



VOLUME 69 ISSUE 7  
July 2018

## PPRAA Club Officers

<b>President</b>	<b><u><a href="#">Rich Milligan, ADØNP</a></u></b>
<b>Vice President</b>	<b><u><a href="#">Mike Anderson, WV7T</a></u></b>
<b>Secretary</b>	<b><u><a href="#">Curtis Cookson, WØCEC</a></u></b>
<b>Treasurer</b>	<b><u><a href="#">James Madsen, K3ILC</a></u></b>
<b>Ø-Beat Editor</b>	<b><u><a href="#">Jerre Redding, WAØBCM</a></u></b>
<b>Webmaster</b>	<b><u><a href="#">Douglas Nielsen, N7LEM</a></u></b>
<b>Board</b>	<b><u><a href="#">John Bloodgood, KDØSFY</a></u></b>
<b>Board</b>	<b><u><a href="#">Glenn Brodt, N3ULW</a></u></b>
<b>Board</b>	<b><u><a href="#">Dan Huber, KNØMAP</a></u></b>
<b>Board</b>	<b><u><a href="#">Frank Rogers, KB3PDT</a></u></b>
<b>Board</b>	<b><u><a href="#">Jim Rader, KDØNQM*</a></u></b>
<b>Board</b>	<b><u><a href="#">Jim Bishop, KDØKQL*</a></u></b>
<b>Board</b>	<b><u><a href="#">Virgil Yost, NØXRS*</a></u></b>
<b>Board</b>	<b><u><a href="#">Ray Uberecken, AAØL</a></u></b>

\* In final year of 2-year term

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

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## Monthly Ham Breakfast

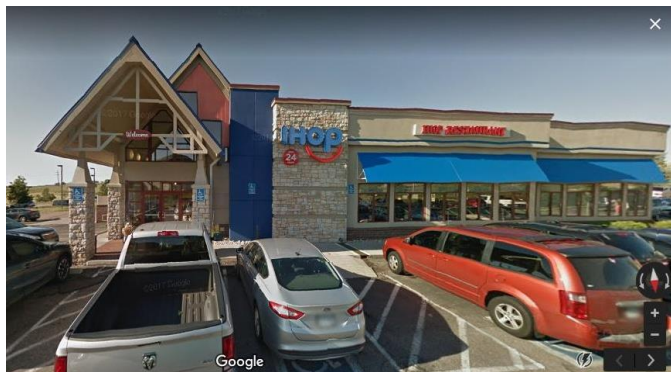


***Saturday, Aug 4, 2018 8-9:30 AM***

719-634-7321

**Omelets Etc. 1515 South 8<sup>th</sup> Street**

All are warmly invited to come on down and join us!



## Aug. PPRAA Club Meeting

The Aug. 8th 7PM club meeting will be at the IHOP on Stetson Hills Blvd  
(just west of Powers Blvd).

**5749 Stetson Hills Blvd.**

## Upcoming Events

# PPRAA Face book

<http://www.facebook.com/pages/PPRAA-Pikes-Peak-RadioAmateur-Association/185833894769325?v=wall>

# Contests and Events

## WA7BNM contest calendars link

<http://www.hornucopia.com/contestcal/>

### Central States VHF Society Conference

- Thursday – Sunday July 26-29, 2018
- Wichita, Kansas
- More info [here.](#)

Updates to NE6PM (USS IOWA) frequencies for this Saturday  
This should be the final cut:

- 18.143Mhz USB
  - 14.243Mhz USB
  - 07.243Mhz LSB
  - 14.043Mhz CW
- (So tentatively 4 stations)

### Denver Radio Club Hamfest

- Sunday, 26 August 2018
- Jefferson County Fairgrounds, Golden, CO
- More info [here.](#)

### Colorado QSO Party

- Saturday September 1, 2018

### 2018 ARRL Rocky Mountain Division Convention

- Friday September 21 thru Sunday September 23, 2018
- Isleta Resort & Casino Convention Center
- More info [here.](#)

### JOTA – Jamboree-on-the-Air

- 19-21 October 2018
- More info [here.](#)

### TechFest – 2018

- Saturday November 3, 2018
- More info [here.](#)

## *You shop. Amazon gives.*

- Amazon will donate 0.5% of the price of your eligible AmazonSmile purchases to **Pikes Peak Radio Amateur Association** whenever you shop on AmazonSmile. You can select a different charitable organization after signing in.
- AmazonSmile is the same Amazon you know. Same products, same prices, same service. Support your charitable organization by starting your shopping at **smile.amazon.com**

<https://smile.amazon.com/ch/84-1476913>

### **Treasurer's Report July 2018**

Total	\$17,115.63
Note: PayPal will be minus PayPal fees when transferred to bank account	
Temporarily restricted categories:	
Awards	\$463.59
Scholarships \$1010.23 carried over from 2017	\$919.82
Major Expenses:	
Web Hosting*	
FD Food (Yum)	\$ 251.19
PO Box Rental	\$ 70.00
Pre Megafest Meal - CB + Potts (Includes 20% tip)	\$ 262.75
Income:	
Awards (COQP)	
Mfr's rebate check for prize purchase	
Amazon Smile	
King Soopers Cards (need \$5,000)	\$6,550.00
Soopers Card Reloads	\$1,600.00
King Soopers Check	\$ 327.50
Notes: Raffle sales from cash box 2 = \$1,600	
Admissions from admission entrance = 384	
Soopers Card Reloads	900.00

I gave the FD logs from N1MM, and Gary's program (I think it was N3FJP) to Wv7T. I think we had between 500 and 600 QSOs.

We need to consider PC maintenance out at Ellicott. (BTW, it was 105° in the trailer on the Wednesday after FD).

- a. The PC connected to the remote needs to have the dust blown out of it. It's been operating 24/7 for over a year, in a dusty environment.
- b. The XP machine on the south side of the trailer isn't very happy and needs to be replaced (another XP machine would be fine). It gives some error messages on startup. Also, no one turned off the PCs after FD – when I went in there on Weds, the fan on that one sounded like a jet airplane taking off.
- c. We should install an antivirus product (free) on all the PCs. I talked to Ed Corn, who said he's concerned, since all the PCs are connected to the fire department's network. I have been doing Windows Updates on the Windows 7 machines (XP is no longer supported).

73

Jim Madsen  
K3ILC  
Treasurer, PPRAA

## **June 2018 General Meeting Minutes**

**Call to Order @ 7:00pm WV7T**

**No program**

**45 people in attendance**

**Tabled Club Picnic until July Board Meeting**

**Motion to Adjourn @ 8:08pm N7LEM, Second WV7T**



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OUR MOST POPULAR UNIT!**

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

**THE BEST WAY TO OPERATE HF  
EASY INSTALLATION  
EXCELLENT PERFORMANCE  
DURABLE CONSTRUCTION  
CC&R FRIENDLY (XYL ALSO)**

**I have been publishing this technical article since January of 2013. For the past 38 years I have manufactured the Isotron Antennas. This also involved helping many with their very difficult installations. Some of the information will be from what we learned solve these problems. Some information will be right from a text book or credible article.**

**You are welcome to contact me at [wd0eja@isotronantennas.com](mailto:wd0eja@isotronantennas.com) with question you may have.**

## **THE AFFECTS OF GROUND IN THE REACTIVE NEAR FIELD**

What in the world is this? It sounds like I know something. Don't be fooled, this can be simple even though it can be made quite complicated.

We are talking about the earth (dirt) directly below the antenna.

What is the affect on the antenna per different heights?

This is in respect to a dipole type antenna. This will also include the Isotron for those that are using them.

Waves radiated from the antenna directly downward reflect vertically from the ground and, in passing the antenna on its upward journey, induce a voltage in it. The magnitude and phase of the current resulting from the induced voltage depends on the height of the antenna above the reflecting surface.

The total current in the antenna consists of two components. The amplitude of the first is determined by the power supplied by the transmitter and the free-space feed-point resistance of the antenna. The second component is induced in the antenna by the wave reflected from ground. This second component of current, while considerably smaller than the first at most useful heights, is by no means insignificant. At some heights, the two components will be in phase, so the total current is larger than is indicated by the free space feed-point resistance. In other words it will be less than the 50 ohms needed to

match the radio. At other heights, the two components are out of phase, and the total current is the difference between the two components. In other words higher than 50 ohms.

Changing the height of the antenna above ground will change the amount of current flow, assuming that the power input to the antenna is constant. A higher current at the same power input means that the effective resistance of the antenna is lower, and vice versa. In other words, the feed-point resistance of the antenna is affected by height of the antenna above ground because of mutual coupling between the antenna and the ground beneath it.

The electrical characteristics of the ground affect both the amplitude and the phase of reflected signals. For this reason, the electrical characteristics of the ground under the antenna will have some affect on the impedance of that antenna, the reflected wave having been influenced by the ground. Different impedance values may be encountered when an antenna is erected at identical heights, but over different types of earth.

Here are some examples of radiation resistance of a dipole type antenna as it varies in height above ground.

HEIGHT-WAVELENGTH (FEET)	RADIATION RESISTANCE-OHMS
0	0
.1	20
.2	65
.3	96
.4	90
.5	70
.6	59
.7	66
.8	80
.9	82
1.0	72

In real life the radiation resistance will be somewhat higher. This is due to the earth absorbing some of the signal resulting in some loss and not reaching the antenna.

This gives you an idea why antennas vary with each installation and why some installations work great, while others not so good.

73,  
Ralph WD0EJA  
JULY 2018

[wd0eja@isotronantennas.com](mailto:wd0eja@isotronantennas.com)

73, Ralph WD0EJA April 2018 PH/FX: 719/687-0650

**BILAL COMPANY** 137 MANCHESTER DR. FLORISSANT, CO. 80816 U.S.

## From the annals of PPRAA history

**July 1981:** Thirty members attended the June meeting at the new location. The club assisted with the SpringSpree in June as a public service event. Bud Libengood KAØLBP will be our new representative to the CCARC. Its next meeting will be in Glenwood Springs on August 1. The club may help with the carrying of the Olympic Torch down from the top of Pikes Peak on July 4th. Charleen Colvin WBØYOB received the Hammy this month for all her assistance. The July program will be on understanding standing wave ratios. The IEEE for Ham Operators will meet at the Denver Hilton on June 17. The club is purchasing crystals for 147.135 for the club's Icom radio. Hams assisting with backup communications at the Black Forest Outhouse Race ended up providing primary communications.

## ARRL Outgoing QSL Bureaus

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

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## ARRL Affiliated Clubs-Outgoing QSL cards

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 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 KØPRA 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)



# PPRAA VE EXAMS

## (MONTHLY)

PPRAA VE session will be held at 10:15 am on the second Saturday of the month at Pikes Peak Library District - Library 21c, 1175 Chapel Hills Dr, Colorado Springs, CO 80920, United States. The exception is the Megafest month where testing will only be July 7 at Megafest and will be at 10:00 AM. Starting August it will relocate to the El Paso County Emergency Services building.

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 (now required – this includes children).
3. 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.

PPRAA VE Team policy, as with many VE Teams, is to not allow same day retests on failed exams.

Dennis Major NOABC, PPRAA VE Contact, 719-213-1109

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.

**PPRAA VE Session**

**Monthly on the second Saturday**

**EL Paso OEM, Mark Dabling near Fillmore, Colorado Springs, CO 80908, United States**

**Where**

[map](#)

**Calendar**

PPRAA

**Created by**

n7lem.0@gmail.com

**Description**

Testing will take place in the Ent Conference Center.



# 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 [k0hzb@arrl.net](mailto:k0hzb@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).
- 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



Study for your Amateur Radio License exam:

[Technician \(2014-2018\)](#)

[General \(2015-2019\)](#)

[Amateur Extra \(2016-2020\)](#)

[Other...](#)

## HamExam.org Amateur Radio Practice Exams

**Welcome, guest.**

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\*\*](#).

**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

