



VOLUME 71 ISSUE 11  
Nov. 2020

## PPRAA Club Officers

<b>President</b>	<b>Don DuBon, N6JRL<sup>+</sup></b>
<b>Vice President</b>	<b>Tom Oliphant, K<sup>+</sup>ØBUL<sup>+</sup></b>
<b>Secretary</b>	<b>Jay Winterton, W<sup>+</sup>ØWJ<sup>+</sup></b>
<b>Treasurer</b>	<b>Dick Kohlhaas, W5UDM<sup>+</sup></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 KE<sup>+</sup>ØYSE</b>
<b>Board</b>	<b>Dennis Major, NØABC</b>
<b>Board</b>	<b>Logan Perry, KE<sup>+</sup>ØKZA<sup>+</sup></b>
<b>Board</b>	<b>Anthony Mitchell, KE<sup>+</sup>ØLQK</b>
<b>Board</b>	<b>Mike McLaughlin, K<sup>+</sup>ØJT<sup>+</sup>*</b>
<b>Board</b>	<b>Michael Walter KE<sup>+</sup>ØTWK</b>
<b>Board</b>	<b>Mike Anderson, WV7T*</b>

\* In final year of 2-year term

<sup>+</sup> One year officer position

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

## Monthly Ham Breakfast

**Black Bear Diner, 975-A N. Academy Blvd.  
Saturday, December 5, 2020 8 – 9:30 AM**



## **PPRAA General Membership meeting (11 November) 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    October 12, 2020

Called to order at 1830 hours by Don Dubon, president

In Attendance:

Board members and officers: N6JRL (Don Dubon, President), KØBUL (Tom Oliphant, Vice President), W5UDM (Dick Kohlhaas, Treasurer), , WT7V (Mike Anderson), KDØKQL (Jim Bishop, Past President), NØABC (Dennis Major), WAØBCM (Jerre Redding), KDØSFY (John Bloodgood), KEØTWK (Mike Walter). Also present member KDØNQM (Jim Rader)

Discussion:

There were no Silent Keys to report.

Treasurer's report . It was agreed that the treasurer could move \$8000 from the Ent checking account to the Ent savings account, to take advantage of the higher interest rate, and the treasurer is authorized to transfer funds between the accounts as needed.

The treasurer reported that our application to participate in the ARRL scholarship program was approved, and that our initial contribution of \$1000 should be made by the end of 2020. This is to be agreed to by the members at the next club meeting.

The proposal by Jason KØWTF for sending election ballots via internet to all club members was discussed and rejected.

It was agreed that club financial information would not be published in Zero Beat.

It was noted that Jay Winterton WØWJ is leaving town, and will no longer be secretary.

Dennis KØABC reported on most recent VE testing.

Jerre WAØBCM reported on Zero Beat status.

John KDØSFY reported on ARES activity

Jim KDØNQM reported on Megafest status

The Thursday 2m and 10m net activity was reported.

Logan Perry will be emailed with a last chance to become current on dues, or else will be dropped from the board and from membership. [who will email?]

Adjourned at 1940 hours

Respectfully submitted,

Dick Kohlhaas W5UDM



**PPRAA October 12, 2020**

### **MEETING AGENDA**

**Meeting start: 7:00pm**

**PLEDGE Don N6JRL**

**SILENT KEYS: ?**

**INTRODUCTIONS:**

**NEW HAMPS/MEMBERS?**

**VE Testing Dennis N0ABC**

**TREASURER REPORT: DICK W5UDM**

**SECRETARY REPORT: Need new secretary**

**ZEROBEAT: JERRE WA0BCM**

**WEBMASTER REPORT; DOUG N7LEM**

**PPARES REPORT**

**MEGA FEST REPORT: Jim Rader KD0NQM**

**VICE PRESIDENT Jim KD0KQL ELECTION**

**MEETING ADJOURN: 9:00PM OR BEFORE**



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**The best way to operate HF**

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### **GETTING AN HF ANTENNA TO WORK. Part 3**

Last time resonance was mentioned and minimum SWR determined that point. Now we can go into the 2 components of resonance.

Start with inductance. Normally a coil of wire that produces a magnetic field when we put an electrical source into it. This magnetic field oscillates the same as the frequency that we are using. For example, at 7 Mhz, the magnetic field is oscillating at 7 million times per second. When this magnetic field increases, decreases and reverses it causes an electrical current in the coil opposite to the current we sent into it. This opposite field battles with the incoming source from your transmitter, offering a resistance.

The larger the coil in diameter, and number of windings determine how much resistance it produces. This resistance is called "INDUCTIVE REACTANCE". Like a regular resister, it is measured in ohms. You will often see it referred to as  $X_L$ .

The reason we call it reactance is due to how it acts in the circuit. The resistance varies with the frequency of electrical energy you put into it.

The reactance increases with an increase in frequency. It decreases with a decrease in frequency. If you want to get fancy the formula is.

$$X_L = 2\pi f l$$

$X_L$  = INDUCTIVE REACTANCE (in ohms)

$\pi$  = ABOUT 3.14

$f$  = FREQUENCY

$l$  = INDUCTANCE IN HENRIES

Since the reactance varies with frequency, inductors are measured in Henries. With this value you can go to a reactance chart and know what the resistance in ohms will be for any frequency.

What we want to keep in mind, is inductive reactance increases with an increase of frequency and decreases with a decrease in frequency.

Next time we will offer information on its partner, "CAPACITIVE REACTANCE".

73, Ralph WD0EJA

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137 Manchester Dr.  
Florissant, Co 80816  
PH: 719/687-0650  
[Wd0eja@isotronantennas.com](mailto:Wd0eja@isotronantennas.com)

## AMSAT 2020 Space Symposium video now online

By Dan Romanchik, KB6NU

The 38th AMSAT Space Symposium and Annual General Meeting was held online on October 17, 2020. I'm kinda bummed about this because I just joined AMSAT, but somehow, I managed to miss this event. Fortunately, the symposium was recorded and is now online, and I've been enjoying watching the video ([https://www.youtube.com/watch?v=EHDgrI\\_w8hY](https://www.youtube.com/watch?v=EHDgrI_w8hY)).



The video includes updates on AMSAT projects and presentations on amateur satellite technology. For details on presenter names and presentation titles, visit the AMSAT website. AMSAT members can access the Symposium Proceedings on the AMSAT website as well. (The proceedings for all the AMSAT Symposiums are available there as well, but you do have to be an AMSAT member.)

Here's a list of the different presentations on the video and the times at which they start:

0:00:00 Welcome

0:02:07 AMSAT GOLF-TEE System Overview and Development Status

0:43:02 GOLF IHU Coordination



1:19:10 GOLF Downlink Coordination

1:50:15 FUNcube Next

2:13:50 LunART – Luna Amateur Radio Transponder

2:45:35 CatSat HF Experiment Overview

3:13:30 Neutron-1 CubeSat

3:39:58 Progress and Development of Open Source Electric Propulsion for Nanosats and Picosats

4:15:00 AMSAT Education

5:14:00 ARISS (Amateur Radio on the International Space Station) / AREx (Amateur Radio Exploration)

6:14:00 AMSAT Engineering

7:21:16 AMSAT Annual General Meeting

So far, I've only watched the GOLF-TEE System Overview and the AMSAT Education presentation. They were both interesting and I'm looking forward to watching the others.

I really hadn't been keeping up with AMSAT lately, so the the presentation on the GOLF project was definitely news to me. GOLF is an ambitious project aimed at sending up high Earth orbit (HEO) satellites. GOLF is short for "Greater Orbits Larger (user communication) Footprints." This is really pretty exciting stuff.

Watching these presentations really gives one an appreciation for the work that goes into the design of these satellites and the technical skills and dedication of the hams working on these projects. These guys are not getting paid to do any of this work, and as Eric Skoog, K1TVV, the GOLF System Engineer said in his presentation, "Space is hard."

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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 ([KB6NU.Com/study-guides/](http://KB6NU.Com/study-guides/)), and often appears on the ICQPodcast ([icqpodcast.com](http://icqpodcast.com)). When he's not trying to work the satellites, he teaches online ham radio classes and operates CW on the HF bands.

**N6JRL**

**N0ZUQ SK**



(CQWW SSB Contest 2008 at TI5N Costa Rica)

On October 24<sup>th</sup> 2020 Cliff Mikkelson N0ZUQ (brother of N6JRL) passed away at his home in Colorado Springs, Colorado. An avid ham since 1970 Cliff is a member of the ARRL and QCWA as well as being a long time member of DARA and PPRAA. Cliff has worked at every Hamvention in Dayton since 1996 and was on the DARA team in Friedrichshafen, Germany in 2017. Cliff was a co founding member of the Dave Kalter Memorial YDXA which has sent youth operators to DX locations since 2010. Cliff was on many teams that went annually to TI5N in Costa Rica for the CQWW SSB contest. He was an early member of the Cheyenne Mountain Repeater Group (CMRG) and helped to design, build and maintain 5 repeaters on mountain tops around Colorado. In 2000 he was instrumental in the construction of the Freemont Peak site and was well known for his fantastic elk stew on winter visits.

Professionally Cliff was a Chief Engineer for many AM and FM radio stations including Clear Channel and Salem broadcasting in Colorado Springs, Denver and Ft. Collins.

Cliff is survived by his wife Lisa (KBORLJ), son Cliff JR. brothers Frank DuBon ex (WB6RMB), Don DuBon (N6JRL), Sister Dorothy (Mickey) Anglestein and many nieces and nephews. Cliff was a VE and an Ordained Minister. Some of his close friends include Dave Novotny (WA6IFI) and Jeff Ryan (KORM) Rocky Mountain Division Director.

## **Dayton Hamvention Cancelled**

### **Refund Information**

Due to unfortunate cancellation of Hamvention 2020, we know that tickets, inside booth spaces and flea market spaces have been purchased. These purchases have been made by online credit cards, mail order checks and purchased from our outside vendors. All refunds will be through the same method of purchase. All credit card sales will be refunded to the original card used to make the charge. All check and cash sales will be refunded by check. We anticipate all refunds completed as soon as possible but not later than August 1.

**We are offering the following options.**

1. Obtain a refund.
2. Obtain a 2021 ticket instead. (to be mailed around January 1, 2021) Hamvention 2021 May 21-23
3. Donate to Hamvention (no refund)

For all general admission (not inside or flea market) online and mail orders, email [tickets@hamvention.org](mailto:tickets@hamvention.org) with your preference. Emails already received will be processed as indicated. Inside booth holders please email [exhibits@hamvention.org](mailto:exhibits@hamvention.org) with your refund preference. If you opt for the hold until 2021 they will contact you to verify.

Flea Market staff will be contacting each flea market space holder personally concerning refund of space(s). For those who purchased tickets at Hamcation in Orlando, please send your ticket (keep a copy for your records) and last four of credit card for credit card refund (if purchased by card) otherwise it will be by check mailed to you.

Hamcation Hamvention forum ticket winners, please email [tickets@hamvention.org](mailto:tickets@hamvention.org) with your ticket number and address information. We will send you replacement 2021 tickets early next year.

If you purchased a ticket at one of our outside vendors then please return to the place of business and they will handle your refund.

Mail correspondence to:

Hamvention Tickets - 2020 refunds

PO Box 1446

Dayton, OH 45401-1446

## ARRL Reshapes Podcast Offerings for 2020

In conjunction with the launch of its new [On the Air](#) magazine, which is aimed at those just beginning their journey in amateur radio, ARRL is reconfiguring its podcast lineup.

Heading up the new schedule will be a free companion podcast to the bimonthly *On the Air* magazine. The monthly *On the Air* podcast will take a deeper look into select features and projects from the magazine. Each month, host and *On the Air* Editorial Director Becky Schoenfeld, W1BXY, will offer additional resources, techniques, and hints to help less-experienced radio amateurs to get the most from the magazine's content.



In addition to the podcast, ARRL Product Development Manager Bob Inderbitzen, NQ1R, will curate a free *On the Air* blog featuring content from the communicators and makers who are the driving force of amateur radio today. The blog will highlight opportunities and activities available to new licensees. The *On the Air* blog is intended as an

entry point into the world of amateur radio for those seeking original voices and perspectives. Readers will be [invited](#) to take part in the conversation by sharing their stories and experiences.

Upcoming events in the Rocky Mountain Division: (more info @ [ARRL.org](#): click on "hamfests")

# Major Events

## PPRAA Megafest has been cancelled

### Postponed until 2021 – the 2020 ARRL Rocky Mountain Division Convention Hamcon Colorado

- Postponed until 2021
- Location: Parker, CO
- More info [here](#).

### PPRAA 75 years Special Event Station

### PPRAA Veterans' Day Special Event Station

### PPRAA Pearl Harbor Day Special Event Station

- QSL to: PPRAA, PO Box 16521. Colorado Springs, CO 80935-6521
- No need to send a SASE, we will send cards to all confirmed contacts.

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

Statistics from our October 10, 2020 VE session.

October 10:

19 applicants

4 Upgrade to General

1 New General

13 New Technician

1 unsuccessful

## 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**

**November 1981:**

**A nice article on skip and how and why some stations can't hear other stations. Dave NØDV was presented with a Ten-Ten award from the local chapter for recognition of his placing nationally in a contest. Don**

**WDØBSZ received the Hammy for helping with finding a meeting location for the club. Centennial Electronics moves from 715 N. Weber to its new location of 2324 E. Bijou Street. The Christmas party will be held on December 5 at Iron Springs Chateau in Manitou Springs. It'll cost \$13.50 per person to eat and enjoy the dinner show. The next CCARC meeting will be held at the Sheraton Hotel on October 24. WBØLTV suggested that the club have two meetings per month during the summer. The idea was shelved. The November meeting will be all about the Public Service Committee and how they decide what to do when someone asks for communications support.**

**primarily elections. A transmitter hunt is scheduled for September 18. The club's bylaws are being reviewed by Dave NØDV, Don KBØKQ and Les Borst WDØGTA.**

# 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.

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

**@ParkerCORadio**





# PPRAA VE EXAMS

## (MONTHLY) NOVEMBER EXAM HAS BEEN CANCELLED

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](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 **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](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.

- 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



Both the pdf and spiral-bound printed versions are available from Lulu.com, and the print copy is also sold by DX Engineering. You can find them via the links below:

<http://www.ke7x.com/successful/ordering-the-successful-ham-radio-operator-s-handbook>

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