.



Figure: Steve/WGØAT operates HF phone from a SOTA summit in Colorado.

PIKES PEAK RADIO AMATEUR ASSOCIATION AFØS



Radio _____ Confirming QSO _____, _____ UTC
 Mode _____ Frequency _____ MHz Your sigs: _____
 Transceiver: _____ Antenna: _____
 Operator: _____ Grid: DM78tt
 Mailing address: PO Box 16521, Colorado Springs, CO 80935
 Station Location: Ellicott, CO PSE QSL TNX

Email: station@ppraa.org

Major Events

PPRAA Awards Program

I have been the Awards/Recognition committee chair for almost 20 years. Awards have been issued when applied for. I just reviewed my logs and found I qualified for the VUCC award with 116 grid squares worked on 6 meters.

If folks will let me know what they have qualified for and fill out an excel log data sheet I will print out a very nice certificate.

Certificates can be printed for regular achievements or a goal you set for yourself.

Mike WV7T
Wv7t@aol.com

I am cutting back on my ham radio activities as other matters have arisen I must concentrate on.

These I will be available to provide:

Technician and General class license tutoring

Hands on skills

Ham equipment and accessories

Club asset manager

Award-Recognition program chairperson (We do have an awards program in PPRAA)

Lots of advice

I can be contacted at 719-229-8610 or wv7t@aol.com

Mike WV7T



This was 2001 when PPRAA was 50 year ARRL affiliation.

This year 2021 is 70 year PPRAA affiliation.

Nice job folks.

July 25, 2001

Pikes Peak Radio Amateur Assoc
1420 North Gate Rd
Colorado Springs CO 80921-3025

Dear Sidney: *W 7/28/01*

Congratulations on 50 years of affiliation with the ARRL! We have prepared a special certificate to commemorate this achievement. The certificate will be mailed to you directly, or sent to your Division Director. If a certificate is not enclosed with this letter, your Division Director, or another League Official, will present it to your club. The League Official selected for presenting the certificate to your club will contact your Club President or ARRL Liaison to make arrangements.

The League's affiliated clubs have been the backbone of organized Amateur Radio for more than 80 years. Amateur Radio classes, TVI committees, equipment exchange and camaraderie are just a few benefits offered to club members. Your club, the League, and Amateur Radio as a whole have grown during our long association. Who knows what's in the future? We do know, however, that clubs like yours will continue to meet and shape the challenges and opportunities the Amateur Radio Service encounters daily.

We hope the next 50 years of affiliation will be as enjoyable and beneficial as the first 50!

73,

Margie Bourgoin, KB1DCO
Margie Bourgoin, KB1DCO
Club & Educational Correspondent

AMERICAN RADIO RELAY LEAGUE

ADMINISTRATIVE HEADQUARTERS • 225 MAIN STREET • NEWINGTON, CONNECTICUT, USA 06111-1494
TELEPHONE 860-594-0200 • FAX 860-594-0259 • INTERNET: hq@arri.org • WWW: <http://www.arri.org/>

2021 is the 70th year of PPRAA ARRL affiliation.
That is a long time!

You shop. Amazon gives.

I'm somewhat dismayed that there are only 18 households contributing via their King Soopers accounts. Seems that many people had obtained the KS gift cards several years back, before they changed it to simply being a selection on their account.

Perhaps we should try to make it clearer just how it's done.

- 1) Go to kingsoopers.com.
- 2) Log in to your account.
- 3) Scroll down to, and select Community Rewards.
- 4) Search for and Add 'Pikes Peak Radio Amateur Association Inc.' (Organization Number MK867) as your target.

That's all it takes.

It shows (me) that I contributed \$18.85 last quarter. So, I guess mine made up slightly more than 10% of the total.

(Of course, maybe some PPRAA members could be directing contributions to another organization.)

Dennis

Amateur Radio Emergency Links Info

Amateur Radio and Emergency Communications

<https://alertfind.com/amateur-radio-and-emergency-communications/>

Disaster Preparedness on a Budget

<https://couponfollow.com/research/disaster-preparedness-on-a-budget>

From the annals of PPRAA history

December 1983:

A motion will be made at the December to establish a club repeater. Please attend. (Interesting to note this has not appeared in any previous 0 Beat to this date.) The Red Cross gave the program at the November meeting, and led an interesting Q&A discussion. The Red Cross would like to work more closely with the club. The club purchased an insurance policy for \$300,000, with a \$1,000,000 rider for the Mall demonstration. Cost is \$100 per year. Les KCØNC will set up a calling tree to notify club members of important information. The first item will be notification of the club's Christmas party. The repeater issue was brought up by Frank KL7IPV at the November meeting. Still looking for a club callsign trustee, preferably an extra class operator. The club will look into determining whether or not it should purchase an antenna rotator. The Chapel Hills Mall demo was a success, with a number of potential new members dropping by. A motion was passed that the board recommend to the club members that the repeater motion be passed at the December 14 meeting. The board approved spending \$200 for the Snack Bar Committee for refreshments.

January 1984:

Since VE testing will soon be allowed by the FCC there is a lengthy article about the facts of VE testing. Colorado Springs will host the next CCARC meeting on March 17. Ongoing discussion at the club meeting about whether or not the club should acquire and operate a repeater. Frank KL7IPV presented a proposal for a repeater. A committee was established to determine the questions concerning a repeater for the club. The January meeting will be held at the Palmer House Motel on North Chestnut, just N of I-25 and Fillmore. The PPRAA is working more closely with the American Red Cross and will help by publishing a list of ARC classes in the Zero Beat. These courses are CPR, and standard and advanced first aid. This year's swapfest may turn into a hamfest. The board discussed the possibility of a larger location, a two-day event, and maybe even charging admission. The swapfest budget was \$200. Frank KL7IPV agreed to take over the duties of Editor. Board member Charlie Biggs KCØTI resigns due to personal conflicts.

Parker Radio Association

PPRAA Team,

Be sure to join us for our weekly nets Monday and Tuesday evenings!

First, Monday, at 8:30pm, on D-Star XRF223B, the PRA holds its D-Star net. There is plenty of conversations from everything digital to the latest projects and devices... from DStar / DMR / Fusion / Brandmeister / Hotspots, and even CW. This can be accessed via your local hotspot. Also, many have linked via the WOCDS 2M repeater as well. Considering our KOPRA repeater is being relocated, using the WOCDS 2M side would be best (please follow common/courteous practice when linking).

Second, at 8:00pm on Tuesday, is the PRA weekly analog net on the WOCFI 448.675 – (100Hz) repeater. This is a great way to catch up on the happenings of the PRA and is a great environment to ask any question related to the hobby or to give yourself some bragging rights on a recent license, upgrade, or new piece of equipment.

We'll see you on the air!

73, KØPRA Your Friends at the Parker Radio Association

www.facebook.com/parkerradioassociation parkerradio.org

[@ParkerCORadio](#)

ARRL Outgoing QSL Bureaus

www.arrl.org/outgoing-qsl-service

ARRL affiliated-club stations may use the service when submitting club QSLs for its members in bulk ("pooling" their members cards together in one package) by indicating the club name inside the package. Club secretaries should check club affiliation on the ARRL web site to ensure that their affiliation is current. In a "pooled" package, each club member using this service **must also be an ARRL member**. Cards should be sorted "en masse" by prefix and a proof of membership should be enclosed for each ARRL member. QSLs for unaffiliated club calls may also be sent via the outgoing bureau to foreign destinations if the trustee of the club call is a member in good standing. The trustee's proof of membership must be included with the club call-QSLs.



Here are the statistics from our March 12, 2022 VE session.

Our next session will be on Saturday April 09, 2022.

March 12, 2022 PPRAA VE Session - 10 Applicants:

6 New Technician

2 Upgrade to Extra

1 New Extra

1 Unsuccessful

--

73

Dennis Major, N0ABC

Laurel ARC VEC, Regional Coordinator #10 / Ø

(CO, IA, KS, MN, MO, ND, NE, SD)

Pikes Peak Radio Amateur Association VE Team Leader

PPRAA VE EXAMS

(MONTHLY)

PPRAA VE session has relocated and will be held at 10:00 am on the second Saturday of the month at Pikes Peak Regional Office of Emergency Management

3755 Mark Dabbling Blvd, Colorado Springs, CO 80907, USA

Organizer: ve@ppraa.org

TESTING IS FREE. Applicants will need the following items at the session:

1. A valid **PHOTO ID**, driver's license preferred (if you do not have a valid photo ID, please call for alternative identification requirements).
2. Your **FRN NUMBER** (Please obtain in advance of the session).
3. A copy of your **amateur radio license** (if any).
4. The **ORIGINAL** of any relevant **CSCEs** you have **AND a PHOTOCOPY** for the VE Team to keep.

PPRAA VE Team policy, as with many VE Teams, is to not allow same day retests on failed exams. Anyone passing their Technician Class examination at a PPRAA test session will receive a free year's membership to the Pikes Peak Radio Amateur Association.

Jim Bishop kd0kql@hotmail.com, 719 332-5283, 000PPRAA VE Contact



MARC VE EXAMS

(January, March, May, July, September, November)

The Mountain Amateur Radio Club (MARC) VE Team conducts VE exam sessions in Woodland Park every odd month at 10 am on the first Saturday in the Community Meeting Room of the Woodland Park Library, 218 East Midland Avenue. The MARC VE Team is affiliated with the ARRL/VEC and examinations for all classes of license will be offered.

Full information, including driving directions to the Woodland Park Library, is available under "VE Sessions" on the MARC website at

<http://www.nx0g.org/ve.html> or contact Wes Wilson (KØHBZ) at k0hbx@arrl.net or call (719) 687-8758.

If attending, please BE SURE to bring the following items to the session:

A valid PHOTO ID, driver's license preferred (if you do not have a valid photo ID, please call for alternative identification requirements).

1. Your FRN NUMBER (now required – this includes children Please obtain in advance of the session).
2. Your ORIGINAL amateur radio license (if any) AND a PHOTOCOPY for the VE Team to keep.
3. The ORIGINAL of any relevant CSCEs you have AND a PHOTOCOPY for the VE Team to keep.
4. Cash, Check or Money Order for \$15 (standard ARRL VE Fee). Checks and money orders should be made out to MARC and covers all the different exams you wish to take at the VE session.

MARC VE Team policy, as with many VE Teams, is to not allow same day retests on failed exams. For already licensed hams, MARC members should be monitoring the MARC repeater system 146.820- or 448.650- (both 107.2 Hz) if you need help with talk-in. 73 Dean Buckhouse

more about your particular radio.

Follow us on www.facebook.com/KE7XBOOKS to keep up-to-date on book news and to be notified of book discounts at www.lulu.com.

One instructor for new and advanced ham classes has said, "This book is exactly what is needed. I've seen some other books targeting the new hams that are less than satisfying both technically and in content but this one is right on the mark and covers so much information that I so often get asked about, during and after teaching classes."

Here are more details on the content:

- With nearly 110 years of ham radio experience between them, the authors are still excited about the challenges this wonderful hobby offers. *The Successful Ham Radio Operator's Handbook* will guide you when exploring some of these.
- Its goal is to help new operators and returning old-timers learn about the breadth of exciting ham radio activities and challenges available today.
- It answers the question "Why is ham radio relevant in the Internet age?"
- It covers a wide range of topics, helping the reader to understand the excitement of different facets of ham radio and to choose a challenging and exciting activity to pursue.
- It helps the reader better understand how the radio works. Many hams only use a small fraction of the features of their radio. For example, if you understand how a noise blanker or a roofing filter or the AGC works, you will be able to more easily use these, and other, features of your radio to your benefit.
- It provides exercises designed to apply the knowledge to cement your understanding of how your radio works without being radio-specific. It is good for all makes and models.
- It helps the reader get enough background to understand much of the jargon hams who pursue special activities, such as the various digital modes, VHF contesting and moon bounce. It quickly takes the novice reader to higher level of understanding and provides URLs and websites that help the reader go deeper into new interests.
- Antennas remain a key area where all hams can still successfully experiment and create a key part of their station. This book provides information to help new hams get started cutting their own verticals and dipoles. It explains why some popular multiband antennas may have compromises that impact performance.
- It gives practical guidelines about choosing transmission lines and building and using baluns and chokes.
- Digital modes such as RTTY, PSK and the new WSTJ modes are explained. The computer-to-radio connections needed for these modes are discussed and illustrated.
- Many hams are motivated by public service and emergency preparedness. This book describes typical local emergency organizations and national networks.
- Hams who like to operate while traveling will find practical information on reciprocal international agreements and how to get permission to operate legally.

Online Practice Test Sites



Study for your Amateur Radio License exam:

[Technician \(2018-2022\)](#)

[General \(2019-2023\)](#)

[Amateur Extra \(2019-2020\)](#)

[Other...](#)

HamExam.org Amateur Radio Practice Exams

Log in using **Error! Hyperlink reference not valid.** or click [register](#) to create an account. If

this is your first visit to the site, please read my brief [introduction](#).

QRZ.COM <https://www.qrz.com/hamtest/>

Eham <https://www.eham.net/exams/>

AA9PW.COM

Membership Application
Pikes Peak Radio Amateur Association, Inc.
P.O. Box 16521, Colorado Springs, Colorado 80935

Date_____ ☐ New Membership ☐ Renewal

Name_____ Nickname_____

Email address_____ Address_____

Telephone_____

City_____ State_____ Zip _____

Call Sign_____ License Class_____

Are you an ARRL Member? " Yes " No

Additional family members residing at same address

Name_____ Call_____ Class_____ ARRL: "Y "N

Name_____ Call_____ Class_____ ARRL: "Y "N

Name_____ Call_____ Class_____ ARRL: "Y "N "

" Full Membership \$15/yr

" Family Membership \$18/yr

" Full Membership - over age 65 \$10/yr " Family Membership - all over 65 \$12/yr

" Free - VE Signature required _____

Mail to: PO Box 16521, Colorado Springs, CO 80935, with check or money order or Scan and email to treasurer@ppraa.org, and pay with Paypal on www.ppra.org or Deliver to PPRAA Treasurer in person