



VOLUME 72 ISSUE 5  
May 2021

## PPRAA Club Officers

<b>President</b>	<b>Don DuBon, N6JRL+</b>
<b>Vice President</b>	<b>Joe Gage, KEØTPW+</b>
<b>Secretary</b>	<b>Jason Taylor, KØWTF+</b>
<b>Treasurer</b>	<b>Dick Kohlhaas, W5UDM+</b>
<b>Ø-Beat Editor</b>	<b>Jerre Redding, WAØBCM</b>
<b>Webmaster</b>	<b>Douglas Nielsen, N7LEM</b>
<b>Past President</b>	<b>Jim Bishop, KD0KQL</b>
<b>Board</b>	<b>John Bloodgood, KDØSFY</b>
<b>Board</b>	<b>R, Lee Glazer WØRLG*</b>
<b>Board</b>	<b>Dennis Major, NØABC*</b>
<b>Board</b>	<b>Logan Perry, KEØKZA*</b>
<b>Board</b>	<b>Anthony Mitchell, KEØLQK*</b>
<b>Board</b>	<b>LD Steiner, WØXLD</b>
<b>Board</b>	<b>Michael Walter KEØTWK</b>
<b>Board</b>	<b>Daniel Burtis, KEØWJL</b>

\* In final year of 2-year term

+ One year officer position

All officers can be contacted at: [boardmembers@ppraa.org](mailto:boardmembers@ppraa.org)

## Monthly Ham Breakfast

La Tartine, 1420 Kelly Johnson Blvd  
Saturday, 5 June  
8 – 9:30 AM



### **PPRAA Board Meeting (10 May) will be virtual**

– There will be an online meeting via Zoom.

### **PPRAA General Membership meeting (12 May) will be virtual**

– There will be an online meeting via Zoom. 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.



## PIKES PEAK RADIO AMATEUR ASSOCIATION

Minutes of the Board Meeting April 12, 2021

Meeting Start 6:30 PM

In Attendance: KE0ZKA, W0XLD, N6JRL, N0ABC, W5UDM, KE0WJL, KD0KQL, N7LEM,

KD0SFY, KE0TPW Welcome introductions;

Silent Keys; Don KI0IS, Frank Rogers K3PDT, Joe Quintana N0ENM, Paul Kwarta N0PK Vice President; Joe KE0TPW: Wednesday guest will be Ron Bondy. Western Mining Museum Family Day in June: We've tentatively accepted participation.

Treasurer Report, report Dick W5UDM; Expenses include new mast, Donation to Dayton ARA. Rent check for club station lease still not cashed.

Asset manager: Mike WV7T – Not in attendance.

Clubhouse report Steve KT0DX

- \* Folded dipole mast has been replaced; still having feedline problems. Awaiting connectors to be shipped to troubleshoot and repair feedline/antenna.
- \* 40 meter loop: either it needs a matching section of 75 ohm feedline added back in, or a 2:1 balun. Earl / AE2RW is investigating 2:1 balun.
- \* All 3 stations are up and running; Jim/Mike/Steve have been working on getting computers working to support FT8. Stations 2 and 3 have FT8 running on them at this time.
- \* Most junk has been hauled off from antenna farm and under solar panels. There are still some items to be dispositioned.
- \* Jim / KD0KQL, Daniel / KE0WJL, Don / N6JRL, Joe / KE0TPW to meet at the station at 9:00 am, Saturday April 17, and determine which outdoor items to keep, and which to dispose of. (A few remaining masts, charcoal grills, air conditioner.)
- \* Offer to buy the Honda inverter generator has been submitted to the board.

- \* Don / N6JRL made motion to decline offer and maintain it for the club's field day and emergency use
- \* Dennis / N0ABC seconded motion
- \* Motion carried after vote

VEC Testing, Dennis N0ABC; 14 Applicants. Everyone got a new license or an upgrade. 2 people came without FRN's. Need new printer, 138.90+tax. Dennis moves, Doug seconds, Motion passes.

Zero Beat Report Jerre WA0BCM; Went out earlier today.

Secretaries Report / Fox Hunt: W0XLD standing in for K0WTF. Fox will be in Northern

Colorado Springs or Black Forest area. Dick makes motion to accept last months minutes. Joe seconds. Motion carries. Web Master Report Doug N7LEM; Zero beat is up. Announcement for VE sessions are restored.

Update on 146.970: Dennis says testing has been transmitting ID on Saturdays every 5 minutes.

PPARES Report John KD0SFY; Skywarn Training is virtual again this year. Amateur Radio Specific zoom meeting will be set up to go over amateur radio procedures. Ongoing MARS exercises on 60 meters: First full week of each month. WWV Announcements at 10 minutes after the hour. Colorado Severe Weather Awareness Week is announced.

Mega Fest Report Jim KD0NQM; Canceled this year. Hopefully can be restarted next year.

Internet Committee Doug N7LEM; Nothing to report in addition to the website report.

Thursday PPRAA net; Typically around 20 attendees.

QCWA Chapter 58 Mike WV7T Don N6JRL Received a certificate of congratulations for being instituted for 50 years.

Meeting Adjourn 8:00 PM

- \* Motion to adjourn made by Dennis / N0ABC
- \* Seconded by Doug / N7LEM
- \* Motion carried



## PIKES PEAK RADIO AMATEUR ASSOCIATION

### Minutes of the General Meeting April 14 2021

Meeting start: 7:00pm 38 Participants.

PLEDGE Don N6JRL

SILENT KEYS:

- \* Don, KI0IS
- \* Frank Rogers / K3PDT
- \* Joe Quintana / N0ENM \*
- Paul Kwartka / N0PK

INTRODUCTIONS:

Randy Abel KEORRW  
John Lacey  
Tony Valle KFOENT  
KFOENV  
KFOERR  
K5KTI  
KFOCEI  
KFOCRX  
KFOCRY

NEW HAMPS/MEMBERS?

WOXLD / KOWTF fox hunt Apr. 18

VE Testing Dennis N0ABC –

- 14 Applicants, 14 passes and upgrades.
- FCC won't be collecting fees until at least June.

TREASURER REPORT: DICK W5UDM

- Only major expenditure was the mast replacement for the club station.
- Moved \$2000 from checking to savings.
- KDONQM moves
- WOXLD seconds
- Motion passes.

SECRETARY REPORT: KOWTF Jason  
KE0QCC moves to approve  
KE0TWP Seconds  
Motion passes.

ZEROBEAT: JERRE WA0BCM  
It's published on the website.

WEBMASTER REPORT; DOUG N7LEM  
ZeroBeat is published as is the latest minutes. Should be all up to date.

PPARES REPORT; John Bloodgood KD0SFY  
Weather: NWS Pueblo virtual skywarn training again this year. 2 dates left open. If you're interested in getting certified [weather.gov/pub](http://weather.gov/pub) look for SkyWarn at the top. One this month and one next month. Not doing one specifically for Amateur Radio folks. John will most likely set up a SkyWarn related training for amateur radio folks.

This is Colorado Severe Weather Awareness Week.

MEGA FEST REPORT: Jim Rader KD0NQM – It's Cancelled. Looking to possibly selling the equipment bought for door prizes in order to recoup some cost there.

VICE PRESIDENT Joe KE0TPW Presentation  
Ron Bondy AD0DX: Satellites and Amateur Radio  
KG4AKV Video from Youtube

Most satellites are in LEO at 300 up. They're essentially just crossband repeaters in space.

Doppler Shift: VHF is negligible. UHF side will shift about 9khz from acquisition to apogee, then will shift down that.

QCWA CH. 58 Report Mike WV7T or Don N6JRL: Received a certificate for 50 years of existing.

PPRAA ; Thursday night net: Nets are going well. Need more net control stations.

KC0ET: Looking for a young or new ham that would like to inherit a station for free. [KC0ET@arrl.net](mailto:KC0ET@arrl.net).

Base: TS-130S. Separate VFO, Digital Interface, CW, RTTY, SSB, PSK31. Needs a new home.

KE0QCC: Tower problem has been solved by Ray.

MEETING ADJOURN: 9:00PM OR BEFORE



**Isotron 80/40/20  
Great for Field Day.**

**[www.isotronantennas.com](http://www.isotronantennas.com)**

**The Best Way To Operate HF**

**Easy Installation  
Excellent Performance  
Durable Construction  
CC&R Friendly (XYL also)**

**Please forward this article to those you feel would be interested.**



**Isotron 80/40 Combination  
Our Most Popular Unit!**

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**THE BEST WAY TO OPERATE HF**

**EASY INSTALLATION  
EXCELLENT PERFORMANCE  
DURABLE CONSTRUCTION  
CC&R FRIENDLY (XYL ALSO)**

## Getting An HF Antenna To Work - Part 7

Part 6 mentioned 4 characteristics or values that an antenna has.  $X_L$ -INDUCTIVE REACTANCE,  $X_C$ -CAPACITIVE REACTANCE, RADIATION RESISTANCE AND R-NONREACTIVE RESISTANCE.

If you are using a SWR meter at the radio through a length of coax, you are limited as to what you can determine. You can scan a section of frequency and find the minimum SWR. This will tell you the resonant point of antenna and coax combined. Not too bad, but sometimes we need more data to make the antenna match closer to 1:1.

If you are building an antenna, many have purchased some kind of analyzer. This device has measurements for  $X_L$ ,  $X_C$ , Z and R. How do we use it?

The instrument needs to be connected at the antenna. On HF a short coax jumper will work. Now scan the area of frequency you are working with. If you are building an antenna for 40 meters, then scan the frequencies in the 7 Mhz area. What are you looking for?

Zero Reactance. Be sure your analyzer is set to reading reactance. When you have found 0 you are at the resonant point of the antenna. This will also be where the minimum SWR is.

What if the minimum SWR is greater than 1:1? Now change the setting on the analyzer to the Resistance setting. In some units you have a resistance meter. You should hold your thumb over that meter so not to see it until you find where the Reactance's are at 0. Now take your thumb away and see what you have. How close are you to 50 ohms? At any other point this value does little to help you.

Now you know if the antenna is above or below 50 ohms. Depending on the design of the antenna, R value can be adjusted (possibly) to measure needed 50 ohms.

Now you are ready to connect your coax and operate. **Wrong!** Once you connect the coax the values will most likely change. The coax is also a component of the antenna. It does not radiate, but it does change the readings you just obtained.

Now what do you do? A future article will start to address this.

73,  
Ralph WD0EJA

May 2021

11-13

**Bilal Company**  
137 Manchester Dr.  
Florissant, Co. 80816 U.S.A  
Ph: 719/687-0650  
[wd0eja@isotronantennas.com](mailto:wd0eja@isotronantennas.com)

# Are you ready for the new RF exposure evaluation regulations?

By Dan Romanchik, KB6NU

On Tuesday, April 27, Dan, W1DAN, ARRL Eastern Massachusetts Section Technical Coordinator, gave a Zoom presentation on the latest FCC regulations on RF exposure evaluation. These are spelled out in FCC-1926A1 (<https://www.fcc.gov/document/fcc-maintains-current-rf-exposure-safety-standards>), "Proposed Changes in the Commission's Rules Regarding Human Exposure to Radiofrequency Electromagnetic Fields; Reassessment of Federal Communications Commission Radiofrequency Exposure Limits and Policies." The document is as long as the title might suggest—159 pages—but W1DAN boiled it down, focusing on what these changes mean for radio amateurs.

A recording of the presentation can be viewed by going to [https://drive.google.com/drive/folders/1\\_qIGZhHyMrha-axJt87Dcu0UZuJO0t8F](https://drive.google.com/drive/folders/1_qIGZhHyMrha-axJt87Dcu0UZuJO0t8F).

After explaining how RF exposure can be harmful, Dan explained how the rules are changing: The biggest change, he notes, is that amateur radio's categorical exclusion has been eliminated. What this means is that now every radio amateur will have to perform an RF exposure evaluation of their stations. This now includes mobile and portable stations, including HTs, SOTA/POTA stations, and Field Day and special event stations.

He noted that you must be able to prove that your station is safe. This includes not only performing the evaluation, but also documenting these evaluations, should this data be requested by FCC personnel.

One thing that's not changing are the maximum permissible exposure (MPE) limits. These are spelled out in FCC OET Bulletin 65

([https://transition.fcc.gov/Bureaus/Engineering\\_Technology/Documents/bulletins/oet65/oet65.pdf](https://transition.fcc.gov/Bureaus/Engineering_Technology/Documents/bulletins/oet65/oet65.pdf)), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields." The FCC published this document in August 1997, but it's still the Bible when it comes to RF exposure. If you don't have a copy, or have never taken a look at it, you really should do so.

Be careful, though, when reading it. It contains a table (Table 1 on p. 21) that contains a list of output powers at various frequencies. If your station exceeded those limits, then you were required to perform an RF evaluation. Now, however, all amateurs (and other radio services, for that matter) must perform RF exposure evaluations if their output power exceeds 1 mW. We are no longer categorically excluded from performing these evaluations.

OET Bulletin 65 goes on to give guidance on how to calculate or measure exposure levels. Explaining how to do this is outside the scope of this article, but again, you'll want to refer to the bulletin for more information.

Besides the elimination of the categorical exclusion for amateur radio stations, what else is new is the dates on which amateur radio stations must perform evaluations. They are:

- **May 3, 2021(!)** for new and modified stations

- May 3, 2023 for stations that complied under the old rules.

Having said all that, the ARRL's RF Exposure page (<http://www.arrl.org/rf-exposure>) has a lot of resources to help you understand this topic and perform your own RF exposure evaluations:

- An RF-exposure FAQ (<http://www.arrl.org/files/file/Technology/RFsafetyCommittee/RFXFAQ.pdf>) to help hams understand the new rules.
- "Learning to Live with RF Safety ([http://www.arrl.org/files/file/protected/Group/Members/Technology/tis/info/pdf/QST\\_Mar\\_2009\\_p70-71.pdf](http://www.arrl.org/files/file/protected/Group/Members/Technology/tis/info/pdf/QST_Mar_2009_p70-71.pdf))," *QST* March 2009 pp. 70-71.
- RF Safety at Field Day (<http://www.arrl.org/files/file/Technology/tis/info/pdf/9906048.pdf>) *QST*, June 1999, pp. 48-51. A case study of Field Day with NSRC in a public park
- RF Exposure Station Evaluation and Exemption Worksheets ([http://www.arrl.org/files/file/Technology/tis/info/pdf/rfex1\\_2.pdf](http://www.arrl.org/files/file/Technology/tis/info/pdf/rfex1_2.pdf))
- *RF Exposure and You* (<http://www.arrl.org/files/file/Technology/RFsafetyCommittee/RF%20Exposure%20and%20You.pdf>). This 8 Mbyte PDF file contains the text of the entire book by Ed Hare, W1RFI.
- Chapter 5 References (<http://www.arrl.org/files/file/Technology/tis/info/pdf/RF%20Exposure%20Chapter%205.pdf>) needed for filling out worksheet.

There are also links to FCC web pages with information on RF exposure.

I'm sure we'll all be hearing more about this in the days ahead. Hopefully, someone will come out with a simple way to do the modeling or make the calculations. As always, play safe.

=====

Dan Romanchik, KB6NU, is the author of the KB6NU amateur radio blog ([KB6NU.Com](http://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 RF exposure evaluations, he teaches online ham radio classes and operates CW on the low end of the HF bands.

## (Not Yet) Collecting \$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, but the new amateur radio application fees will *not* 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



# Celebrating 10 Years of Summits On The Air in Colorado

Bob Witte, KØNR  
bob@k0nr.com

The Summits On The Air (SOTA) program originated in the United Kingdom but has propagated to most countries around the world. The program came to Colorado on May 1st, 2010 with Steve/WGØAT sending a CQ from Mount Herman, just west of Monument. Today, the SOTA program in Colorado (called WØC-SOTA) is very active with roughly 180 activators that operate from Colorado summits.

To celebrate our 10th Anniversary, [WØC-SOTA](#) is organizing a **10-10-10 Event** with a challenge for Activators and Chasers alike. (Activators operate from summits, Chasers try to contact them.)

**Activator challenge:** Activate **10** (or more) **10K** feet (or higher) summits (in Colorado/WØC) within **10 days**.

**Chaser challenge:** Chase Activators on **10 different** (or more) qualifying WØC summits (**10K** or higher) within the **10 days**.

**Event Date:** We will kick-off the event in conjunction with the [Colorado 14er event](#) on August 7th, 2021 and conclude on August 16th.

Everybody is invited to participate, either as an Activator or a Chaser. Block off these days in your calendar now and start planning for how you can participate. Feel free to operate as much or as little as you would like. It is all about having fun messing around with radios. Any HF, VHF or UHF band can be used for making SOTA contacts, with the most popular ones being 40m (CW & SSB), 20m (CW & SSB) and 2m (FM).

There will be a leaderboard on the [WØC-SOTA](#) website showing all participants who meet one of the challenges. More details will be announced on the WØC-SOTA Website as soon as they are hashed out.

For more information on the SOTA program in general, see the [worldwide SOTA website](#).

*Full Disclosure: May 1 is actually the 11th Anniversary, but the COVID-19 Pandemic interfered in 2020, so we are catching up.*



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



When it snows some people are unconventional



I found this speaker jack on the outside wall of IHOP.

**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](mailto:station@ppraa.org)



# Major Events

## PPRAA Field Day 2021

**Who:** PPRAA encourages members to work from home as a Class D or E station to support social distancing. A very limited number of hams (priority to club members) are invited to participate from the Ellicott club station if they do not have equipment to participate from home. Anyone interested in operating from the club station should contact a Club Officer to coordinate a time.

**When:** 1800Z, Jun 26 - 2059Z, Jun 27 Entries due: 2059Z, Jul 27

**Where:** Ellicott Fire Station  
75 N Ellicott Hwy, Calhan, CO

Talk In: 146.460 simplex. We will also monitor repeater 146.970-



### Computer Program:

N1MM ([Get it here.](#))

Note: Full Field Day Rules can be [found here.](#)

Rule waivers for 2020 can be found [here.](#)

## 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

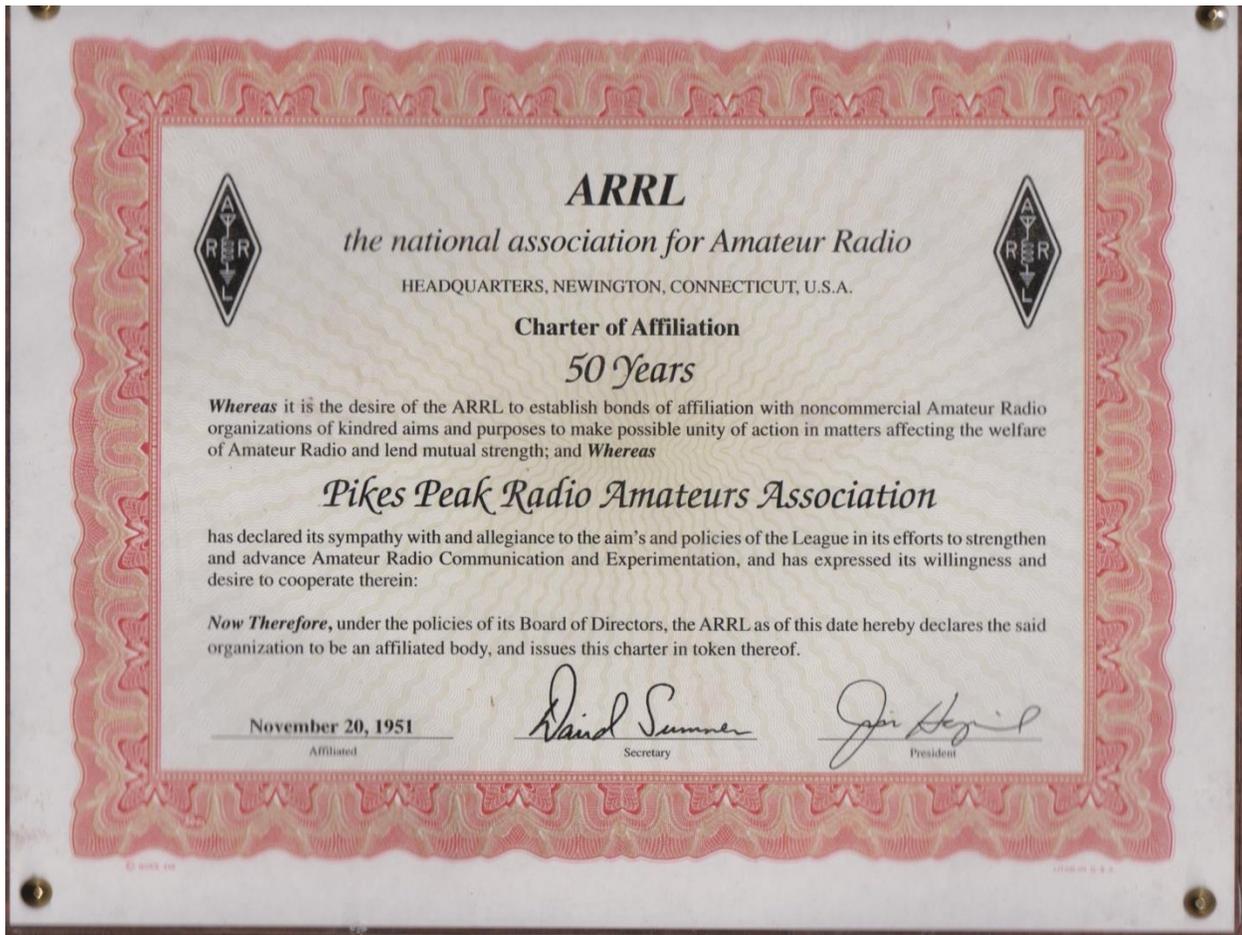
Club asset manager

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](mailto: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.



JIM HAYNIE  
WSJP, PRESIDENT  
JOEL M. HARRISON  
W5ZK, FIRST VICE PRESIDENT  
KAY C. CRAIGIE  
WT9P, VICE PRESIDENT  
JOHN C. KANODE  
N4MM, VICE PRESIDENT  
RODNEY J. STAFFORD  
W9RO, VICE PRESIDENT  
INTERNATIONAL AFFAIRS  
JAMES E. McCOBB  
W1LU, TREASURER  
DAVID SUMNER  
K1ZZ, EXECUTIVE VICE PRESIDENT  
SECRETARY  
BARRY J. SHELLEY  
N1VXY, CHIEF FINANCIAL OFFICER



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](mailto:hq@arri.org) • WWW: <http://www.arri.org/>

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

*You shop. **Amazon gives.***

## **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**

**May 1982:**

**May 1982: Harry WDØFRJ writes how to take a Hustler fold-over mast and resonators and cut them down to work on HF with lower wind resistance. The Rocky Mountain Rendezvous Swapfest sponsored by the Mountain Amateur Radio Club will be held on July 17 and 18 at Red Rocks Campgrounds. The club is following the activity of the cable TV provider, whose frequencies on cable are near the 144 and 220 MHz amateur bands. Hopefully there will be little interference. KØTER passed around sign-up sheets for the Walk for Mankind and for Field Day. The 1982 membership list is printed in this issue. There are 55 members registered**

## 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

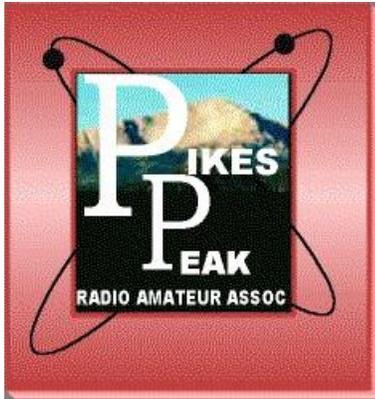
[www.facebook.com/parkerradioassociation](http://www.facebook.com/parkerradioassociation) [parkerradio.org](http://parkerradio.org)

[@ParkerCORadio](https://twitter.com/ParkerCORadio)

## ARRL Outgoing QSL Bureaus

[www.arrl.org/outgoing-qsl-service](http://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.



## 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 Dabling Blvd, Colorado Springs, CO 80907, USA

Organizer: [ve@ppraa.org](mailto: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 **CSCs** 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](mailto: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 [k0hbz@arrl.net](mailto:k0hbz@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.



Here is a link that describes the book in more detail:

<http://www.ke7x.com/successful>

Follow us on [www.facebook.com/KE7XBOOKS](http://www.facebook.com/KE7XBOOKS) to keep up-to-date on book news and to be notified of book discounts at [www.lulu.com](http://www.lulu.com).

This book has 267 pages, 211 figures and diagrams, and 53 tables of data to make understanding the sometimes complicated ham radio operations much easier. The book follows KE7X's philosophy of presenting material in several forms to accommodate people with different learning styles -- reading, visualizing, hands-on -- with the many figures and text explanations and there are hands-on exercises throughout the book that can help you learn more about your particular radio.

Follow us on [www.facebook.com/KE7XBOOKS](http://www.facebook.com/KE7XBOOKS) to keep up-to-date on book news and to be notified of book discounts at [www.lulu.com](http://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 <https://hamexam.org> 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: \_\_\_\_\_

E-mail address: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Call: \_\_\_\_\_ License Class: \_\_\_\_\_ Telephone: \_\_\_\_\_

Are you an ARRL member?  Yes  No

Additional Name: \_\_\_\_\_ Call \_\_\_\_\_ Class \_\_\_\_\_ ARRL member?  Yes  No

Additional Name: \_\_\_\_\_ Call \_\_\_\_\_ Class \_\_\_\_\_ ARRL member?  Yes  No

Additional Name: \_\_\_\_\_ Call \_\_\_\_\_ Class \_\_\_\_\_ ARRL member?  Yes  No

Full Member - \$15.00

Full Member over 65 - \$10.00

Free - VE Signature Required:

Family Membership (same address) - \$18.00

Family Membership (both over 65) - \$12.00