



# The VHF Transmitter



Keystone VHF Club, Inc.

W3HZU

Founded 1955 – York, PA

VOL 58 No 2

CIRCULATION 150

February, 2013

## The Keystone VHF Club's Holiday Party "A Feast Fit for a King!"

On Saturday, January 26th, the club held it's annual Holiday Party. This year the event was held at the Fairview Township Fire Hall. This was the first time in memory that the club members secured the location, prepared the facility, cooked & served all the food, and totally organized the event by themselves.

The Party began at 4 PM with a cocktail hour where wine, beer, Punch and hors d'oeuvres were served. Several club members tried their hands at making these. Tim Barefoot, W3TWB made a whopping 8 pounds of barbecued meat balls! Thanks Tim !!



The kitchen crew and other volunteers arrived by 1 PM to set up the room and to prepare the food. The Turkey, Ham, and hors d'oeuvres were prepared at the volunteers homes. The Potatoes, hot vegetables, Filling Balls, and punch were made in the kitchen.

At 5 PM dinner was served buffet style. It consisted of Ham, Turkey, Stuffing Balls, Mashed Potatoes & Gravy, Corn, Green Beans, Broccoli Casserole, Cranberry Sauce, and Dinner Rolls



Boy oh Boy! Those Stuffing Balls were good! Kathy Dellinger, KA3THC had a great recipe for these treats and they were made right from scratch in the fire hall's kitchen. Here Chris Shover, KB3TWW is sautéing onions and celery in butter while Lorrie Shover, KB3ZLO and Kathy prepare fresh eggs & milk to be added to Chris's mixture. This was then poured on to the filling bread pieces and hand kneaded into the filling balls which were subsequently baked and voraciously consumed.

We had 52 people attend the party. During the Cocktail hour and throughout dinner we were entertained with music and a slide show of club members & events dating back to the 1950's. I think that everyone who attended had their picture displayed several times! Dinner lasted for a good hour and I am happy to say, came out absolutely delicious!

*Continued on Page 4*

## Bob Poff, WB3AWJ Recognized for Technical Excellence

(and getting us out of a Tight Situation!)



Over the course of the last year Bob, WB3AWJ has been instrumental in reference to getting our 6 meter and 10 meter repeaters up and running at the club site.

About 6 months ago, we ran into a problem where another group of Amateurs decided that they would like to take possession of our frequency allocations where we have our 10 meter repeater. These frequencies were 29.580 Mhz and 29.680 MHz. This group went to the Regional Repeater coordinating committee and attempted to secure these frequencies using the rationale that our repeater was not on line. They did have justification in this respect as our 10 meter machine has been off for several years! The Coordinating committee contacted us and told us that we had 90 days to get the repeater back on line or risk losing these frequencies. Bob did some scrambling & obtained some hardware to use to put the 10 meter repeater back into service. As well as providing this, we needed a way to get audio from the remote receiver on 29.580 MHz located up on Conawago Mountain back to the club.

*Continued on Page 5*

## Dan Shortencarrier, N3EEI Donates a new desk microphone



Hey! Come on you old Keystone VHF Club members. Does this look like a good guy or what! Dan isn't able to get down to the club as often as he'd like due to family commitments but when there's a work party or something important (like beer), he's usually there.

A couple of weeks ago, he found a really nice Yaesu MD-100 desk microphone on E-bay. *This is absolutely the mic to have if you own a Yaesu FT-920 transceiver.* The club's main HF transceiver is in fact a FT-920!

To make a long story short, Dan purchased the microphone and donated it to the club. We received it and tried it out about a week ago ... it is sweet! Not a single mark on it and it is a perfect impedance match to the FT-920! A picture of the mic is on Page 10. **Thanks Dan!**

### NEXT MEETING

Thursday, February 7th, at the York County EOC  
On Davies Road

**\*\* Check out the Tuscarora Summit Adventure on Page 5 \*\***



## Scheduled Club P.S. Events for 2013

- \* April 21, 2013 - MS Walk at Rudy Park (Chip, W3FJD)
- \* April 28, 2013 - Iron Masters Challenge Superhike at Pine Grove Furnace State Park (Jack, KC3JD)
- \* April 28, 2013 - March of Dimes Walk-a-thon at Rudy Park (Dick, WA3USG)
- \* May 26, 2013 - Bob Potts Marathon on NCR Trail (Jack, KC3JD)
- \* June 8 - Diabetes Tour de Cure Mountain Bike, Grantville (Marty, KB3BAA)
- \* July 4-7 - Gettysburg 150<sup>th</sup> Re-Enactment
- \* July 13, 2013 - MS Bike Tour in Gettysburg (Sandy, N3ECF)
- \* July 27-28 - Horse Trail Ride Camp Weiser (Marty, KB3BAA)
- \* Sept 7 - KTA Superhike (Ken Wiggins, N2DYK)
- \* Oct 20 - Hershey Half Marathon (Marty, KB3BAA)
- \* Oct 27 - Michaux Team Challenge (Dan, KB3MUN)
- \* Dec 24-25 Glen Rock Carolers (Stan, AB3EM)

## York County EOC Communications Test Slated for February 20th

On February 20, 2013 YARS is intending to hold a communications test between all 11 York County Emergency Operations Centers (EOC's). This test, which is the first of its kind in York County, will determine if all of the EOC's can access the appropriate repeaters necessary for them to communicate with the York County EOC.

We will be testing several Repeaters on VHF, UHF, and at least 3 VHF and UHF simplex frequencies. We are testing simplex frequencies at the low & upper end of the VHF & UHF spectrum to see if antenna efficiency due to large frequency excursions plays an important factor in communications.

We would like to have at least one communicator at each of the EOC's for this test. Our first choice is if the EOC has radios and antennas, we would like you to use them. If they do not have equipment, or if you cannot gain access to the EOC that day, our second choice is to set up a portable station on the property of the EOC. We would like you to run a power level of at least 30 watts on VHF and 20 watts on UHF. An ideal antenna would be a dual band J-Pole at least 15 feet above the ground. A dual band mobile antenna with radials, or a base style dual band antenna would also be acceptable. The important thing is that it be mounted at least 15 feet off the ground and in the clear. If you cannot get access to the property, we request that you operate from your vehicle parked as close as possible to the EOC with a dual band mobile antenna at a power level no lower than the above.

We will be testing on several different frequencies using both Repeaters and simplex. The goal of this exercise is to see if all 11 EOC's can communicate with the York County EOC and what repeaters and/or simplex frequencies will work for this. As a secondary test, and as a point of interest, we would like to know how many EOC's can hear each other directly on simplex. We don't believe that there will be many scenarios where one EOC will need to talk directly with another but since we will have the communicators on station, it would be easy to note in your log who you can hear other than the main York County site.

There is a question of what EOC's we will have access to during this test. If you have a point of contact in your "Adopted EOC", you may want to discuss this test with them and see if you can get access that evening.

*Continued on Page 3*

### Local area nets:

Capitol Area Traffic Net starts **Monday at 8 PM** on the South Mountain Radio Amateurs (SMRA) repeater on 145.46 (67.0 tone), 1 MHz offset. All properly licensed radio amateurs are invited to check in, with or without traffic or experience

The Combined Club ARES/RACES Net meets **Monday at 8:30 PM** on the Keystone 147.97 Repeater (Tone: 123 Hz).

South Mountain Radio Amateurs (SMRA) Net on **Monday at 9 PM** on the 145.43 (Tone: 67 Hz) repeater located in Mt. Holly Springs. *After the normal FM net, a group moves off to 144.210 MHz and operates SSB.*

The Keystone VHF Club Digital Net on **Tuesday at 8 PM** on the York 146.97 Repeater.

The Keystone VHF Club Digital Familiarization Net on **Wednesday at 8 PM** on the York 146.97 Repeater.

The Keystone 75 meter net on **Tuesday at 9 PM** on a frequency to 3820 to 3840 KHz (+ or - the QRM). In the Summer, the net is suspended.

The Quarter Century Wireless Association (QCWA) net meets on **Wednesday at 9 PM** on the York 146.97 repeater.

A local FM Simplex Net runs **Thursday at 8:30 PM** on a frequency of 146.55 MHz.

The Digital Roundup Net **Friday at 8 PM** on the 146.610 (Tone: 131.8 Hz) repeater in the Lancaster/Lebanon area.

WLO Marine Radio in Mobile AL has begun broadcasting a RTTY news service on 8473 kHz. It appears to run continuously. They alternate between 45 Baud Baudot and SITOR Mode-B FEC ("AMTOR" to we hams). Its kind of fun to copy, and a good way to test out your RTTY setup.

**\*\* Listed below are some local 10 meter nets \*\***

Ham Shack Talk Net - Monday at 9 PM: 28.335 MHZ.

South Central PA SSB Net - Friday 8:30 PM: 28.495 MHZ.

Delaware Lehigh Valley ARC Net - Sunday 4:00 PM: 28.430 MHZ

Do Drop In net - Sunday 8:30 PM: 28.450 MHZ

Penn- Mar Club net - Tue. 8:30 PM: 28.495 MHZ.

The time that the test starts has not yet been cast in stone. We would like to make it as early as possible but need to adjust it according to the needs of the facilities. At this time we are planning on 7 PM.

The test itself will be a basic communications test. It is something that we Amateurs do every time we operate and I think this will be quite enlightening and fun. At this time, we foresee the use of the following Repeaters and simplex frequencies:

- \* The Keystone VHF Clubs 146.97 Repeater in York
- \* Chris Shover's 146.79 Repeater on Reesers Summit
- \* The Hilltoppers 146.865 Repeater in Red Lion
- \* The Keystone VHF Clubs 447.275 Repeater in York
- \* The 444.250 Repeater in Red Lion
- \* 144.34 MHz simplex
- \* 146.58 MHz simplex
- \* 147.47 MHz simplex
- \* 446.10 Mhz simplex

The testing scenario itself should be fairly simple. The Net control station will be at the York County EOC. As each satellite EOC is manned, it's communicator will check into the NCS at York County on 146.97. Once everyone has checked into the NCS, we will begin the test. The NCS station will also have a cell phone, if any of the satellite EOC's cannot access a Repeater at all, they will call the NCS via cell and report this. Once all the EOC's have finished testing on the first Repeater, we will move on to the second, the third, and so forth. I suspect that virtually everyone will be able to get into the 146.97 machine okay. We will have one of the radios at County monitoring that all the time. During communication tests using some of the lower profile repeaters, the 70 cm machines, and during simplex tests, if one or more satellite EOC's are not copying anything, they can call County on 146.97.

We will adjust our procedures as necessary but the bottom line is that we want to see if all the satellite EOC's can talk to County. We want to see what Repeaters work, which don't and which simplex frequencies could possibly be used in case Repeaters were not available.

During this test, we would like to man as many of the 11 EOC's as possible. At this time, we are planning to hold this event in place of the YARS meeting starting at 7 PM. This would give us a better chance at having the maximum man power available. There is a chance that we may not have enough YARS members available to man all the EOC's plus County. In this case, we probably could accept volunteers from the club to augment the YARS members.

There are quite a few people in the club who have Go Kits and could set up a portable station who are not active in YARS. This would give you a good chance to exercise your equipment and participate in an interesting experiment.

*Continued on Page 8*

## The VHF Transmitter

published monthly by the

**Keystone VHF Club, INC**

**Editor: Dick Goodman, WA3USG**

**ADDRESS LETTERS TO THE EDITOR and ARTICLES TO**

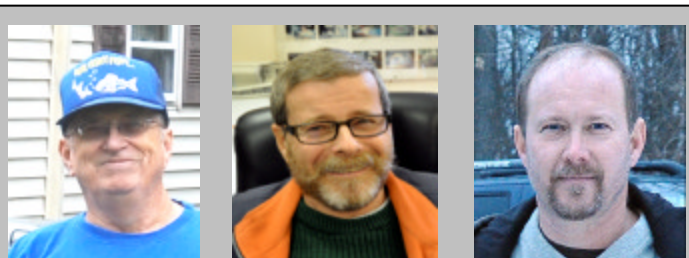
**DICK GOODMAN, WA3USG Voice: (717) 697-2353**  
**199 MAPLE LANE e-mail:**  
**MECHANICSBURG, PA 17055 [wa3usg@verizon.net](mailto:wa3usg@verizon.net)**

**Website: <http://www.w3hzu.com>**

**Distribution only via the Internet by WA3USG**

To change your  
address for the  
Newsletter, contact:

Dick Goodman, WA3USG  
199 Maple Lane  
Mechanicsburg, Pa.



Larry, N3LED

Thierry, KB3TPX

Jeff, KB3RCT

**Trustees Report - No report this month**

## Pennsylvania State Police Launch New "See Something, Send Something" App to Help Fight Terrorism

*Sent in by Cameron Baily, KT3A*

Harrisburg— A new smartphone application has been developed to help the Pennsylvania State Police receive reports regarding suspicious activity that may be linked to terrorism.

The new *See Something, Send Something* app allows suspicious activity to be captured as a photo or written note and sent to the Pennsylvania Criminal Intelligence Center (PaCIC).

"This App provides concerned citizens with an effective communications and reporting tool," State Police Commissioner Frank Noonan said. "The *See Something, Send Something* mobile app, developed by My Mobile Witness, sends terrorism-related tips directly to PaCIC where tips are evaluated by analysts and assigned for investigation as warranted," Noonan said.

The application, which is available at no cost for iPhone and Android phone users, also includes information on what to look for and when to report suspicious activity, along with how to receive important alerts.

"No one knows what goes on in your neighborhood better than you," Noonan said. "You may see or hear things that seem out of the ordinary and raise your suspicions -- if you see something suspicious taking place, report it."

"One tip from an alert citizen can prove valuable and protect Pennsylvania from a potential terrorist act," Noonan said.

My Mobile Witness uses patent-pending privacy protection software for safeguarding the integrity of tips and citizens' personal information. The system allows the PaCIC to engage citizens without tracking location or storing of personal information. Submitted tips are immediately removed from the mobile device and purged from the My Mobile Witness system once delivered to the intelligence center for analysis.

Factors such as race, ethnicity, national origin, or religious affiliation alone are not suspicious activity. For that reason, the public should report only suspicious behavior and situations (e.g., an unattended backpack or briefcase in a public place) rather than beliefs, thoughts, ideas, expressions, associations, or speech unrelated to terrorism or other criminal activity. Only reports that document behavior reasonably indicative of criminal activity related to terrorism will be shared with local, state and federal partners.

"Prevention is everyone's responsibility," Noonan said. "We are one neighborhood, one state, one nation; and it is the responsibility of all to remain vigilant and to report suspicious behavior -- one report can make a difference."

In addition to the new mobile app, people can call the toll-free State Police Terrorism Tip Line at 1-888-292-1919 or email [tips@pa.gov](mailto:tips@pa.gov) to report suspicious individuals or activity.

The Pennsylvania State Police have been receiving terrorism-related tips from the public since 2003.

In the case of an immediate threat or emergency, call 9-1-1 immediately.

**"A Feast Fit for a King" ... Continued from Page 1**

Not only was the food delicious, there was plenty of it. I think at first, our volunteers were a little nervous that we hadn't made enough food but as the meal progressed, we found that our concerns were without merit!



A plethora of delicious edibles awaits those who got in line for dinner! There was no way to get the entire table in one picture and do it justice. Off to the right is the Broccoli Casserole, Gravy, and Cranberry Sauce.



Dinner turned out to be a great social event! Here Ken and Ezzie Brody toast us and enjoy chatting with other members. The kitchen crew worked over half way through dinner before they sat down to eat. With the way the tables were set up, there was plenty of room for folks to walk around and talk without bumping into each other. Another benefit of having this event in this great facility!



The Fire Hall had a superb multi media system which made it easy to play music and display our slide show. I really got a kick out of seeing some folks reaction to seeing themselves on the big screen.



Check out our desert table! It certainly wasn't lacking anything. Chris & Lorrie Shover even had a cake made with the Keystone VHF Club Logo!

After dinner, we had an approximate 20 minute presentation about the history of the club presented by Dick, WA3USG. This highlighted the clubs rich heritage and its many accomplishments that began in 1955 and continue to this day.

Tim Beck, KB3OFE, the head of our Technical Committee, then got up and detailed some of his visions for the future of our organization. He made it clear that the club should be on the forefront of Amateur Radio technology and detailed some of the ways we can do this. There are great things on the horizon!

We then presented 9 of our members who were present with certificates for working the club members who participated in our "Adventure Day" event back in October of 2012 (see the November, 2012 issue of this newsletter). It took awhile to get the certificates ready but we did it! We still have about another 7 certificates to issue to folks who didn't make it to the party.

Finally, we recognized one of our members, Bob Poff, WB3AWJ who has gone way beyond the call of duty in getting our 6 and 10 meter repeaters back on line. This is detailed on page 1 of this newsletter.



Of course this event wouldn't have been possible if not for the volunteers shown in the image above. They worked for weeks and kept in touch by e-mail. Over the last month, they did all the shopping to procure everything. On the day before the event they cooked the Hams & Turkey's. On the day of the party, they arrived at the Fire Hall by 1 PM to set everything up. Through out the event, they were working in the kitchen & behind the serving tables. They also hung around afterwards to clean everything up. We also had great help from the attendees in regards to this. Our big thanks goes out to Lorrie & Chris Shover who got us the Firehall at a great price! What a super bunch of people!!

**THANKS GANG !!**

**"Bob Poff, WB3AWJ" ... Continued from Page 1**

Initially, we put a beacon up on 29.680 MHz to test a new antenna. While this worked, it still did not constitute a repeater, and that had to go up within 90 days. It would cost the club over \$600 to put together an analog link from the Conawago site to the club, it would also take a bit of time to put this together. Since we have high speed Internet at both the club and at the remote receive site, Bob decided to bring back remote receiver audio via the AllStar system.

I won't go into details of AllStar here but in last months newsletter, Bob wrote an in-depth article about it. Since we needed to get this machine up ASAP, AllStar was a viable method. Bob procured the computers and provided the necessary expertise to get the 10 meter repeater up and running well before the 90 day deadline was up. As well as providing a link between the 10 meter remote receiver and the repeater transmitter at the club, Bob has enabled linking our 10 meter machine to any other repeater or node that is running AllStar. It's not unusual to hear the morning Alaska net via our 10 meter machine. You can even talk back to them if you have 10 meter FM capabilities.

Bob did much of the same work on our 6 meter repeater. While this is not a split site system (both the receiver & transmitter are at the club), Bob also has enabled linking via AllStar. When we had problems with frequency stability on the 6 meter repeater exciter, Bob took it upon himself to get a new crystal made which resolved the problem.

I have been up at the club during many tech sessions and Bob has shown up and then disappeared into the repeater room for hours making tweaks to the AllStar computers or resolving hardware issues.

Again, AllStar enables linking our repeaters to any other repeater that has AllStar capability. Some people get this mixed up with EchoLink. EchoLink is another Voice over IP system that allows users to access EchoLink enabled Repeaters but does not have the flexibility of AllStar. EchoLink allows licensed Amateurs to connect to other Amateurs who have the EchoLink application installed on their computer. It also allows them to connect to any Repeater that is EchoLink enabled but does not allow linking of Repeaters.

Right now AllStar linking is via the Internet so there is no absolute guarantee that repeater linking would function if there was an Internet outage. This worries some people who anticipate the linking of repeaters during periods of emergencies. However, it seems that when there is a high load placed on the commercial communications infrastructure caused by regional events, the telephone system overloads and in many cases, Internet and data service continues to function.

In the case of our 10 meter repeater, at this time, it is on line for non emergency use. If the Internet went down, we would lose connectivity to the remote receiver and repeater would not function. In the very near future, we hope to replace this link with our own dedicated data network between the club and the remote receive site. We would be responsible for powering & maintaining this network. Once this is put into place, the repeater would no longer rely on the Internet.

The bottom line here is that Bob Poff, WB3AWJ did a lot of work both quickly and well ... and that was a winning combination! At our Holiday Party he was awarded a Certificate of Appreciation that read:

**In recognition for his dedication and assistance to the Keystone VHF Club's Technical Committee**  
**Robert A. Poff, WB3AWJ**  
**Has over the course of this last year been the primary Mover & Shaker in reference to getting both our 6 meter and 10 meter repeaters operational and interfaced to the AllStar system. Bob has donated many hours of his time and much equipment to this effort and as a result, we have two systems that we as a club can take great pride in.**

The entire club membership, the Technical Committee, and all of the club officers owe Bob a round of thanks for the work he has done. We certainly wouldn't be where we are today without him.



## A Long Delayed Antenna Project

By Ralph Brandt, K3HQI

I started this project sometime late in the Summer of 2011. I picked up 30 feet of used tower and started the planning. Based on lot size it was decided to only use twenty feet of the tower. It puts the beams (6M – 2 element, 2M – 8 element quad – thanks Dale for talking me into a quad, 70CM 11 element yagi) between 21 and 29 feet AGL and the triband vertical is on the top of that.

The third section of tower is laying in the driveway in case a neighbor complains I will tell them, "I knew someone may object, that is why I didn't go 10 feet higher." I poured some of the concrete base in late September and over the winter I finished the mast assembly and sat the top ten feet of tower along the deck. The LMR and router cable runs were made during that time. It is imperative that all outdoors antenna work be done in cold weather. It works better if you do it then. I couldn't find a thrust bearing that would fit on the top of the tower so I had a plate made to mount one.



The summer went and I finally got to finish the base, a 4x6 a couple feet into the concrete base and two angled 4x4 braces. Finally late November I fired up the winch and the tower went up, without the mast and antennas. After getting the braces for it aligned I decided to wait till that evening to get some help to put the mast in the rotor and do the final lift. The mast went in pretty well but there was a minor issue when I tried the first lift, a tree limb that looked to be clear but wasn't. It took till December 18 to get that clear and get the final lift.

The design criterion for this tower was NO CLIMBING and the ability for me to raise and lower it alone for repairs. A twelve volt winch (\$79 from Harbor Freight) allows me to raise and lower the tower and work can be done on an antenna at the 3-5 foot above ground level. I looked at a hand winch and they were within \$20 of the cost and 115V AC winches were out of sight. I was a frequent customer at TSC for about two months.



I have an MA5B (10, 12, 15, 17,20 – a big 3 element yagi) that may be added, I am looking to see how this behaves before I add that thirty or so pounds and 3 square feet of wind load. It will also limit the laying down the tower unless the antenna is pointed east/west. Also since I picked up an A-99 real cheap, was intending to use it for roving but it is now up on a piece of 16 foot fiberglass and working well. With that and the 80 meter dipole (soon to become a fan dipole to add 40/60M) I can pretty well cover most of what want to do. I am thinking that the A-99 will come down when the MA5B goes up and the A-99 be moved to the roving kit.

Sixteen months isn't too long, is it?

# High Adventure on Tuscarora Summit Or "A Night on Big Mountain!"

By Dick Goodman, WA3USG

"It was a dark and stormy night!" Hey, is that literary or what!, actually, it was simply a cold & windy night, but wait, I'm getting ahead of myself here.

At the December meeting Tim Barefoot, W3TWB suggested that we head out to Tuscarora Summit to work the January ARRL VHF contest. Some of us actually thought that this was a great idea so we started making plans! Doesn't it sound like a great time?

1. Tent camping on the top of a 2,500 foot summit in January with snow!
2. Wind velocity anywhere from 10 to 45 mph typical.
3. Temperature at night runs about 8 to 25 degrees. Sometimes much lower.

We needed to check the place out, so three of us drove out to see if this adventure would be possible. The fact that I (WA3USG) got stuck twice in the snow & had to be pulled out by Tim, W3TWB should have sounded a warning alarm or two!



Tim Beck, KB3OFE and Tim Barefoot, W3TWB checking the place out on January 12th, the week before the event. "Looks okay to us" we thought!

We needed to stop somewhere and really strategize this! The area was remote, cold, and could be dangerous. This would take some serious consideration ... nothing to be taken lightly.



This was a good place to do some serious thinking ... *Yep! Hell ... let's do it!*

Over the next week we all did some real planning. I would bring a 15' X 10' tent. We would set up two operating positions in it. One for 2 meters and 70 CM, the other for 6 meters. Power would come from a 1 KW generator that I brought and a 2 KW generator that Tim, W3TWB brought. I provided a 4 element 6 meter beam, we used the clubs new 12 element 2 meter beam, and Rick, KR3EE lent us his 27 element KLM beam for 70 CM. Over the next week Tim, W3TWB constructed antenna supports for all three antennas. Tim also provided a shelter to be used for cooking and eating. This was basically a trailer with a small portable pavilion attached wrapped with tarps ... it worked! W3TWB was also to be our master chef for the weekend.



The operating positions tent (left) and the food tent (right) were all set up by about 10 AM Saturday morning. We got lucky and the temperature rose to the mid 40's. Dan, N3EEI & Greg, KE3CW also came out & helped set up.

Setting all of this stuff up Saturday morning wasn't easy. The wind was blowing fairly hard and it took four of us to get the main operating tent erected. It didn't help that I hadn't put the tent up for over 2 years and had forgotten where all of those fiberglass poles are supposed to go ... YOWL !!



Erecting the 2 meter & 70 CM antenna supports along with the respective antennas went quite well..



To the left is my 4 element 6 meter beam supported on the back of Tim's pickup truck. It should be noted that both sets of antennas had their own dedicated rotor. We were lucky in that when we were putting the antennas up, the wind virtually died down to nothing. Later on in the night the wind really picked up. Probably gusting to 20 or 30 mph. Things did start moving around a bit. By Sunday morning the wind was really raging and we decided to tear down early. For awhile we thought that we were going to lose our operating tent.

The wind !!! I have no idea what was holding the food tent together! All of the antennas performed well. We had a good SWR on everything and ended up making over 135 contacts. Our longest contact was about 1,200 miles on 6 meters.



The 2 meter & 70 CM operating positions inside the tent. This worked out okay as long as there was a good bit of weight inside, otherwise the wind really moved the tent around!



Here's the 6 meter operating position on the other side of the tent. This also worked out okay and we made about half our contacts on this band.



Heat was provided by a propane heater. While this kind of heater does not emit harmful quantities of Carbon Monoxide, it could possibly deplete the area of Oxygen. In our case however, the tent was extremely well vented so this wasn't an issue. We did worry about it being blown over because of the tent moving in strong winds. At one point, the wind blew so hard that the side of the tent touched the back of the heater and this melted a hole in the side (see arrow).

After darkness fell the temperature went down and dropped into the 20's. The propane heater did a adequate job of keeping us warm but it really had to work at it. The operating tent was not designed for Winter camping and the entire roof was a screen mesh. We had a rain fly covering this but still most heat was lost out the top.

It was very dark at the top of the mountain. Fortunately, Tim, W3TWB brought along an experimental light fixture that he built. It was a L.E.D. light equivalent to a 400 watt Sodium Vapor lamp in brightness.



← To the left:

This thing was pretty amazing. Even out in full sunlight, it was so bright that you couldn't look at it directly. All though it's equivalent to a 400 watt lamp, it draws less then 100 watts from the generator that we ran it from. Tim had it set up with a wireless remote control so we could turn it on and off from inside the tent.

**Below:**

This is how it lit up the campsite at night. It even provided illumination for the inside of the operating tent.

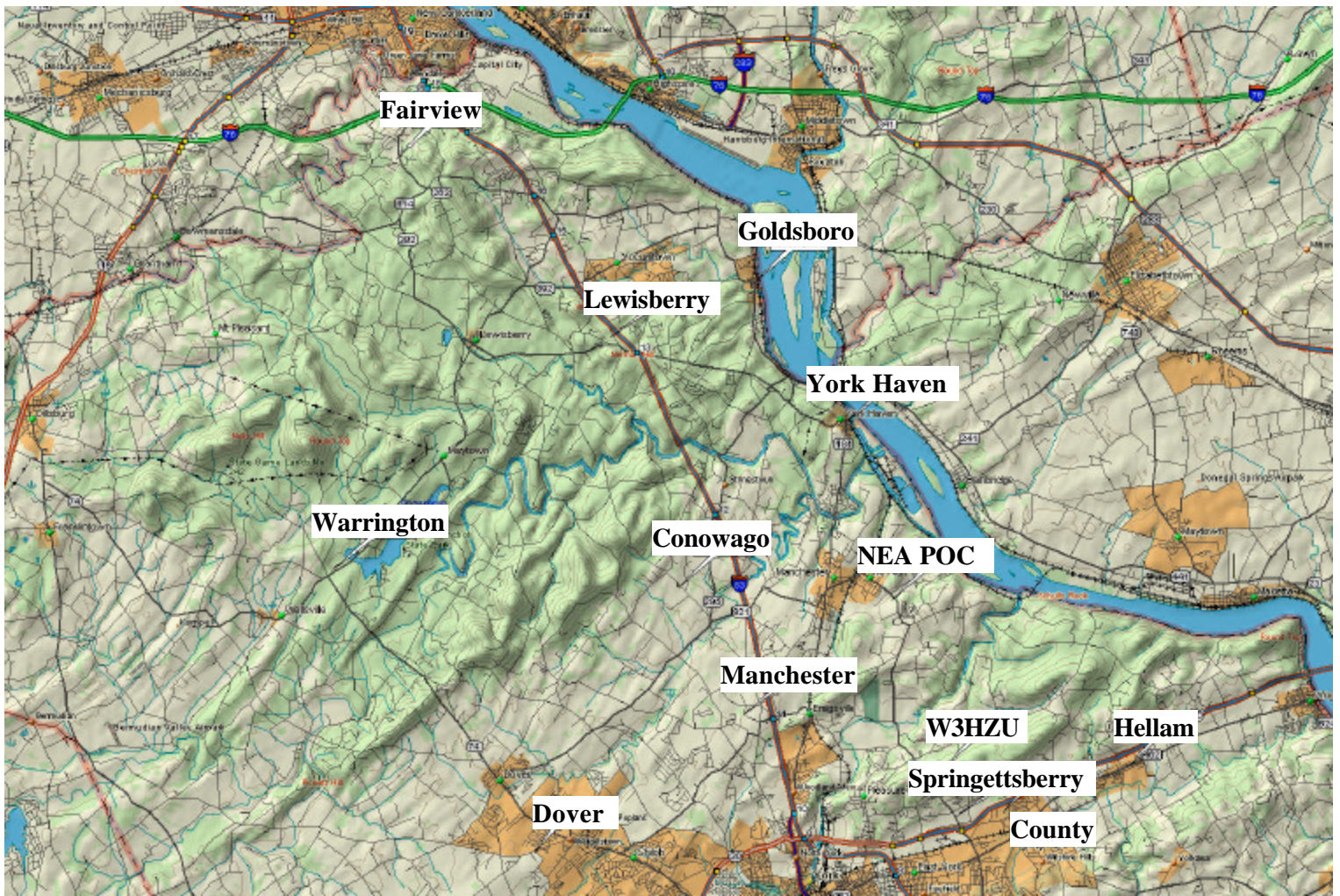


Tim, W3TWB shot this picture of our antennas being illuminated by the light from the L.E.D. lamp.

We operated until about 11 PM. We were going to operate all night but the cold really sapped our strength and we also had interference from another group of Amateurs who set up about 200 yards away. We decided to hit the skids. Tim, KB3OFE brought along a small trail tent to sleep in. Dan, KB3JSV slept in his Jeep, and I slept in the operating tent.

In the operating tent the wind was really getting bad! The walls were moving back & forth and In & out. I was concerned that the propane heater would be knocked over. I decided to turn it off and rely on my sleeping bag to keep me warm. This worked until about 3 hours into the night when nature called. Now I do quite a bit of back packing and I am used to having to crawl out of a nice warm sleeping bag to "take care of business"

*Continued on Page 11*



Shown above are the locations of the EOC's that need to be manned for this event. As far as I know, there has never been a real test to see what Amateur communications capabilities there are from each one.

If we cannot get enough people to man all of them, we would like to see as many tested as possible. As well as running this as a communications test, having people at all the sites would make it a true communications exercise. It would test our net discipline skills and would even be a great place for some of our new Hams to get some experience operating in a large net.

If you have any questions or would like to take part in this event, on the evening of February 20th, please either E-mail or call:

**Sandy Goodman, N3ECF**  
**SLgoodman1@verizon.net**  
**(717) 697-2353**

## FEMA Exercise in Emmitsburg, Maryland

We just got home after a two day FEMA drill in Emmitsburg. The scenario of the drill is that there is a hurricane moving into the Ocean City Maryland area and Emergency Management officials are trying to make appropriate preparations.

The drill was held at a FEMA training facility in Emmitsburg Maryland with Emergency Management officials from Ocean City present. We were simulating operations from the Ocean City EOC and passing message traffic between our EOC and the Simcell. The Simcell simulates various other outside activities from which we pass traffic to and get traffic from. Both the EOC and Simcell are located within the same building but in different rooms about 100 feet apart. We have an Amateur communications team in each room and pass traffic via both voice and

digital using FLDIGI. Since the two rooms are so close to each other, we can run low power and use simple antennas.



The simulated Ocean City EOC was staffed by as many as 80 people at times. It was a hotbed of activity. There were at least 40 workstations in this room and virtually all of them were manned by at least one emergency management operator. We were set up at the only island in the room where there was no one else at. The place was filled & there was someone in every chair.

**Communications Team 1** located in the Simcell consisted of Jack Dellinger, KC3JD who was the Team Leader, Alan Fleckner, KB3TOZ and Perry Wood, WB3JKT who were both communicators under him. Jacks team consisted of one voice operator and two digital operators.

**Team number 2** located in the EOC consisted of Brain Koenig, K3BMK who was the Team Leader, Sandy Goodman, N3ECF and Dick Goodman, WA3USG. This team also consisted of 1 voice and 2 digital operators.

*Continued on Page 9*





Comm Team 1 set up in the Simcell. On the left is Jack, KC3JD, Center, Al, KB3TOZ and on the right Perry, KB3JKT



Comm Team 2 set up in the EOC. On the left is Dick, WA3USG, Center, Sandy, N3ECF and on the right Brian, K3BMK

Both teams were managed under our Communications Leader, Don Schmitt, K3DCS.

We initially arrived at our assigned locations by about 9 AM Wednesday morning. We set up our radios, antennas, and digital stations and ran a quick voice comm check on both 2 meter and 70 CM simplex. Since the rooms were only about 100 feet apart, the signals were strong. However when we started running tests using digital, we started having problems. Even though we had full quieting signals, we were getting a lot of data errors and checksum failures. When Jack initially set up his station, he was unable to even get his computer to recognize his SignalLink interface. After switching to a different USB port, we finally got it working.

However, throughout the day we had reliability problems with the data. We were able to send messages but about 25% of them had checksum errors. We did manage to successfully pass about a dozen or so messages during the first day. All of us experienced very unusual problems, and I like to think that we are competent digital operators.

We had been running our digital communications on 446.500 MHz. Simplex. Our antennas were all located inside the room with us and we started thinking that perhaps we were having problems with multipath reception. Normally we run digital on 2 meters. For this exercise, we wanted to run our voice net there and use 446.500 MHz for digital. UHF frequencies reflect off of objects more readily than VHF. With the antennas located inside, near metal objects, and with over 100 people milling around, we thought that perhaps multipath was an issue. So day 1 ended here!

Day 2 began much earlier on Thursday morning. We arrived at the FEMA facility by 7 AM and were set up and ready to go by 7:30. We

decided that since there were only 2 teams, we could run all of our comms, both voice & digital on 2 meters, perhaps this would minimize the multipath issue ... if that was the issue!

Jack, KC3JD tried to run a test transmission and found that again, his computer would not recognize his SignalLink interface. This time there was no easy fix. We had to end up uninstalling the USB soundcard driver and reinstalling it. It somehow had become corrupted. Then the rest of us began to have even worse problems with data reliability than we did the day before.

I started listening very closely to how my data tones sounded during my transmissions. They sounded normal except that about 2 or 3 times during transmission, they seemed to stop for about 1/10 of a second. This also happened to Brian, K3BMK the day before. He seemed to resolve the issue by rebooting his computer. I tried the same thing but the problem remained. I had located my antenna outside a window next to my station but it still was less than 10 feet from the radio & computer. We started wondering if we were getting RF back into things. At this point of time, I could not make any transmissions without getting a checksum error. I had a dummy load in my Go-Kit and disconnected the antenna and tried using that. Brian, who was right next to be copied a perfect transmission! I added another 10 feet of coax to my antenna and moved it further away. My next transmission was perfect but listening to the tones, I could still tell there was something abnormal when I was on the antenna. I tried several more transmissions with the dummy load & they were all perfect!

Unfortunately, FEMA and the Emergency Management decided that on this day, they were going to complete the drill just using tabletop exercises and we would be passing no traffic. We experimented for about an hour more among ourselves. Team 1 in the Simcell moved their antennas further away from their radios & computers but we could not reach any conclusive results.

There is a good chance that the problems were not all caused by one single point of failure. Having the antennas located in the same room near the radios & computers definitely caused problems ... that was proven by switching to a dummy load. Jack's antenna was a quarter wave whip on a baking pan located about 18 inches from his computer. It was discovered that for awhile, he was running high power, probably about 30 watts. This most definitely could have gotten into the computer and corrupted his USB soundcard drivers. It could have happened sometime on Wednesday and the problem wouldn't have manifested itself until he started his computer up the next day ... precisely what had happened.

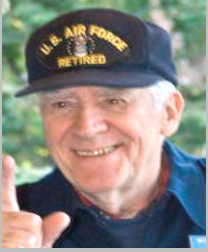
Jack also heard a lot of computer noise and interference from his receiver. Keep in mind that in the two rooms, which were no more than 100 feet apart, there were probably 100 operational computers along with associated printers, video projectors, and networking equipment. Actually, I guess that we're lucky that we didn't screw them up!

In summary, we don't really know exactly what caused our problems but in any future operations we should take some precautionary measures (which are just good RF engineering practices):

1. Antennas should be outside and mounted 15 feet or more above the radio & computer (vertical displacement offers much better RF isolation than does horizontal displacement.)
2. All cabling between the computer to radio interface should be shielded. This includes the computer USB to interface cable. The cables should not be less than 20 inches in length (12 inches is resonant on 70CM and 19 inches on 2 meters).
3. Ferrite RF suppressors should be installed on both ends of all data and power connections to the computer.
4. RF problems will most likely manifest themselves more due to RF getting into the computer rather than the radio or interface. It may help to move the computer away from other components in your station by using a good shielded USB cable,

Keep in mind that we don't have these problems in our home stations because our antennas are located a great distance from our radios and computers. When operating out in the field, we may not have this luxury so we have to make sure everything is as well shielded from RF as possible.

Finally, even with all the problems, we passed all traffic that was given to us! We adapted & overcame! It was a great experience and I am beginning to think that we are starting to be taken seriously as a communications asset!



**Stories From One of Our Most Lively Members!**  
**--- This Month ---**  
**US NAVY Hospital Corps Assignment**

*By Lee Lindsay, WB3HNA*

Working as a Hospital Corpsman at The National Naval Medical Center in Bethesda, Maryland was an everyday eye opener for a simple orphanage / foster care graduate like me. Everybody in the place was much more senior than I had ever hoped to be, and on a daily basis the V.I.P. list held the names of historically famous individuals I had never in my wildest dreams even hoped to see, much less meet -- much less treat as patients under my individual care and attention.

Assigned to the 16th Floor, about the lowest denominator was a grade at least above Rear Admiral, or Representative, or Senator -- yes, even as Vice President. It was in that elite company that I got to meet and treat the greats such as Admiral Nimitz, Admiral Halsey, James Forrestal, Hubert Humphrey, Adlai Stevenson and a myriad of other notables. The big thing was "do your job - create absolutely no friction or malaise - and most of all --- KEEP YOUR MOUTH SHUT when you go off duty. Worked for me -- I never envied any of those people because I never knew what those people actually were until years later, and at the time didn't even care.

My timidity was brought up rather short one morning after finishing the morning care on one Admiral "Bull" Halsey. No one could ever have convinced me that a Navy Captain was ever considered useless. However, as I was removing the breakfast table on wheels and gathering the napkins and other table ware, I inadvertently became a witness to a rather disheartening circumstance. The Captain who was in discussion with the Admiral suddenly braced to attention and with a bellowing roar, Admiral Halsey not only dismissed him but instructed him to resign immediately and never face him again. I was so stunned, I almost became next to get the axe, but just in time, adjusted my attention to the job at hand and quickly vacated the premises. The commotion brought several nurses and other medical personnel running to the room to be briefed, and left me scurrying off to tend my own emotions. In fact, this is the first time I have even dared write about it, knowing information as trite as this would never be publicly disclosed. I kept wondering if that ever really happened, and had a difficult time putting it from my mind.

Another round of vital signs brought me face to face with Vice President Hubert Humphrey who was very pleasant and gracious to me. As was custom, selected politicians were offered annual physical examinations at the Naval Facility, and today was his turn, I guess. He even asked about my history both in and before entering the Service. I had the feeling that I was with a rather important political influence and conducted myself accordingly, leaving him with a courteous salute and "Good Day".

Adlai Stevenson was a bit more politically inclined, I think, and contact with him was on a strictly do-your-job basis. Other high ranking politicians and the News Media seemed to be his only frequent visitors.

The day James Forrestal, Secretary of Defense, took his final, fatal steps is still ingrained in my memory. On that day I was working in the hospital emergency room and simply carrying on with the mundane duties of the job. I can still hear that "THUMP" sound overhead, and remember querying the nurse on duty with me about how strangely it interrupted the silence of the shift. The E.R. entrance stretched out from the building in such a way that it made somewhat of an apron protruding from the main structure. I thought something could have landed on it, and became somewhat apprehensive thinking about what that could have been. After a short discussion, we decided to call the floors above and ask for a bed-check. Everything seemed to be in order so the incident was set aside.

Only bare moments later the nurse on the 16th floor called and asked if someone could come and check on Mr. Forrestal who did not respond to an attendant knocking on his bathroom door to ask if he was

O.K. The door was locked and there was definitely no response from him when we tried to ask how he was, so eventually the door had to be forced open. Looking quickly inside it was noted that the window was wide open and our patient was not present. Our question about the strange thud on the E.R. roof was answered when we could see the human form lying on the entry roof below. Frantic activity with lots of security visitors proved what we now assumed.

With a towel around his neck and very little else one could there recognize, the body of James Forrestal was identified and removed. Those of us present were advised that this was now a formal investigation and that we should refrain from discussing the principles of it. It has been that way ever since, but knowing that the Secretary was on Mr. Truman's lately undesirable list, often rubbed my inquisitive conscience as to what actually transpired.

As one can certainly imagine, there are many things that occur in the lives of those who serve in the community of power, and of course being a Corpsman working in a government facility has that aroma. Maybe that's where the little tag - "Ours is not to reason why -- Ours is but to do or die--", comes from. Anyway, I can't remember anybody else on the compound talking about this incident either in public or in private. The only thing left to our imaginations was the fact that the Secretary often had some pretty stiff disagreements with presidential protocol and was not a Truman cheer leader.

Although not advised or fashionable, I often thought that with my inquisitive mindset, it would have been great to have been an undercover agent looking into this sad happening, and not sharing this with others who worked alongside me or others who had been on duty that day. But then ---- "Ours is not the reason why -----"



**The Yaesu MD-100 Dynamic Microphone**

**In the last issue of the VHF Transmitter, we told the hair raising saga of the acquisition of Dan Melato's (KB3JSV) tower of death! During the same week Chris Shover, KB3TWW, his XYL Lorrie, KB3ZLO, and Dick, WA3USG erected a 30 foot Rohn 25 tower at Chris's house. Lorrie actually hauled it up all by herself with the wench on their John Deere Gator. However I don't have a picture of the "completed product." Believe me, there's more to this story than meets the eye! Next month we will relate **The rest of the story"****

*Continued from "High Adventure" on Page 7*

However, this is the first time I've ever Winter camped ... or camped in these conditions. When I woke up the wind was raging. The temperature was in the mid 20's and the tent was dancing around like it was going to take off!

I managed to get out of my sleeping bag & get dressed. I unzipped the tent and went outside. The area was well illuminated by Tim's lamp so I walked back into the wood about 10 yards. I got back into the tent and thought that perhaps I ought to relight the propane heater. I looked around for the igniter but it was nowhere to be found ... Tim took it! I walked out to the food tent hoping that he had left the igniter on the table ... it wasn't there. Went back to the tent ... what to do?? Maybe I ought to check the gasoline level in the generators. I went over to mine and topped it off ... heck, it was almost full. Later I found out that about an hour before I woke up, Tim went out and topped off all of the generators. I went back to the tent and crawled into my sleeping bag but I couldn't quite get warm.

I laid there for about 10 minutes and the generator died! Crawled out of the sleep bag again and went out. When I was topping the generator off, I accidentally closed to fuel cap vent. I restarted the generator and went back to the tent. I really needed to relight the heater! Went back outside and rummaged through all the stuff in the food tent ... AHH-HAA! I found a propane torch with a built in igniter! Took this back into the tent and relit the heater ... ahh ... warmth! I crawled into my sleeping bag and started to doze off. Then a strong gust of wind hit the tent against the wall where the 6 meter operating position was located. The entire table turned over. I was sleeping right next to it ... it fell over and defying all the laws of physics, it somehow didn't hit me ... it sure as hell woke me up however.

By now it was about 5 AM and I didn't think there was any way I was going back to sleep. The tent was a rockin' & rollin! I picked everything up and moved the 6 meter operating table away from the wall. I also moved the heater to the center of the tent. I went outside and found two of the stakes had pulled out of the ground. Pounded em' back in and then went back & crawled into my sleeping bag. When I opened my eyes the next time it was after 7 AM and the Sun was coming up .... We survived!



Dan, KB3JSV emerged from his jeep and walked over to ensure that Tim, KB3OFE made it through the night in his trail tent. Tim Barefoot fared better than all of us. He slept in his trailer with a small propane heater. He stayed toasty warm all night!

The temperature was COLD and the wind was really gusting so we decided to pull out! We had everything packed up by about 9 AM and

headed down the mountain. On the way down we stopped and chatted with the group who had set up close to us. They were good guys ... I am sure that both of us degraded each others performance quite badly but still ... we all had the right to be there & operate. Some of the guys were from Georgia, one was a local who may be stopping up to the club to visit. I'm glad we stopped by.



Sometime during Saturday they had set up next to a radio tower about 200 yards from where we were located. At this location, the wind was brutal! It bent the mast on their 6 meter beam. Look at the number of guy ropes that they had to use to secure their antennas in the picture above. While we were there, I thought several times that those antennas were going to come down. We stayed and chatted for about 20 minutes. When they were setting up, they didn't even know that we were up above them ... it was just one of those things. Everyone was very sportsman like and even though I'm sure that it substantially effected both of our scores, we all had a great time!



**So in retrospect, how did we do in the contest?**

We worked a total of 137 contacts

Total QSO Points: 150 Total Multipliers: 42 Score: 6,300

75 contacts with 19 Grid Squares on 6 meters

49 contacts with 18 Grid Squares on 2 meters

13 contacts with 5 Grid Squares on 70 cm



**Keystone VHF Club  
General Meeting Minutes of  
January 3, 2013  
By Sandy Goodman, N3ECF – Secretary**

The General Club Meeting held at Keystone VHF Club was called to order by Pres. Dick WA3USG at 19:00. There were 31 members present and 1 new applicant. Dick talked about the plans for the Holiday Party on Jan 26. More details will be provided by email after the committee meeting on Jan 6. Dick also advised that Bob Riese, K3DJC, is doing well following a cornea transplant.

**TECHNICAL HAPPENINGS:** none

**SECRETARY REPORT:** Sandy, N3ECF. Steve, WB3EFA moved to accept the December minutes as published. Alan, WB3FTD, seconded the motion. Motion carried.

**TREASURER REPORT:** Linda, KB3EBV, reported for December: Income: \$806.14; Expenses: \$514.64; NET Total \$291.50. Balances: Club CD \$7,607.41; Bill Hurst CD \$2,516.36; Checking Acct \$3,471.91; Trustee Acct \$265.54; Total \$13,861.22. Mike, N3VQH, moved to accept the report; 2<sup>nd</sup> by Rich, KR3EE. Motion carried.

**COMMITTEE REPORTS:**

**TRUSTEE REPORT –** Larry, N3LED, reported that the pickup around the clubhouse is done. There are still a few odds and ends to do. Winters completed the line changes for the generator and provided a new battery.

**TECHNICAL COMMITTEE REPORT - Tim, KB3OFE,** reported on completion of the pre-amp closure. The new router has arrived for the network. He adjusted the notification for a power loss that identifies when the repeater is on generator power. The newsletter contains a complete list of all the technical committee's work.

**EMCOMM/PUBLIC SERVICE NEWS – Sandy, N3ECF,** reminded everyone that this is the year for the TMI Drill. We will be asking for volunteers. All public service events are listed on the W3HZU website.

**VE/ED REPORT -** January 12<sup>th</sup> may be the next test date. Only 1 person is potentially signed up.

**CONTEST REPORT -** The January contest is coming. Club members will work with what's available. A group may set up for roving.

**NEWSLETTER/WEBSITE – Dick, WA3USG,** newsletter out.

**OLD BUSINESS:**

A second reading was done for Anne Zarlenga, KB3ZLJ, who was then voted into membership.

Dick announced receipt of an award for W3HZU for the September 2011 VHF Contest for 1<sup>st</sup> Place Limited MultiOperator in Eastern PA.

Discussion was held on a previous request for First Aid Training for operators who do Public Service and EMCOMM. Tom, KB3ETG, told us that American Red Cross can provide the training at a cost. He also recommends the Wilderness Program training, which would include such care as how to make a splint. The per person charge would be \$20 for the CPR and \$35 for the Wilderness training. About 15 people showed interest in taking the classes. More discussion will be held off-line.

Jack, KC3JD, started a discussion about the Silent Key board. Some of the tags on the old board have fallen off, and we have several Silent Keys that are not included. We do have the equipment from Bill Barefoot, but that's cumbersome to take out. Dick, WA3USG, keeps the Silent Key list that's displayed on the W3HZU website up to date. Jack, KC3JD, moved to drop the old Silent Key board and continue to maintain the data on the website. Motion carried

**NEW BUSINESS:**

First reading was done for Micah Neff, KB3TGY.

February is the month that we will do the audit of our financial books. The Audit Committee will consist of Dick, WA3USG, Sandy, N3ECF, Larry, N3LED, Jack, KC3JD, Mike, WS3C.

We'll do the audit on Sunday, February 17, at 2 PM.

**GOOD OF THE CLUB -**

Tim Barefoot, W3TWB, announced that the Corn Roast will be held on August 17<sup>th</sup>. Tim also said the coffee maker has been purchased and put into operation at the club house.

50-50 Steve Steffan, WB3EFA, won \$18.00

Adjourned at 7:45 PM.

NCS	CALL	2013 DATES			
Ralph	K3HQI	Jan 07	Apr 08	Jul 08	Sep 30
Tom G.	KB3ETG	Jan 14	Apr 15	Jul 15	Oct 07
Walt	K3DQB	Jan 21	Apr 22	Jul 22	Oct 14
Jack	KC3JD	Jan 28	Apr 29	Jul 29	Oct 21
Dick	WA3USG	Feb 04	May 06	Jul 30	Oct 28
Jon	KB3IGH	Feb 11	May 13	Aug 05	Nov 04
Rich	KR3EE	Feb 18	May 20	Aug 12	Nov 11
Chris	WY6Z	Feb 25	May 27	Aug 19	Nov 18
Sandy	N3ECF	Mar 04	Jun 03	Aug 26	Nov 25
Dick	WA3USG	Mar 11	Jun 10	Sep 02	Dec 02
Nate	N6PHW	Mar 18	Jun 17	Sep 09	Dec 09
Stan	AB3EM	Mar 25	Jun 24	Sep 16	Dec 16
Lorna	KB3SST	Apr 01	Jul 01	Sep 23	Dec 23
					Dec 30

**Schedule of Keystone VHF Club Sponsored  
VE Testing for 2013**

Laurel VE Group Testing sponsored by Keystone VHF Club are held the second Saturday of the odd months. All tests are at 10 AM, pre-registration is appreciated except the Hamfest. Contact, Ralph Brandt at ralph.brandt@comcast.net or phone 717-792-1017.

Locations are York EMA Office at 120 Davies Road, York, or Keystone VHF Club on Deiningger Road, York, near the Rocky Ridge Park

**Testing dates:**

- March 9 at York EMA office
- \*\*\* maybe at York Hamfest in April
- May 11 at York EMA Office
- July no test cancelled due to MS Bike Tour
- Sept 14 at York EMA Office
- November 9 at York EMA Office.

**Gang,**

**Please think about writing a monthly column for the newsletter! I need articles. What interests you? What could you contribute that you think everyone would enjoy? This is your chance to become a top notch Arthor! Weather it be a controversial "soapbox" article or a technical masterpiece, we will print it! This is your club and YOUR newsletter. There are a lot of new members that I'm sure have varying interests, please make yours known! Drop me an e-mail at wa3usg@verizon.net. 73, Dick, WA3USG**

# KEYSTONE VHF CLUB OF YORK, PA



## W3HZU



### Membership Application

Name: \_\_\_\_\_ Phone: \_\_\_\_\_ - \_\_\_\_\_

Address: \_\_\_\_\_ Callsign: \_\_\_\_\_ Expires: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ Lic Class: \_\_\_\_\_

Occupation: \_\_\_\_\_ E-Mail: \_\_\_\_\_

### Membership Desired

**Full** → Full Club Privileges  
\$20.00 annually & one time \$5.00 Application fee

**Family** → Sponsoring members call: \_\_\_\_\_  
Privileges same as Full membership  
\$5.00 annually & a one time \$5.00 Application fee

**Associate** → Repeater Support  
\$20.00 annually & a one time \$5.00 Application fee

Are you a member of:

ARRL Y-N

ARES Y-N

RACES Y-N

QCWA Y-N

### Special Areas of Interest (circle all that apply)

AM Antenna building ATV Contesting CW Digital (Packet, RTTY, PSK-31, etc)  
DX FM HF QRP Satellites SSB SSTV SWL Tower climbing LF DSP  
UHF/Microwaves VHF Astronomy Photography Other: \_\_\_\_\_

### Application & Dues Mailing Address:

Make checks payable to: *Keystone VHF Club Inc.* Mail to: *PO Box 20143*

*York, Pa. 17402-0140*

#### FOR CLUB USE ONLY

First Reading Date: \_\_\_\_\_ Second Reading Date: \_\_\_\_\_

Date voted IN-OUT: \_\_\_\_\_ Date Dues Collected: \_\_\_\_\_

Applicant Sponsored by: \_\_\_\_\_