

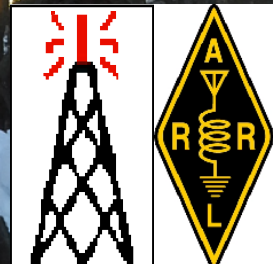
**PENN WIRELESS ASSOCIATION**

# **X-MITTER**



***PUBLIC SERVICE  
THROUGH COMMUNICATION***

**December 2014 Vol. 53 No. 3**



***WINTER BEGINS DECEMBER 21ST!  
ARE YOU READY?***

*Image by ... H. Rubin, N3FEL*

## PENN WIRELESS ASSOCIATION

### CLUB INFORMATION

W3SK VHF Repeater Frequency: 146.790 MHz (-0.6, 131.8pl)

W3SK UHF Repeater Frequency: 448.225 MHz (-5.0, 131.8pl)

Echolink to W3SK Repeater System: Via W3SK-L (node# 502543)

PWA Webpage URL: <http://www.pennwireless.org>

PWA Email: [pennwirelessarc@gmail.com](mailto:pennwirelessarc@gmail.com)

Technet Email Reflector: [PWA-Technet@GoogleGroups.com](mailto:PWA-Technet@GoogleGroups.com)

**Penn Wireless Association** holds regular meetings consisting of general club business, current committee reports, group discussions, featured programs and a social period. This meeting is held at the Falls Township Building, 188 Lincoln Highway, Fairless Hills, PA on the third Monday of each month at 8:00 pm. Please contact the club vice president to add your business topic to the meeting agenda.

**ALL VISITORS ARE WELCOME!**

### PWA-Technet @ GoogleGroups.com Email Reflector

#### User Account Policy

Penn Wireless Association, Inc. does not knowingly profit and/or disseminate user e-mail information to "spam" lists. The reflector provides us a means to just send e-mail to those who wish to receive notification when new X-Mitter issues and other relevant information (including, but not limited to, volunteer requests, ARES/RACES meetings, Field Day information, & Club events) are available for you to view on PWA web sites. We routinely send mass e-mail notification to all users, but we avoid issuing e-mail that is unrelated to Amateur Radio. However, we may send a mass e-mail to all users only if there is a problem with the web site, during web site maintenance, or during an emergency or scheduled public service event in order to notify those Amateur Radio operators who may wish to participate in RACES/ARES or PWA operations. If you have already registered as a user please review your account's distribution settings and if your e-mail is current so we may send you notification when new X-Mitter issues

### X-MITTER

#### Newsletter Policy

**X-MITTER**, the official newsletter of Penn Wireless Association, is published monthly by and for Penn Wireless members and all Radio Amateurs. All material in **X-MITTER** may be reprinted, providing that a credit line is given, mentioning **X-MITTER**, Penn Wireless, Inc. and the byline contributor. The **X-MITTER** publication committee strives for accuracy, and we believe that all articles submitted are factual in their content. **X-MITTER** and PWA cannot be held responsible for inaccuracies of information and/or sources. All material submitted by PWA members shall be published, providing that such items meet generally accepted standards of quality and substance. Contributions by others shall be considered on a space-available basis. PWA membership is open to all persons with an interest in amateur radio, subject to approval of the executive board and current membership. A valid Amateur Radio license is required for full voting privileges. Mail for **X-MITTER** should be sent to: **Penn Wireless Association, P.O. Box 224, Morrisville, PA 19067**. Contributions may, also, be E-mailed to [pwa-x-mitter@googlegroups.com](mailto:pwa-x-mitter@googlegroups.com). The closing date for submission of appropriate material to the pending issue (space permitting) is one week before the PWA General Meeting. We exchange **X-MITTER** with other area club newsletters. If your club is interested in exchanging with us, please e-Mail our group accordingly. Copyright © Penn Wireless Association, 2014. Version 23:08 12.8.2014

## PENN WIRELESS ASSOCIATION

### In this issue ...

Club Information Page	2
From The Editor	4
Top of the Tower & PayPal and Penn Wireless	5
Minutes of Business Meeting	6
League Happenings	7
Duties of the Treasurer	8
Swedish Auction Rules	9
Minutes of General Meeting	10
Calendar	12
System Fusion for PWA	17
SPAR	18
Contest Calendar	19
VE Examination	20
Application for Membership	21
PWA Executive Board	23

### HOLIDAY DINNER *and Swedish Auction*

#### WHERE:

**Grand China Buffet**  
28 Franklin Mills Blvd  
Philadelphia, PA  
215-632-2100

#### WHEN:

Monday, December 15, 2014  
6:30 to 9:30 pm

#### WHAT TO BRING:

- **YOU** and anyone else you want to share in the fun.
- Pay GCB at entry, \$17.99 pp (\$16.62 seniors), to include dinner, beverage, tax and gratuity.
- Please ask for and retain your receipt. Be directed to the Penn Wireless Association party.
- A wrapped gift (value ~\$10) for Swedish auction

***See You There!***



## PENN WIRELESS ASSOCIATION

### FROM THE EDITOR

**Howard Rubin, N3FEL**

*n3fel@arrl.net*



**T**wo ways to look at December—either it's the peak of the holiday season and end of the calendar year or it's the grand finale of the holiday season and an early beginning to the following year. If you are a party-goer, December is the reason

you diet in the prior eleven months. The stretch between the fourth Thursday (Thanksgiving) and the New Year's eve blast has got to be the most calorie-stuffed 35 days of the year. If you are the planner of the family, you are probably thinking of New Year's resolutions, how you are going to pay for those credit card charges and survival tactics to deal with the treacherous days of the winter months. But if you are a member of Penn Wireless Association, December is the month to settle into the shack on those cold nights and copy the mail — or participate in a phone net with a group. However you plan to use this last month, it is a good month.

Exciting things are happening in Amateur Radio. New technology for communication has found its way into our hobby. Amateurs everywhere are learning about digital codecs, protocol converters, and digital signal processing. These technologies have grown substantially important in our own lifetime from mathematical theories to real applications that are aided by the exponential rate of development of integrated circuits, microprocessors, and fiber optics. Our radios have imploded in size, yet at the same time they've increased in complexity. The old tried and true methods of CW, AM, SSB, and NBFM surely remain, and ever growing in popularity in

many circles. But the new technologies of digital data and now digital voice using C4FM, DSTAR, DMR and others have arrived and are becoming more affordable.

Since the bandwidth granted to us is limited, amateurs must seek ways to extend our communication ability without over-reaching our frequency allocation limits. These digital enhancements allows us to introduce new services for voice and data communications that allow us to get more out of the narrow frequency bands we now operate.

A little bit of knowledge goes a long way in keeping up with these technical advancements, progressively increasing our involvement in the advancing state of the art of communications. That's another true benefit of bringing the C4FM physical layer and Fusion layer protocols to our amateur radio community. As pointed out by Yaesu, "...it's very similar to the protocols used in professional communications and provides a test and training platform for aspiring amateur radio operators seeking a carrier in radio communications.

No one should feel left behind as the digital waters rise about us. If you don't have or want a digital-enabled radio now, use the luxury of time to explore the Internet for any of the many fine technical and promotional articles available. Learn from others — especially their experiences in developing and using the new digital equipment.

We owe thanks to Cully for his dedicated focus on maintaining and improving our repeater system. Use of the Yaesu Fusion platform for digital communications has brought Penn Wireless Association back to the forefront of communications. Thankfully, at relatively minor cost; consider it an early holiday gift to our membership. Grab onto the speeding vehicle, enjoy it while you have it, move it a bit faster if you can, for the technology is within our grasp for just an instant.

## PENN WIRELESS ASSOCIATION

### TOP OF THE TOWER

**Paul Ceglia, N3TMX**

*cegtv1@aol.com*



**W**e have a lot to look forward to as we approach the new year. One being the new Yaesu Fusion repeater, now installed and running after a few attempts at control coordination. After many weekends at the repeater site helping

Cully N3HTZ get the machine together I am pleased that we have successfully completed the repeater installation. As of November 24, it has been operating over a week without a problem.

Giving credit where it's due, everyone should go to Cully, shake his hand, and thank him for his relentless pursuit to make the repeater one of the best, state-of-the-art machines in the area. I sincerely hope you voted in the ARRL election. A few weeks ago we watched the YouTube video by Art Goddard W6XD, "Amateur Radio in the 21st Century." We need the League now more than ever.

I hope to see everyone at the holiday party, December 15. Barb and I wish all of you the best for this holiday season and for the coming year.

Merry Christmas!

### PAYPAL AND PENN WIRELESS

**Ben Johns, K3JQH**

*k3jqh@arrl.net*

**T**he Executive Board discussed and approved the idea of having Penn Wireless Association open an account on PayPal.

Now any individual with a PayPal account can send money directly to PWA checking account with no additional cost to the individual.

If you do not have an account with PayPal, you can open your personal account at no cost, however, the most convenient way will be to start at

**[www.pennwireless.org](http://www.pennwireless.org)**

and select the "PAY DUES" button. This will take you to PayPal and from there all personal finance information will be secured by PayPal regardless of which path you take to get there.

The advantage of doing business the electronic way is that the individual does not have to write a check, address the envelope, lick a stamp and post the letter.

On the PWA side the Treasurer does not have to receive mail, endorse the check, write a deposit slip and make a trip to the bank.

In the future some other functions may be added so that you could donate to the Field Day fund and pay for other fund raising functions.

Here is how it works. Once the individual is in PayPal all processing is contained within PayPal.

Your PayPal account or your credit card will be charged and the payment is posted directly to the Penn Wireless checking account. An email is sent to the Treasurer to inform him of the transaction. A small transaction fee will be deducted from the amount posted to the Penn Wireless account.

## PENN WIRELESS ASSOCIATION

# Minutes Of November E-Board Meeting



**Jim Petrosky,  
KE3LA**

Recording Secretary

Date: 11/10/14  
Meeting Opened at:  
8:00 P.M.

### In Attendance:

Paul Ceglia (N3TMX) – President  
Tom Stafford (KE3QC) – Vice President  
Howard Rubin (N3FEL) – Treasurer  
Jim Petrosky (KE3LA) – Recording Secretary  
Guests: Cully Phillips (N3HTZ)

Old Business: None

Treasurer's Report: Oct 2014 – PWA Ledger  
and Field Day Fund statements given to E-  
Board.

Repeater: Cully discussed interfacing issues  
with the repeater controller and the new Fusion  
system. He has developed a work around solu-  
tion using an Arduino microprocessor and plans  
soon to install and test the unit.

Membership: Jim (KE3LA) working on the direct  
mail post cards for Bucks County area hams.  
Will have sample cards for approval at the next  
E-Board meeting.

### New Business:

- Use of funds allocated to Field Day discussed.
- Shift focus of Field Day from Picnic/Contest to  
Contest/Picnic.
- How much food to provide?
- Field Day chairman to present budget to the

Board for approval.

Program for November General Meeting –  
Bob Hecht (KA3ZJK) to present “The use of CW  
during the Vietnam War” (*Editor's  
Note: On 11/15/14 Bob postponed his presenta-  
tion due to personal illness. He requests that we  
reschedule it soon.*)

Holiday Party – Board approved change of  
venue from Tokyo Buffet to Hong Kong King  
Buffet. Meeting room reserved. Board approved  
purchase of an ARRL Handbook as the door  
prize.

Board discussed open committee positions:

- Club Elmer
- Fund Raising Chairman
- Hospitality Committee Chairman
- Public Relations Committee Chairman
- QSL Manager

### PWA website discussion:

Board agreed that the current website should be  
“taken down,” the opinion being that it is doing  
more harm than good to the club. Paul (N3TMX)  
to set up meeting with Scott (KD2EQP) to estab-  
lish goals and direction for the new website.  
Board unanimously agreed to establish a new  
P.O. box to handle all incoming PWA mailings.

Howard (N3FEL) requested investigating the  
obtaining of a used laser printer for club use (X-  
MITTER, etc.)

Meeting Closed at: 9:30 P.M.

## PENN WIRELESS ASSOCIATION

### LEAGUE HAPPENINGS

#### Dave Heller, K3TX

215-946-1040

The big news in amateur radio in our area is the just-concluded director and vice director elections.

The outcomes were, at least in my opinion, the best qualified candidates for both positions won by substantial margins.

Tom Abernathy W3TOM, who has been Vice Director for a time is the new Atlantic Division director and Bob Famiglio K3RF, our present EPA Section Manager the incoming Vice Director.

There seems to be some lack of understanding of the role of director, not only generally, but even among several of the candidates, though fortunately not with the winners.

Director of corporations, including public, privately owned and non-profit, such as ARRL, are primarily responsible for keeping their organization solvent and the overseeing relations with government agencies and other organizations, hiring and firing top-level personnel, including their president and as a group, not individually, making suggestions to the top level operating people.

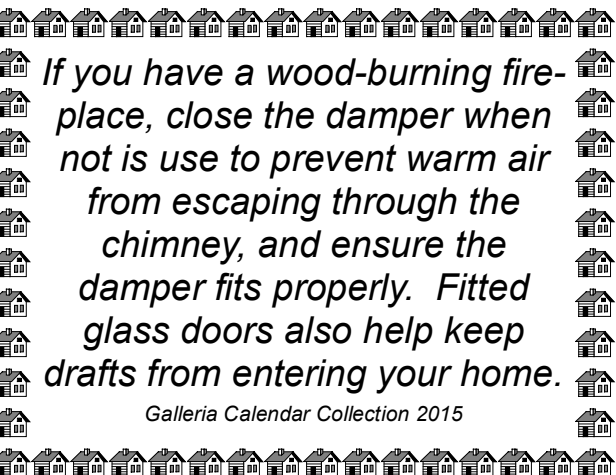
Directors should have no contact on an official basis with non-executive employees nor influence day-to-day operations

The directors alone have voting power - the vice directors and president may with permission enter discussions, though they are expected to attend meetings.

In our division, at least recently, the director has worked closely with his vice director - a situation which with Tom and Bob is sure to continue, to the benefit of our division and ARRL overall.

We can expect K3RF to attend our meeting occasionally and present us complete information of the top management workings -- and to be available to us individually and as a group to discuss our wants and complaints.

### A Bucks County Winter



*If you have a wood-burning fireplace, close the damper when not in use to prevent warm air from escaping through the chimney, and ensure the damper fits properly. Fitted glass doors also help keep drafts from entering your home.*

Galleria Calendar Collection 2015

## PENN WIRELESS ASSOCIATION

### DUTIES OF THE TREASURER

**Ben Johns, K3JQH**

**— Ex Treasurer**     *k3jqh@arrl.net*

Well, note the “Ex-“ in the title, give your support to the new Treasurer, Howard, N3FEL.

The turnover is nearly complete; one does not realize how complicated a web that is built when it is constructed one piece at a time over the years.

The basics, of course, are the bank account, where money is deposited and checks are drawn for outside expenses, and the ledger where detail information is recorded about each transaction.

After the basics we accrue a number of functions that need attention of the Treasurer. Instead of drawing a chart to show the different connections which could be very complicated and probably confusing, let's look at each one individually.

#### Email Account

([pennwirelessarc@gmail.com](mailto:pennwirelessarc@gmail.com)).

Other processes like utility billings need to send notices via email and some of these functions require that you use email as your user ID. The treasurer needs to open this email account to check for these notices.

#### Verizon Account

The repeater site uses a land-line phone connection for security and control. The telephone company communicates with the bank account where the monthly bill is drafted automatically and notice is posted to our email account.

#### PayPal Account

Club members and other visitors can pay their dues or donate money to the club. There are icon-buttons on the [www.pennwireless.org](http://www.pennwireless.org) web page that will take a payer to PayPal where one can sign-on to their personal PayPal or chose one of the approved credit cards to make payments to PWA. The PayPal account is also connected to the bank account so that funds can be directed into the PWA bank account, and PayPal sends notification to PWA email.

#### 501C3 Charitable Organization

PA Dept of Incorporated Non-Profit Organizations and the IRS require annual tax reports. This is one of the tasks currently performed by the Treasurer. Hays Company is another entity requiring contact information for billing and payment of our liability and equipment insurance.

All of these entities require user sign-on and passwords which are passed to the incoming Treasurer, all requiring a change of contact information.

A noteworthy mention, I thought giving Howard access to the bank account would be a two-minute signing of the signature card; however it turned out to be over a half-hour of forms with much tedious information including one concerning “will your organization be participating in on-line gambling?” Why, you ask? Because the federal government's office of homeland security is watching money flows to prevent money laundering that could wind up in the hands of the unfriendly.

You can see how this would be even more tedious if we decided to move to another bank and all of the connections to the bank account would have to be changed.

Best wishes to Howard as he takes on this very important office in our organization.



## PENN WIRELESS ASSOCIATION

### SWEDISH AUCTION RULES

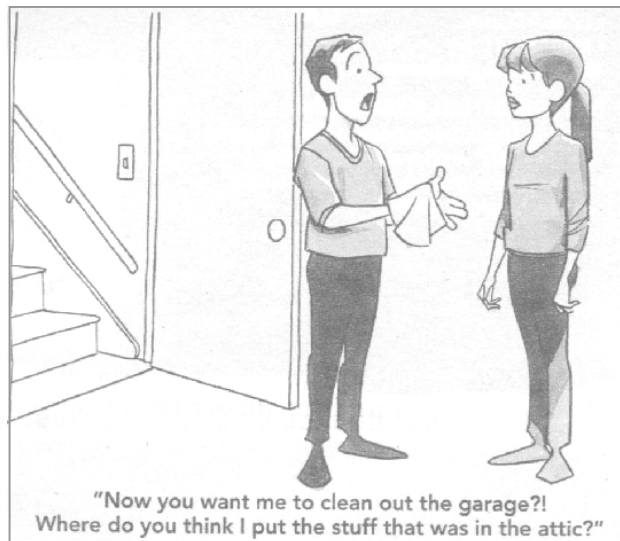
**P**WA has for many years engaged in our traditional Swedish auction at our December meeting/holiday party. No bidding is involved.

Everyone should bring a wrapped item valued between \$5 and \$15. The entertainment is conducted according to the following rules:

1. Each participant places a wrapped item on the table and receives a numbered ticket.
2. At the beginning, one number is drawn and the holder of that number will come forward and select an item from the table, open it and show it to all, describing the item if necessary. The first person will return to their seat after drawing the next number.
3. The holder of the next number comes forward and has the choice of taking the item from the first person or opening a new item from the table, showing it to all and return to their seat after drawing another number.
4. And so it goes that each person as their number is drawn has the choice of going to the table and open a new item or taking an item that is already open from any of the previous players.

5. If you have an item taken from you, you must then replace that item either from the table or from another player that has something you would like. You may not take an item back from someone who has just taken it from you and a time limit is set for the exchange of items; the one without an item when the bell rings must go to the table.

6. This process continues until everyone has something and then the person who was first has the choice to trade their item with anyone.



## PENN WIRELESS ASSOCIATION

# Minutes Of November General Meeting



**Jim Petrosky,  
KE3LA**

Recording Secretary

Date: 11/17/14  
Meeting Opened at:  
8:10 P.M.

Call to order: N3TMX

Opening ceremonies: Pledge of Allegiance,  
Introductions

In Attendance:

N3TMX, KE3QC, N3FEL, KE3LA, N3LBP,  
K3JCP, K3FKW, NY3J, WA3QVU, K3JQH,  
K3TX, KD2FHA, KD2EQP, N3HTZ

Guests: N3JNC - Mark

Old Business:

Treasurer's Report: By N3FEL

Oct 2014 - Treasurer presented the beginning  
balance, ending balance and Field Day funds  
to carry over for FD.

Board Actions Report:

New venue to be selected for December  
Meeting/Party - old venue closed

Board recommends taking down the old web-  
site.

Board to request Field Day budget from Field  
Day chairman.

PWA to establish its own P.O. box for club  
business.

V.E. Report: By K3JQH

No candidates for testing

Repeater: By N3HTZ

Cully discussed interfacing issues with the  
repeater controller and the new Fusion sys-  
tem. He has developed a work around solu-  
tion using an Arduino Microprocessor. System  
has been installed and is working well. A two  
week beta test is in process to work out any  
remaining issues. Cully also discussed issues  
he has encountered bring the Philmont Fu-  
sion system online.

Howard requested graphical documentation  
be generated (to clarify) the new repeater and  
controller interface (and published) for gen-  
eral consumption. Cully and Howard to work  
together on this project. Cully also reported  
that the new antenna installed at the repeater  
site is working extremely well.

Membership: No report

Activities/Public Service:

Field Day 2014 scores have been published  
in QST. W3SK (5A) - 945 contacts, 3582  
points, 22 participants.

## **PENN WIRELESS ASSOCIATION**

RF Hill (5A) - 883 contacts, 3210 points, 20 participants.

Warminster - 1402 contacts, 4478 points, 35 participants.

New Business:

Mark WA3QVU suggested obtaining new batteries for the repeater. Discussion on appropriate batteries and cost followed.

Ben (K3JQH) inquired on the proposed location of the December Party/Meeting. Membership was surveyed as to preference, no location prevailed. Howard N3FEL to nail down venue location.

Break: 8:50 P.M.

Meeting reconvened: 9:10 P.M.

Presentation: By Tom KE3QC (video)

Amateur Radio In The 21st Century - Mainstream or Backwater? - Art Goddard W6XD

Additional:

50/50 drawing - Winner - Christian (KD2FHA)

Meeting Closed at: 9:30 P.M. N3TMX

# PENN WIRELESS ASSOCIATION

## December 2014

Sun	Mon	Tue	Wed	Thu	Fri	Sat
<b>30</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
Technet 8PM					160M Contest 12/5 –12/7	EME 50- 1296 MHz 12/6—12/7  Full Moon
<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>
Technet 8PM  Pearl Harbor Day 1941	PWA E-Board Meeting 7:30PM					10M Contest 12/13—12/14
<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>
Technet 8PM	Holiday Dinner Grand China Buffet 6:30 pm	Hannukah First Night		Arduino uP SIG Mtg 7:30p Falls Rm 205		
<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b>
Rookie Roundup CW Technet 8PM  Winter Begins New Moon				Christmas Day		
<b>28</b>	<b>29</b>	<b>30</b>	<b>31</b>			
Technet 8PM						



# PENN WIRELESS ASSOCIATION

## January 2015

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				<b>1</b>	<b>2</b>	<b>3</b>
				Straight Key Night  Happy New Year!		RTTY Roundup 1/3—1/4
<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
Technet 8PM  Full Moon						
<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>
Technet 8PM	PWA E-Board Meeting 7:30PM			Arduino uP SIG Mtg 7:30p Falls Rm 205		
<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>
Technet 8PM	VE Session & PWA General Mtg 8 PM Falls Conf Rm  MLK, Jr Day	New Moon				VHF 1/24 - 1/25 SPAR Winter FD 1/24—1/25
<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b>	<b>30</b>	<b>31</b>
Technet 8PM						

## PENN WIRELESS ASSOCIATION

Penn wireless is a general interest Amateur Radio club nominally serving the lower part of Bucks County, though our membership is drawn also from the surrounding counties. Our objective is to promote and encourage all phases of Amateur Radio. Penn wireless in its present form is now **49** years old, though its origins pre-date by about 15 years. Two clubs centered in the Bristol-Levittown area, Windsor Radio Club and Bucks County Amateur Radio Club, formally merged in 1965 to form Penn wireless. The thought was that a single consolidated group would best serve Amateur Radio and the public, and experience has shown that thought to be correct.

Penn wireless is dedicated to the emergency and public service aspects of Amateur Radio. we continually support and participate in the formal ARES organizations and drills, and have made significant contributions in numerous minor emergencies and several protracted disaster situations where our communications abilities were well utilized.

We are eager to see Amateur Radio expand. We have helped by supporting both technician and upgrading classes, and have been rewarded by seeing many graduates of our classes become licensed, active, and upgraded to all of the higher grades. We

have been active from the start in the V.E. program, with regular monthly testing sessions arranged for the convenience of those anxious to upgrade or secure their first licenses. We have a large corps of accredited examiners, and are presently able to arrange special testing sessions on short notice.

One of our special projects each year is Field Day. We always strive for a high score, but we also see that every member (and many visiting hams) have as much operating time as they wish. Usually the operators with less experience at Field Day will have an experienced contest operator nearby. We have found that this procedure of learning by doing with top instructors helps our beginner-members learn quickly how to become top-operators in their own right. This increases their own enjoyment of amateur radio as well as their value to their club and to our emergency preparedness. Our Field Day record over the years shows us consistently in competition with out clubs countrywide.

We actively support ARRL and its field organization. Our local 80m CW net is registered as part of the National Traffic System. Our membership has included numerous appointments, including Net Manager, Emergency Coordinator, Technical Coordinator, Assistant Section Manager, Official



## **PENN WIRELESS ASSOCIATION**

Traffic Stations, Official Observers, Assistant Director, and more.

Our regular monthly radio meetings are devoted to some timely topic of interest to all, usually with an informed guest speaker. Organizational business is held to a minimum, as business matters are reserved for a separate business meeting.

Penn wireless is an active participant in the Delaware Valley Council of Amateur Radio Clubs. We are convinced that this organization, recently reactivated after many years of dormancy, can be a significant factor in the promotion of amateur radio through its voluntary coordination assistance offered to the many clubs throughout the Delaware Valley.

You are presently seeing another Penn wireless production, our monthly X-MITTER, of which this issue is typical. X-MITTER exists to keep our membership informed of club activity and local related affairs, and to provide a guaranteed publication outlet for the writings of our members. It appears that we've been successful in our efforts to have X-MITTER meet Penn Wireless standards. We've become accustomed to placing at or near the top in the regular Amateur Radio News Service club paper competitions. X-MITTER articles frequently are picked up and re-run in other club papers countrywide and even (more than once!) in QST.

## PENN WIRELESS ASSOCIATION

### SYSTEM FUSION FOR PWA

**Mark Hinkel** | [mrhinkel@verizon.net](mailto:mrhinkel@verizon.net)

The Penn Wireless Association has joined the digital age with a newly installed Fusion DR-1 on our UHF 448.225 repeater. The new 2nd generation Fusion system (non-beta) will interconnect with our existing S-Com 7330 controller allowing linking to the VHF repeater.

[http://www.yaesu.com/pdf/System\\_Fusion\\_Text.pdf](http://www.yaesu.com/pdf/System_Fusion_Text.pdf)

After Cully (N3HTZ) and crew installed the new wide band antenna in September, the signal reports were glowing. As the club looked into a purchase of the Fusion beta repeater, Cully made a phone call to Yaesu and found an unbelievable deal available to us. Yaesu offered clubs and repeater groups the ability to purchase the newer 2nd generation Fusion at very low cost — about 1/3 of list price — if they had existing repeater systems up and running. Members are also able purchase either the HT or mobile Fusion radio with up to a \$100 off via Yaesu mail in rebate. (Their offer expires 12/31/14)

The Fusion repeater by itself works quite well on either the UHF or VHF band. It is essentially two mobile "dual band" radios in a single 19 inch rack-mount cabinet. Look over the pdf given above and you'll see the Fusion is a full repeater with built in controller, and it has several settings for both digital and analog FM. To receive



both signals, the Fusion must be set to AMS (Automatic Mode Select) and left in Auto. If it receives a digital signal the controller will grab the first group of packets and then retransmit the group as digital. If it receives an analog FM signal it must first switch to analog mode or fixed FM, and then retransmit the analog signal leaving the digital operation alone. When the FM signal is finished the Fusion switches back to listening in AMS digital.

After installation, the first thing Cully wanted to do was connect up the 7330 controller to the accessory port on the back of the Fusion. Well, that's when trouble started. First, Cully needed to install a tone decoder board in-line from the controller to the Fusion. That took care of some problems but the Fusion was still locking up after the first transmission. This required someone to travel back to the repeater site and power down the Fusion for a few seconds, then re-energize it, effectively resetting the unit.

After some hair-pulling and a couple of phone calls to Yaesu, Cully deduced by



## PENN WIRELESS ASSOCIATION

observation that the Mode Selection signals and either Input/Output or Push-To-Talk signals must not occur simultaneously. The MS signals must occur first to make Fusion shift from AMS to fixed FM mode, then approximately 100 milliseconds later the I/O-PTT signals can come in. The reverse must happen when the signal is dropped. To make this happen in the correct sequence, Cully conceived a timer application for an Arduino board and arranged to have it programmed by a fellow enthusiast. Now the signals occur in precise cadence on the rise and fall thus preventing lock-up of the Fusion repeater equipment.

Cully also helped the Phil-Mont club restore linking capability to their VHF/UHF system (a non S-Com controller) in Roxboro. He also assisted owners of another repeater system that does use the S-Com controller in Westminster Maryland.

However, several of the Fusion users over at Phil-Mont have noticed a new problem while using the linked dual band repeaters. Their problem occurs when someone is on the analog side and someone else is on digital. If the digital operator drops transmission while the analog operator continues the analog takes it immediately and may lock up the Fusion's internal controller. Cully is working on a 30 sec timer to have a short buffer between the time the digital traffic drops and analog can resume. This will require a bit more work to introduce another delay of some type by either a more complicated

Arduino program or a second board.

As with D-Star and other DV (Digital Voice) modes, a Fusion machine requires a delay to function properly. Whether using the VHF or UHF repeater, you must allow several moments, maybe seconds, from when you key the mic to when you begin talking. Otherwise the first part of your message will not be heard. Remember, you're on a repeater system and not talking simplex.

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### SIGNS OF COMPULSIVE HOARDING

- ♦ **AN EXCESSIVE AMOUNT OF CLUTTER** that limits living space
- ♦ **DIFFICULTY CATEGORIZING** and organizing items
- ♦ **HOLDING ONTO POSSESSIONS** that seems of little or no value.
- ♦ **SEVERE ANXIETY** when trying to throw out an object
- ♦ **TROUBLE MAKING DECISIONS** about possessions.
- ♦ **FEELING ANXIOUS**, embarrassed or depressed because of clutter.
- ♦ **FEARS ABOUT NEEDING ITEMS** that could be thrown away.

... source, unknown



## **Society for the Preservation of Amateur Radio**

### **SPAR Announces Winter Field Day 2015**

Not only during Field Day in June, do the bands come alive with improvised signals proving the ability to respond to emergencies. Since emergencies and natural disasters don't always happen in the summer, during Winter Field Day, frigid winds, icy limbs and bitter cold replace the thunderstorms and blistering heat of summer. In 2007 SPAR established a Winter Field Day event and invited all Amateur Radio operators to participate. The event was repeated in 2008 and was considered a success, so it was then designated an annual event to be held the last full weekend each January. In 2007 - 2014 the event was enjoyed by many, but it is time to issue the invitation for the Ninth Annual SPAR Winter Field Day!

The 2015 Winter Field Day will be held from 1700 UTC (12:00 noon EST) Saturday January 24, 2015 through 1700 UTC (12:00 noon EST) Sunday January 25, 2015. The object of the event is familiar to

most Amateur Radio operators: set up emergency-style communications and make as many contacts as possible during the 24 hour period. The rules encourage as many contacts on as many bands and modes as possible, because during a real emergency, the most important factor is the ability to communicate, regardless of band, mode or distance.

The official rules can be found at the SPAR web site. The event is open to all amateurs, although we encourage everyone to join in the discussions and other activities sponsored by SPAR. Information about SPAR can be found on the SPAR Home Page.

Membership is free and open to all amateurs who want to encourage technical and operating skills. You can register by going to the SPAR Forum and registering, using your amateur call sign as your user name.

Please join with SPAR in promoting amateur radio and keeping our bands alive!

<http://www.spar-hams.org/contests/winterfd/index.php>

**CQ FIELD DAY,  
CQ FIELD DAY,  
W3SK ....**

## PENN WIRELESS ASSOCIATION

### WA7BNM - DECEMBER CONTEST CALENDAR

± ARS Spartan Sprint	0200Z-0400Z, Dec 2
± CWops Mini-CWT Test	1300Z-1400Z, Dec 3; 1900Z-2000Z, Dec 3; 0300Z-0400Z, Dec 4
± NRAU 10m Activity Contest	1800Z-1900Z, Dec 4 (CW); 1900Z-2000Z, Dec 4 (SSB); 2000Z-2100Z, Dec 4 (FM); 2100Z-2200Z, Dec 4 (Dig)
± NCCC RTTY Sprint	0145Z-0215Z, Dec 5
± ARRL 160-Meter Contest	2200Z, Dec 5 to 1600Z, Dec 7
± TARA RTTY Melee	0000Z-2400Z, Dec 6
± ARRL EME Contest	0000Z, Dec 6 to 2359Z, Dec 7
± Wake-Up! QRP Sprint	0600Z-0629Z, Dec 6; 0630Z-0659Z, Dec 6; 0700Z-0729Z, Dec 6; 0730Z-0800Z, Dec 6
± TOPS Activity Contest	1600Z, Dec 6 to 1559Z, Dec 7
± Ten-Meter RTTY Contest	0000Z-2400Z, Dec 7
± SARL Digital Contest	1300Z-1600Z, Dec 7
± CQC Great Colorado Snowshoe Run	2100Z-2259Z, Dec 7
± NAQCC CW Sprint	0130Z-0330Z, Dec 10
± CWops Mini-CWT Test	1300Z-1400Z, Dec 10; 1900Z-2000Z, Dec 10; 0300Z-0400Z, Dec 11
± NCCC RTTY Sprint	0145Z-0215Z, Dec 12
± ARRL 10-Meter Contest	0000Z, Dec 13 to 2400Z, Dec 14
± NAQCC CW Sprint	0130Z-0330Z, Dec 17
± CWops Mini-CWT Test	1300Z-1400Z, Dec 17; 1900Z-2000Z, Dec 17; 0300Z-0400Z, Dec 18
± NCCC RTTY Sprint	0145Z-0215Z, Dec 19
± AGB-Party Contest	2100Z-2400Z, Dec 19
± OK DX RTTY Contest	0000Z-2400Z, Dec 20
± Feld Hell Sprint	0000Z-2400Z, Dec 20
± Croatian CW Contest	1400Z, Dec 20 to 1400Z, Dec 21
± ARRL Rookie Roundup, CW	1800Z-2359Z, Dec 21
± Run for the Bacon QRP Contest	0200Z-0400Z, Dec 22
± CWops Mini-CWT Test	1300Z-1400Z, Dec 24; 1900Z-2000Z, Dec 24; 0300Z-0400Z, Dec 25
± NCCC RTTY Sprint	0145Z-0215Z, Dec 26
± DARC Christmas Contest	0830Z-1059Z, Dec 26
± RAC Winter Contest	0000Z-2359Z, Dec 27
± Stew Perry Topband Challenge	1500Z, Dec 27 to 1500Z, Dec 28
± RAEM Contest	0000Z-1159Z, Dec 28
± CWops Mini-CWT Test	1300Z-1400Z, Dec 31; 1900Z-2000Z, Dec 31; 0300Z-0400Z, Jan 1

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

## PENN WIRELESS ASSOCIATION

### VE Examination

#### Take the Exam...

Our ARRL/VEC VE Team is ready and willing to administer any license grade/upgrade or code element test. Confirm your intention to test with Ben Johns, VE Contact at 215-657-5994 not later than the Sunday evening before the 3rd Monday of the month. Please advise us in advance of any special needs you may have in successfully completing the intended test. Our testing session begins promptly at 6:30 pm and remains active until all license grades desired are administered. We do not recommend, nor is it our practice, to administer repeat examinations of similar license grades to any candidate. However, progressive license grades may be attempted by any applicant at no additional charge. Please come prepared with the following items.

☐ Confirmation of appointment letter, email, note, etc. Walk-ins are not guaranteed a test session.

☐ Test fee of \$15 in cash or personal check payable to ARRL/VEC.

☐ Either of the following ID methods:

- a. One legal photo ID (driver or non-driver license, passport, radiotelegraph license, or other legal photo ID)

OR

- b. Any two of the following IDs: Non Photo ID/Driver License, Social Security Card, Birth certificate, Minor's work permit, Utility bill, bank statement, business correspondence specifically naming the person, Postmarked envelope addressed to the

person at his or her mailing address as it appearing on the FCC Form 605

☐ Any of the following ID numbers: Taxpayer ID (Social Security Number), IRS issued EIN (Employer Information Number), Alternate taxpayer ID Number (ATIN), FCC Issued Registration Number (FRN), FCC Issued Licensee ID Number

☐ The **\*\*original\*\*** plus one copy of your FCC license or CSCE (Certificate of Successful Completion of Examination). The original will be returned immediately to you.

☐ If applicable, a Physician's Statement if necessary to validate your claim of difficulty at reading, writing or speaking when requesting special assistance.

☐ A calculator is recommended and allowed if ALL internal memories are cleared and can be demonstrated free of information. A simple four-function calculator is suggested.

☐ One or more black-lead pencils and eraser, and a ball point pen.





*Penn Wireless Association  
P.O. Box 224  
Morrisville, PA 19067*



## APPLICATION FOR MEMBERSHIP

*Personal Information (please print):*

Name: \_\_\_\_\_ Date : \_\_\_\_\_

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

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

Home Phone: \_\_\_\_\_ Cell Phone: \_\_\_\_\_

Birth Date: \_\_\_\_\_ Occupation: \_\_\_\_\_ ☐ active ☐ retired

*License Information:*

Call Sign: \_\_\_\_\_ Class: ☐ Novice ☐ Tech ☐ General ☐ Advanced ☐ Extra

Date First Licensed \_\_\_\_\_ Previous Calls: \_\_\_\_\_

*Preferences:*

ARRL Member? \_\_\_\_\_ Other Clubs? \_\_\_\_\_

Bands/Modes Frequently Operated \_\_\_\_\_

Emergency Power? \_\_\_\_\_ Portable/Mobile? \_\_\_\_\_

*Favorite Amateur Radio Activities: (note all that apply)*

- |   |                                       |  |  |
|---|---------------------------------------|--|--|
| <input type="checkbox"/> Awards         | <input type="checkbox"/> Traffic      | <input type="checkbox"/> Contesting      | <input type="checkbox"/> Digital Radio       |
| <input type="checkbox"/> Rag Chewing    | <input type="checkbox"/> MARS         | <input type="checkbox"/> Field Day       | <input type="checkbox"/> QRP                 |
| <input type="checkbox"/> Projects       | <input type="checkbox"/> Newsletter   | <input type="checkbox"/> Fund Raising    | <input type="checkbox"/> Renewable Energy    |
| <input type="checkbox"/> DX'ing         | <input type="checkbox"/> Fox Hunting  | <input type="checkbox"/> Public Service  | <input type="checkbox"/> QSL Card Collection |
| <input type="checkbox"/> County Hunting | <input type="checkbox"/> Packet Radio | <input type="checkbox"/> Rig Restoration | <input type="checkbox"/> _____               |
| <input type="checkbox"/> Education      | <input type="checkbox"/> Hamfest      | <input type="checkbox"/> Antennas        | <input type="checkbox"/> _____               |

Comments: \_\_\_\_\_

\_\_\_\_\_

Sponsored By: \_\_\_\_\_ Annual Dues: \$20. Paid \_\_\_\_\_

## PENN WIRELESS ASSOCIATION

### Executive Board ...

PRESIDENT <b>PAUL CEGLIA, N3TMX</b>	610-608-9584	cegtv1@aol.com
VICE PRESIDENT <b>TOM STAFFORD, KE3QC</b>	215-584-3428	ke3qc@ke3qc.com
RECORDING SECRETARY <b>JIM PETROSKY, KE3LA</b>	215-943-7654	ke3la@comcast.net
TREASURER <b>HOWARD RUBIN, N3FEL</b>	267-304-6949	n3fel@arrl.net
CORRESP. SECRETARY <b>ALEX GROSS, KB3SYY</b>	215-639-8306	kb3syy@yahoo.com

### Committees ...

FIELD DAY <b>MARK HINKEL, WA3QVU</b>	mrhinkel@verizon.net
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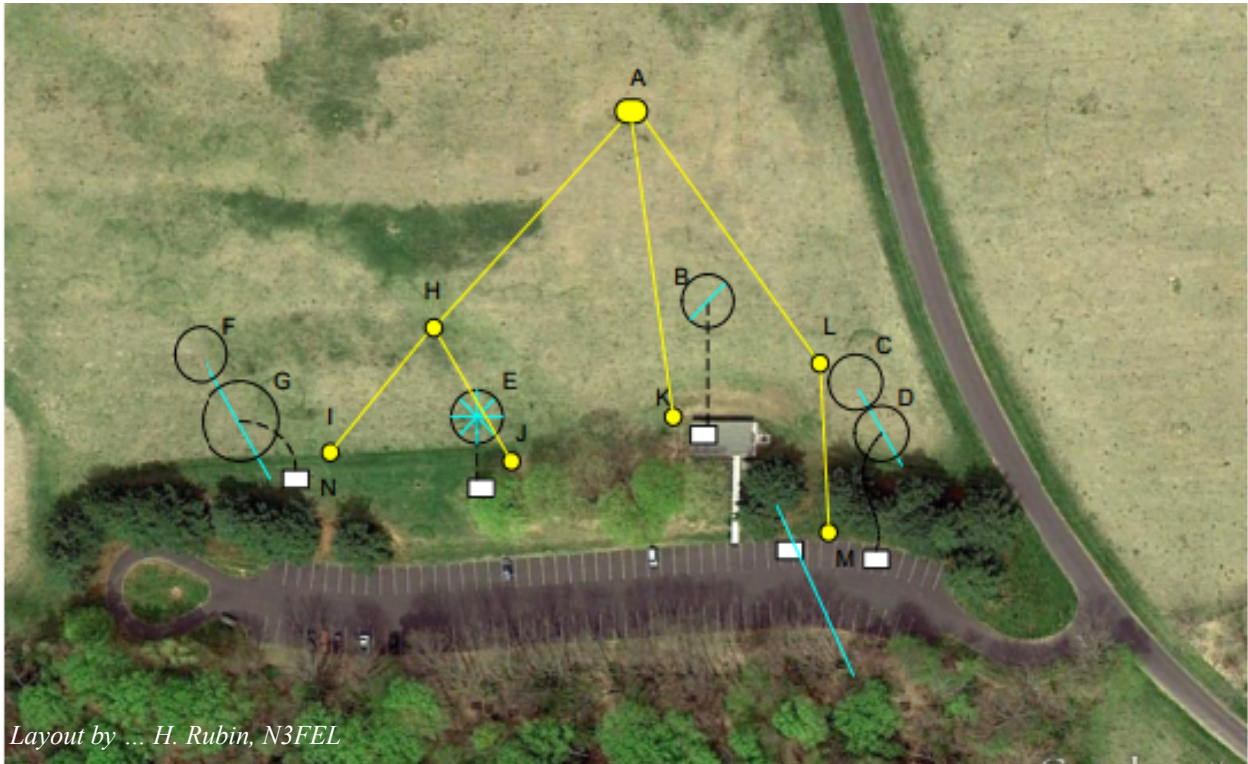


### ***Silver Service Award***

Penn Wireless Association sponsors the Silver Service Award to recognize amateurs who have performed outstanding service to their club, their community and Amateur Radio. Nominations are accepted throughout the year and a candidate is selected to be honored at our annual banquet. Nominations should be mailed to PWA Silver Service, P.O. Box 224, Morrisville, PA 19067.

PENN WIRELESS ASSOCIATION

Field Day is a time for amateur radio operators to show the world what grass roots communication is all about.



Join PWA at our annual Field Day exercise. Sign up now for a station assignment. Station locations are to be awarded soon (see note.) Don't hesitate, as the best assignments and locations will no longer be available. Field Day committees are forming now. Plan to serve on one or more of the following and help Penn Wireless Association bring out the best exercise experience this side of Newington.

- |   |                              |   |                          |   |                                |
|---|------------------------------|---|--------------------------|---|--------------------------------|
| ✓ | GOTA Station / Recruitment   | ✓ | Safety / First Aid       | ✓ | Field Day Ways and Means       |
| ✓ | Antenna Planning / Setup     | ✓ | CW, SSB, & Digital Modes | ✓ | Power Generator / Distribution |
| ✓ | Public Awareness / Relations | ✓ | Education/Training       | ✓ | Food Planning / Preparation    |

*Note: Station assignment and location options are initially offered to participating band captains of FD 2014. After that, assignments are offered to band captain applicants in descending order of highest license class on a first-come, first served basis. For additional details, contact your Field Day 2015 Chairman, Mark, WA3QVU.*

**X-MITTER  
P.O. BOX 224  
MORRISVILLE, PA 19067**

*If undeliverable as addressed,  
return requested*
