



The VHF Transmitter



Keystone VHF Club, Inc.

W3HZU

Founded 1955 – York, PA

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September, 2013

Corn Roast - 2013

Saturday, August 17th was the annual Keystone VHF Club Corn Roast. On Friday, the day before, Larry, N3LED, Jeff, KB3RCT and I made a run to Sam's club to stock up on charcoal, beverages, butter, and other incidentals. Then at 9:00 AM Saturday morning, the three of us met for breakfast at Stoneybrook and by 10 AM were up at the club getting everything set up.

We had a great group of volunteers helping. Rich, KR3EE; Joe, KB3TCM, Thierry, KB3TPX; Kip, WB3AFL; Brad, KO3T; and Tim, KB3WZX got the tables and cooking stations set up in almost record time. I was a bit nervous about this years event, Tim Barefoot, W3TWB has managed this for the last 10 years ... but this year, his XYL Sandy, N3NCF and he were out of town and couldn't make it.

I was especially worried about cooking the 50 chicken halves that were ordered. We had never done this without Tim's supervision.



We cooked two racks of 25 chicken halves. I tried something a little different this year. I got a recipe for the sauce off of the Internet. It consisted of Vinegar, Olive Oil, Salt, Pepper, and poultry seasoning. We applied it with a pressurized garden type sprayer (don't worry - brand new - never been used).



The secret to making great buttered corn!

I was a little concerned that we might not have good attendance. At 3 PM, we only had about 20 people at the club but by 3:30 cars started pouring in! We ended up with 60 folks attending! The chicken turned out great and the corn was as good as ever. We started out with 120 ears of corn and only had a couple of dozen left. We had 45 chicken halves reserved and I had ordered 5 extras "just in case." I'm glad that we did that because we had 5 attendees who wanted them. At about 6:30 PM we started clean up and within an hour we were done ... a great ending to a great day! Thanks to everyone who attended & brought those great covered dishes and a special thanks to our great volunteers!

Don Baker, K3NUZ - A Silent Key



YORK Don Cruden Baker, 84, died Wednesday, August 28, 2013, at his residence. He was the husband of Rebecca B. "Beppy" (Baker) Baker. Mr. and Mrs. Baker observed their 61st wedding anniversary on December 29, 2012. Don was born on July 25, 1929, in Parsons, W.Va., a son of the late Frank Elwood and Mabel (Ridgway) Baker. Mr. Baker retired as the Vice President of the former J.E. Baker Company after 35 years of service. He was a [U.S. Air Force](#) veteran of the [Korean War](#) having served at Ellington Air Force Base, Texas. Don was a 1949 graduate of William Penn Senior High School and attended Northeastern University.

Don joined the Keystone VHF Club in June of 1961 and was our President in 1963. He also was a member of the York Amateur Radio Club.



Don was active in ATV in the early 1980's and would occasionally check into the Tuesday night ATV net. The picture to the left is a frame of video I took of Don's ATV signal on the night of February 7th, 1984. Today we use computer generated graphics for an ID ... back in the early 80's there were no computers around with this capability so we used drawings.

ATV - Things are happening fast!

Tim Beck, KB3OFE being received in Mechanicsburg over the ATV Repeater



Do you have a computer, an Internet connection, and a web cam? If you do, in the next month or two, you will be able to access the clubs ATV repeater and any club member will be able to see live video from you over the air! Think about it ... during our nets, you will be able to watch the Net Control station on a TV in your shack. Any club member will be able *Continued on Page 7*

NEXT MEETING

**Thursday, September 5th, at the Clubsite
The last meeting at the club until next year!**



1. I read a report from Dave All, N3XUD, about the amateur radio demo done at the Red Lion Street Fair. Dave advised that they had a few interested in "what now", including one person who had a WOXUN radio interested in getting his license. So that encourages us to continue doing "demos" where ever we can, including the activities that we do at public service events.

2. We will be providing demonstrations of our EMCOMM capabilities at an Open House at the York New Salem Fire Company 8 on Sept 14th. Jack and Dick will be on hand at the fire company. We hope to demonstrate digital as well as voice communications, so we could use other operators at their home QTH to send and receive communications. Please let me know if you would be available the morning of Sept 14 starting about 9 AM. We also invited the Penn Mar Club to join us. We hope to get someone from that club along.

3. Shelly Creasy, Deputy Director of the York County 911 Center, is organizing a fund raiser 5K race, 1 mile walk, and a kid's fun run on Sept 21st at John Rudy Park, beginning around 8:30 AM. We decided to provide some minimal assistance as communicators. I will be contacting her for details of how those race/walks will operate. Please let me know if you would be available that morning to assist.

4. Stan discussed the information he had that Penn Dot has a tower on property at the intersection of Route 24 and Windsor Road, in Windsor Township. Because they are switching communications, they no longer need that tower and would like to turn it over to a non-profit (501c.3) organization. The difficulty with taking it will be to assume managing the property, including paying for any utilities. Dick, WA3USG, will discuss that with the Keystone VHF Club Technical Committee and the Executive Board. We felt the property is too close to Red Lion to be of use to that club.

5. Jack, KC3JD, recently initiated discussion of a YARS banner that can be used for displays at open houses and public service events, as well as at EMCOMM activities. He and Dick, WA3USG, submitted some possible designs. At the YARS meeting we decided to go with the proposed banner that I'm attaching, but lightening the yellow color on the background. We will also add the York Amateur Club to the banner. Their members no longer support our EMCOMM efforts, but we do use their equipment at the Red Cross Headquarters in York. I will contact the SCTF to see if we can use their logo, and either get an original or adjust the copy that we have to get a better resolution for the banner

Dick and Sandy agreed that the Keystone VHF Club can fund the largest portion of the cost, but we will ask the other clubs to give us a donation toward that cost.

Sandy Goodman, N3ECF
YARS EC/RO



Local area nets:

Capitol Area Traffic Net starts **Monday at 8 PM** on the South Mountain Radio Amateurs (SMRA) repeater on 146.46 (67.0 tone), 1 MHz offset. All properly licensed radio amateurs are invited to check in.

The Combined Club ARES/RACES Net meets **Monday at 8:30 PM** on the Keystone 146.97 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 Digital Familiarization Net on **Wednesday at 8 PM** on the SMRA 145.43 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 9 PM** on the York 146.97 repeater. **(Net currently not held)**

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 - Friday. 8:30 PM: 28.495 MHz.

10 Meter Ragchew Net - Every evening starting 7:30PM: 28.600 Mhz



The Keystone VHF Club

The Technical Committee needs your help

By Rick Goodman, WA3USG

The Keystone VHF Club is an incredible organization and we have a remarkably diverse skill set among our members. I don't know of any club as responsive as this one when it comes to getting members to volunteer to participate in public service & EmComm events. We also have a wonderful relationship with York County and even the Federal government by having many club members belonging to the Southern Pennsylvania Task Force. Both of these entities have demonstrated their appreciation & generosity in the form of equipment, training, and taking us seriously as a versatile EmComm resource. I think that we excel in everything stated above and we should continue to support other organizations both public & private the way we do now.

I was up at the club about two weeks ago, chatting with Tim Beck, KB3OFE, our technical committee head. While extolling the virtues of our involvement in public service and local government support Tim made a comment that made me really think. Yes, we are heavily involved with EmComm & Public service, but what makes it possible for this all to happen? It is our equipment. Our repeaters, computer network, interfaces (EchoLink & AllStar), antennas, feedlines, power distribution systems, operating positions, and many other things not mentioned here.

One of the most important aspects of EmComm is our ability to provide communications without the need of the public infrastructure. Well guess what gang ... we do this by requiring an infrastructure of our own! All of the equipment mentioned above needs to be on line and maintained or we are useless as communicators ... for any purpose. At this time we have one (1) person doing about 95% of the work maintaining all of this, and that is Tim Beck, KB3OFE.

That one comment is all that Tim made that afternoon. I think that Tim genuinely enjoys working on the equipment at the club. I believe that he finds it a challenge not only to keep our equipment running efficiently but to expand its capability. When we lose commercial power, the 2 meter repeater now tells us that we are on the generator. It even lets us know that the generator has actually started. When there is a NOAA weather alert, our 2 meter repeater warns us without affecting our ability to communicate through it ... and he gave us this capability for about \$30! We have a functional APRS gateway at the club because of Tim's efforts. Tim also put together and configured our satellite operating position out in the main club room. This allows us to communicate through the AmSats and download images from the NOAA APT weather satellites. I could literally go on and fill this page with a list of technical achievements that Tim has made for us but it comes down to the following:

We have approximately 30 club members very active supporting public service and EmComm and we have about 3 people who are technically supporting the equipment that makes this possible. Of the three people providing technical support, Tim is doing about 90% of the work. If something happens to Tim, we are in trouble folks!

Now that the doom & gloom is all over let me say another thing about technical support at the club ... it can be a lot of fun. Take a look at the ATV article elsewhere in this newsletter. Can you imagine how enjoyable it would be if you could click on your TV set and see the person that you're talking to on the 2 meter repeater. What Tim is doing with that is nothing short of amazing!

Do you have technical skills that we could use up at the club? Please join us and let us know what they are. Would you like to join the technical committee? We don't really have enough folks in it now to have meetings but if we could get another half dozen or so we could meet and

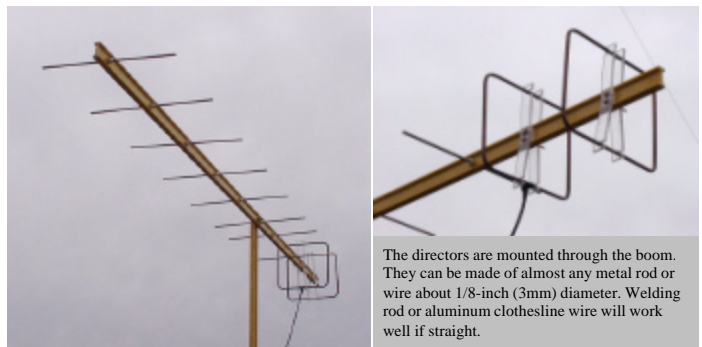
perhaps take some of the load off of Tim. Even if you're not technically oriented enough to take over a task yet, it sometimes helps to have someone to talk to ... to bounce ideas off of. There are times when I am up with Tim and he will ask me something. I think that he probably had it all figured out but having someone there to add some confidence it can be a big morale booster.

Please, if you are interested, come up to the club and learn. While you may not be working on the repeater right away, there are simpler technical tasks that either Tim or I could help you with. The Keystone VHF Club used to be a highly technically orientated organization ... looking at what the club has, you can see that. We need to build up the technical side of our club again ... it can be a totally new aspect of this hobby for you weather you already have the skills or want to learn them.

Club Projects - A 70 cm ATV Yagi

The antenna below will get you on ATV receive in a big way. It is inexpensive & easy to build. You must use horizontal polarization.

Element Lengths	144.5 MHz	147 MHz	222 MHz	432 MHz	446 MHz
Reflector (all No 12 TW wire, closed)	2200 mm	2159 mm	1432 mm	711 mm	689 mm
Driven Element (No 12 TW, fed at bottom)	2083 mm	2032 mm	1359 mm	676 mm	657 mm
Directors	913 mm to 889 mm in 5 mm steps	897 mm to 873 mm in 5 mm steps	594 mm to 568 mm in 3 mm steps	298 mm to 291 mm in 1.5 mm steps	289 mm to 280 mm in 1.5 mm steps
Spacing					
R - DE	533 mm	521 mm	346 mm	178 mm	173 mm
DE - D1	400 mm	391 mm	260 mm	133 mm	130 mm
D1 - D2	838 mm	826 mm	546 mm	279 mm	272 mm
D2 - D3	445 mm	435 mm	289 mm	149 mm	144 mm
D3 - D4	663 mm	651 mm	432 mm	222 mm	215 mm
D4 - D5	663 mm	651 mm	432 mm	222 mm	215 mm
D5 - D6	663 mm	651 mm	432 mm	222 mm	215 mm





Larry, N3LED



Thierry, KB3TPX



Jeff, KB3RCT

Trustees Report - The Summer is almost over. We've had lots of rain and still could use some help in keeping the lawn cut but it's something that we all really enjoy doing! Matter of fact, it's quite an honor! We also just sprayed the parking lot with weed killer. We just stocked up the reefer with over \$100 worth of candy & other goodies. Stop on by and bring your weed wacker... HI HI!

Scheduled Club P.S. Events for 2013

- * Sept 7 - KTA Superhike (Ken Wiggins, N2DYK)
- * Sept 15 - Three Creek Century Bike Tour (Dick, WA3USG)
- * Oct 20 - Hershey Half Marathon (Marty, KB3BAA)
- * Oct 27 - Michaux Team Challenge (Dan, KB3MUN)
- * Dec 24-25 Glen Rock Carolers (Stan, AB3EM)

FOR SALE/WANTED

Nothing this month!

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PA QSO Party News

Gang ... Don't forget the contest dedicated to our fair state of Pennsylvania ... The PA QSO Party. This year the contest takes place on October 12 & 13. How about a club challenge? Whoever gets the highest score gets a free frozen Snickers out of the club refridge ... and also recognition. Perhaps a framed certificate to be hung up at the Keystone club listing the name of the highest scorer and anyone who makes a clean sweep of all PA counties. We will start with 2012 and Bob Gundlach, N3NBT and Jack Dellinger, KC3JD will be the first to be listed.

On the same note, I received an e-mail from Dave All, N3XUD. He told me that the Hilltop Transmitting Assoc, W3ZGD will be the Bonus Station for the 2013 PAQP.

They will be active on 80,40,20,15,10,6,2, they will have ssb, cw and digital. It would be great to get boost to the numbers of digital contacts with in the PAQP.

More Hilltoppers News

The Hilltop Transmitting Assoc manned a booth at the 2013 Red Lion Street Fair as a way to help celebrate the clubs 60th Anniversary. Dave N3XUD and Kip WB3AFL manned the booth, along with Scott Kopp from the Red Lion EMA. N3XUD had his motorcycle with M2 6m and 2m loops mounted on display. Just as expected no activity on 6m.

WB3AFL set up his Digital Go Kit. Well half of his digital go kit, he forgot the Signalink USB. So we were unable to transmit digital. But with the use of a large flat screen TV we were able to show case numerous Slow Scan images sent by Jack KC3JD, Jeff KB3RCT, and John KB3IGH.

A big thank you to these three for helping to make for an enjoyable day of digital communication at the Street Fair. We had ARRL hand outs and we talked to a fair amount of people that stood and stared, rather than just passed us by. So we took the opportunity to explain what we were doing. This resulted in a handful of "that's cool", and even a few serious "I'm interested what now". One person even had a WOXUN hand held in his hand and wanted to know how to get his license. But the one that sticks out for me was a family who said their father was a ham years ago and even said the call signs, but he was ill and in the hospital. They took several hand outs to give him to read while in the hospital.

Thank You to Jack KC3JD and Kathy KA3THC for the poster they created to be used at the booth that featured photos from then and now of the Hilltop club house and photos of the new EMA ham radio station in Red Lion. Jack also updated us on a missing child during the event. Good news was that the 6 yr old returned to the vehicle and was located.

Linux Help Offer - Learn about a new O.S.

If and when my son sends instructions for copying and re-installing in another computer, the complete file system I have been able to set up utilizing Ubuntu (Linux Operating system), I would be very happy to share the process with other club members - perhaps at one of the Thursday tech sessions.

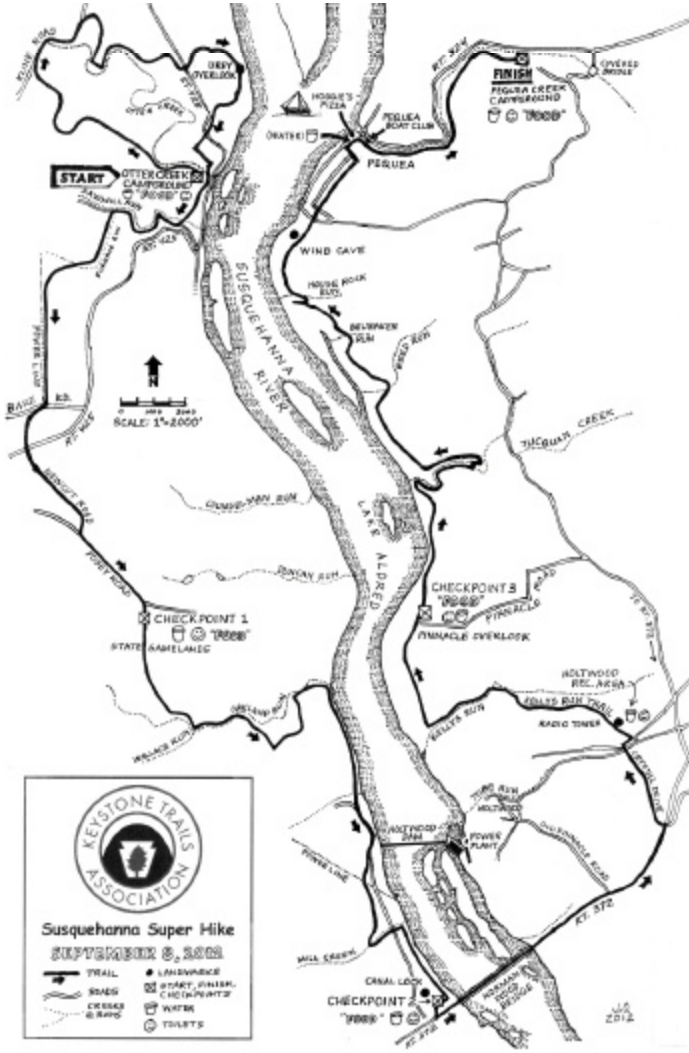
It has been a real learning experience for me as I have methodically addressed each of the digital programs available through Windows, and transferred them to the Linux system. I am ecstatic with the results. I am aware of the fact that most computers already come with Windows installed, but for those who may have any reason to conserve resources, the convenience of these programs sans monetary investment, could be very inviting.

Should anyone be interested, they can e-mail me or the club and we can play it from there after I get proper instructions from my boy. I must also recognize the input of N3JRT - Rick - for his assistance in opening up the Signalink access to MMSSTV for me. Without that, I could not make this offer.

P.S. There may also be somebody in the club who already knows how to transfer files to a second machine and their input would be invaluable. -- Lee WB3HNA lvlindsay@comcast.net

The KTA Superhike - Saturday Sept 7

On this coming Saturday, the Keystone Trails Association (KTA) Superhike will be taking place in the Lancaster area. The 29.6 mile hike starts at the Otter Creek Campground and basically runs along the Mason-Dixon Trail along the west side of the river then on the orange-blazed Conestoga Trail across the Norman Wood Bridge (route 372) and north on the Lancaster/east side of the river.



Usually this hike brings in 300 - 400 participants. Last year there were about 450 hikers pre-registered but over 100 didn't show up. The weather for that year was extremely humid, unfortunately very similar to the way the weather is now. As well as a turnout that was below average, we also had a lot of drop outs throughout the day. This will be the 4th year that we've helped at this hike and I have to admit, last year was extremely rough.

Toward the end of the day we had a thunderstorm with heavy downpours. I swept from the start to lock 12 where Dan Melato, KB3JSV relieved me as the sweep hiker. I drove his Jeep back to the finish line. I had gotten about 100 yards down the road when the rain hit. I looked out the window to the left and saw poor old Dan just entering the woods with a group of hikers ... his big old backpack mounted "Slim Jim" antenna whipping back & forth in the wind. I thought to myself "Boy, I'm sure glad I'm not out there!" Sorry Dan ... I love that story. Maybe it will rain in the morning this time!

When I arrived back to the finish area, it was still raining cats & dogs! I parked the Jeep and ran to the pavilion which was the only shelter in the area. The inside of the Pavilion was packed solid was about 200 hikers trying to stay dry. The noise from all the people & the rain was deafening. They were trying to cook food for the hikers & I got a

Soggy Hamburger. Let me tell you ... it was good!! You will be surprised at what tastes absolutely GREAT after a day of hiking!

Ron Small, WB2OQB was sitting at the edge of all this at a picnic table trying to run the net. He was swamped by hikers jammed in everywhere and could barely hear his radio.

However, at the end of the day we came through with shining colors. We were responsible for getting a lot of hikers who were stranded at check points safely back. Ralph Brandt, K3HQI even set off into the woods to find a couple of hikers who were thought lost. It was a hard day but a good one and it's why we take part in events such as these.

Below is our list of volunteers for this year. We have everything covered but could use a few more people. We can almost promise you that it will be exciting!

POSITION	TIME	NAME	CALL
START - Otter Creek	6:00 AM	Dick Goodman	WA3USG
CHECKPOINT 1	7:30 AM	Sandy Goodman	N3ECF
Posey Rd (& Blain Rd)		Chris Palm	WY6Z
CHECKPOINT 2	8:30 AM	Vern Kiehl	N3VK
Lock 12, River Rd		Ken Wiggins	N2DYK
		Dan Boone	KB3ZMB
HYDRATION STOP	9:00 AM	Patti Olsen	W3KO
Holdtwood Rec Area		Dave Olsen	W3EAI
CHECKPOINT 3	9:30 AM	Ralph Brandt	K3HQI
Pinnacle Overlook		Franz Niedermeyer	N3HFS
		Tom Graybill	KB3ETG
FINISH	6:00 AM	Ron Small	WB2OQB
Pequea Creek		Mark Vreeland	KB3NCJ
Campground		Jack Reed	N3BBC
SWEEP HIKERS		Dan Melato	KB3JSV
		Micah Neff	KB3TGY

If you would like to take part, we could still use you. If interested E-Mail Sandy Goodman at slgoodman1@verizon.net



The Tree Creek Century - Sunday Sept 15

The Three Creek Century bike tour is sponsored by the Harrisburg Bicycle Club. It consists of three loops. The first is 50 miles, followed by two 25 mile loops. Riders who complete all three will have cycled a full 100 miles. There will be anywhere from 300 to 700 riders in this event probably making it the biggest ride we have ever done. Here are some stats:

- ** All three loops start and end at LeTort Park in Carlisle
- ** Not all riders will do all three loops.
- ** For those riders who are doing the full 100 miles, they will ride the loops in the following order (see attachment):
 - The Big Spring Meander (RED) - 50 miles
 - The Opossum Lake Loop (GREEN) - 25 miles
 - The Boiling Springs Ramble (BLUE) - 25 miles
- ** Riders must start off no later than:
 - 8:00 AM for full 100 mile riders
 - 9:30 AM for riders doing 50/75 miles
 - 11:00 AM for riders doing only one of the 25 mile loops
- Riders must be off all routes by 5:00 PM
- ** There will be five (5) stationary sites that need to be manned by communicators:
 - LeTort Park in Carlisle (Start/End for all loops) - NCS location - On station by 6:00 AM
 - Highly suggest that the NCS get there early due to possible parking problems
 - Huntsdale Fish Hatchery Rest Stop (mile 15.5 on Big Spring Meander) - On station by 8:00 AM
 - Newville Fire Station Rest Stop (mile 31.5 on Big Spring Meander) - On station by 8:30 AM
 - Opossum Lake Rest Stop (mile 10.5 on the Opossum Lake Loop) - On station by 9:00 AM
 - Leidigh Road Rest Stop (mile 14 on the Boiling Springs Ramble loop) - On station by 9:00 AM
- ** We will provide four (4) SAGS with 2 meter communications

- ** We will be using the 146.79 MHz repeater (tone: 114.8 Hz) located on Reesers Summit
 - Backup will be the York 146.97 MHz repeater (Tone: 123 Hz)
 - Backup simplex frequency will be 144.34 MHz
- ** A mobile class rig (20 - 60 watts) with an external antenna (eg: J-Pole) to be used at all locations
 - If the weather is good, please set up on a small table next to the rest stop operators
 - If weather is bad, operate from your car or set up under a canopy if you have one
 - H.T.'s will be very marginal for this event

This is the first time that we have supported this event. It only costs \$20 to ride so there are normally a lot of participants (last year about 500). The riders DO NOT have BIB numbers and there is no way to uniquely identify them. They will have colored wrist bands but in many instances, they are hard to see. We will not be checking off riders as they come into the rest stops but will try and keep track of those who are having problems. We will also attempt to sweep the last riders with our SAGs.

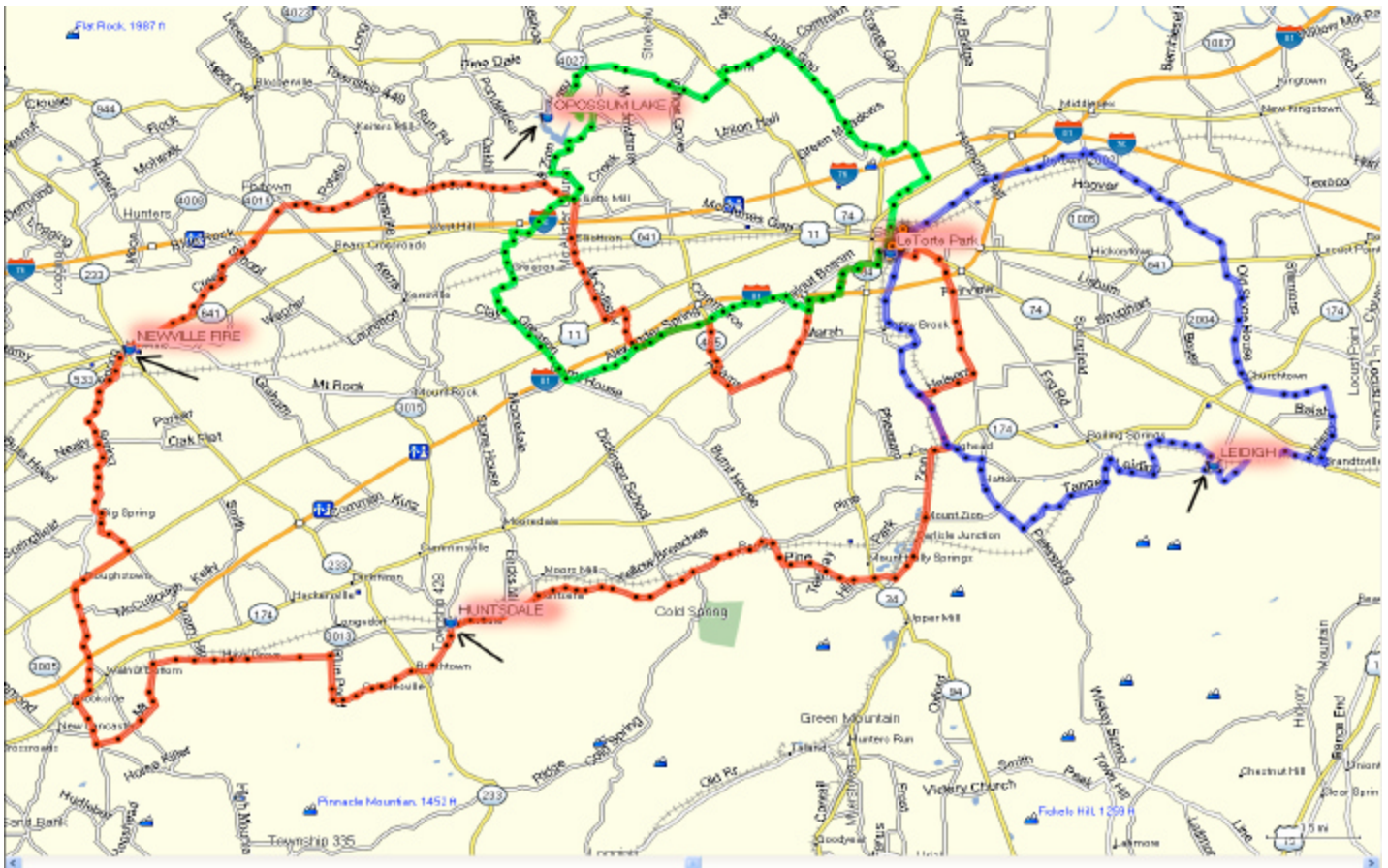
The Event Web Site Is: <http://www.threecreekcentury.com/>

At this time we have the following volunteers:

Steve Steffan, WB3EFA - LeTort Park NCS
 Joe Imgrund, KB3TCM - Huntsdale Fish Hatchery RS
 Dan Melato, KB3JSV & his lovely XYL April - Newville Fire Hall RS
 Tim Snook, KB3WZX - Opossum Lake RS
 Tom Williams, KB3IQH & Barb Baller, W3AVQ - Leidigh Road RS
 Rick Goodman, WA3USG - SAG
 Sandy Goodman, N3ECF - SAG
 Dan Shortencarrier, N3EEI - SAG
 Rich Reese, KR3EE - SAG

We will have final details, travel directions, and assignments out next week. If you volunteered and I missed you, or if you would like to volunteer, please get in touch with me by replying to this e-mail or call 697-2353.

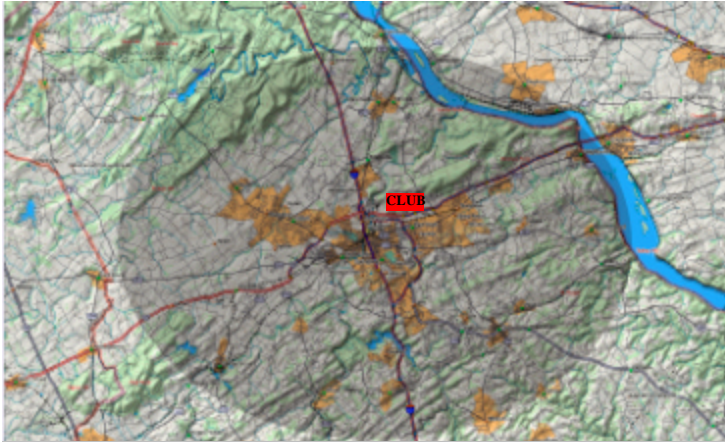
BTW, on Sunday, September 8th, anyone who volunteers for this event is welcomed to ride the course the week before the actual event. There will be a group of us meeting at LeTort park at about 7:30 AM on that day. You don't have to do the whole thing!



Amateur Television (ATV) ... Continued from Page 1

show their shack or latest project to anyone who is able to receive the ATV repeater on 439.25 MHz and that is a lot of people!

We have talked about ATV quite often in the last couple of newsletters but we have decided to stress a different way for folks to actually get their video into the repeater. Please keep in mind that it is very easy to receive the ATV repeater. All you need is any kind of TV set that will receive cable channel 60. You set the TV to this channel and connect a 70 cm antenna to the antenna connection on the back of the TV instead of the cable. You aim the antenna at the clubsite and you should receive television from our ATV repeater.



With a 5 to 10 element 70 cm Yagi, you should be able to easily receive the repeater if you are within the shaded circle (about a 16 mile radius from the club). I receive it quite well at a distance of over 25 miles and have quite a few obstructions between my station and the clubsite.

In the past, we have encouraged our members to get their receivers working first and then to either purchase or build a transmitter. We are changing our recommendations in this matter. If you have a computer with a web cam and an internet connection, we are hoping to give you an IP address that you will type into your web browser and video from your web cam will be directly streamed to our ATV repeater. This will key the 439.25 MHz transmitter in the repeater and your video will be sent out on 439.25 MHz. Everyone who can receive the repeater on their TV sets (set to cable channel 60) will receive it.

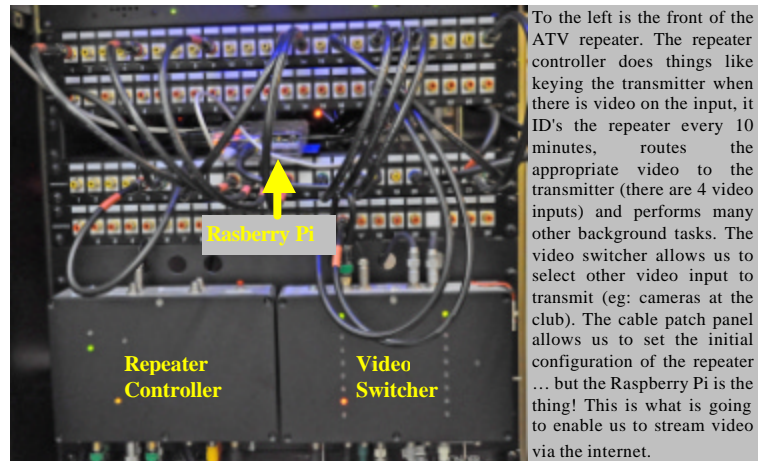
Only one person can connect to the repeater at a time ... this is the way the ATV repeater has always functioned. Before you connect to the repeater over the internet, you will check your TV set to make sure someone is not already using it. We also thought about allowing folks to receive the ATV repeater over the internet but there is a major problem there.

Our internet connection will support one person streaming video into it without severe degradation. That will be the one person who at the time is sending video through the repeater. If we would attempt to allow users to receive the ATV repeater through the internet, it would require a separate video stream for each user ... after about 3 people connected, our internet connection would be saturated. Having folks receive on 439.25 MHz enables any number of people receiving at once with no degradation what so ever.

So ... if you want to get on ATV, the first thing you have to do is to see if you can receive the repeater on 439.25 MHz. You can simply try yourself ... but you do need a 70 cm Yagi. Probably the best way would be to get in touch with me (WA3USG) or Tim Beck, KB3OFE. One of us will bring out a TV and Yagi to your QTH and we will verify that you can receive a usable signal before you go to the trouble of getting equipment & putting up an antenna of your own. If we find that you are able to receive a usable signal, we will also help you build your own 70 cm Yagi. It will cost you about \$25 for materials and we will have a antenna building workshop under the pavilion at the club.

The ATV repeater will also have dedicated receivers on 426.25 MHz, 1243 Mhz, and 910 MHz for folks who want to get in with their own transmitters but going in via the internet should get a lot of people on in a short period of time.

Tim Beck, KB3OFE is making enormous strides in making this internet video streaming possible.

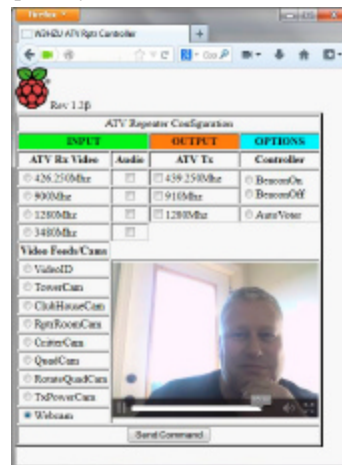


To the left is the front of the ATV repeater. The repeater controller does things like keying the transmitter when there is video on the input, it ID's the repeater every 10 minutes, routes the appropriate video to the transmitter (there are 4 video inputs) and performs many other background tasks. The video switcher allows us to select other video input to transmit (eg: cameras at the club). The cable patch panel allows us to set the initial configuration of the repeater ... but the Raspberry Pi is the thing! This is what is going to enable us to stream video via the internet.



Over the course of the last year, Tim has very successfully written software (in three programming languages running concurrently) that allows the "Pi" to control all aspects of the repeater. Using this software, the repeater may be completely configured over the internet via its internal web server.

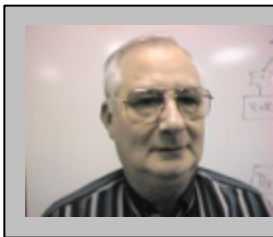
Tim's next challenge is to write code to allow video streaming directly from the users computer to the "Pi." This is pioneering work and I believe that we will be the first organization in the country that has this capability.



This is very similar what you & everyone else will see on their TV sets tuned to cable channel 60.

This is what you will see on your computer (outgoing video) - Tim may not be there.

Are you interested?



Keystone VHF Club History "The York Repeater" By Ray Shaub, W3AXC

Have you ever wondered about the history of the York Repeater?

Chapter one

First a little history of amateur FM. In the late 50's or very early 60's the FCC decided that the commercial services that were using FM for their business two way radio should be using narrow band fm instead of the wide band so that more users could be crammed in the allotted spectrum. Many of the services just junked their wide band stuff and bought new narrow band equipment. This dumped a lot of FM gear on the used equipment market for hams. The Frequency range of some of this used gear was near the amateur two meter band. Hams had been using FM on the 2 ½ and 5 meter bands since the late 1930's

There were modulated oscillator transmitters and super regenerative receivers in use but very few crystal controlled transmitters and super heterodyne receivers. The surplus equipment was just what was needed to get high power transmitters and superhet receivers on the air. As I remember the new FM craze began on the west coast the first two meter repeaters were put on out there. The first repeater pair was 146.34 input and 146.76 output. The simplex frequency was 146.94. All new rigs came with crystals for those frequencies installed. There were no "all channel rigs"

The transmitters and receivers that came out of commercial service had only one pair of crystals installed. In commercial service there was no need for tunable receivers or transmitters. The first band plan put fm in the 146.00 MHz. to 147.00 MHz. portion of the band. It wasn't long before that portion of the band became filled with repeater pairs.

It was obvious that more frequency pairs would have to be allowed. The next step was to allow FM in the 147 to 148 MHz. portion of the band. Because it was easier to make transmitters operate over a wider range (146.30 to 147.9) than to make receivers cover that range without losing sensitivity at the outer edges of that range it was decided to make the repeater inputs at the lower portion of the new band 147.00 to 147.50 and the outputs at 147.50 to 148.00. It is still like this today we say the repeaters above 147.00 have a plus input.

There were other repeaters on in the south central PA area before we got the York Repeater up and running in 1973. Harrisburg was on 146.16 / 146.76, Mount Holly Springs was on 146.28/ 146.88, Red Lion was on 146.37 / 146.97. There was another repeater in the area on 146.28/146.88,

The York Repeater was put on the air as a joint effort of the York Amateur Radio Club and The Keystone VHF Club. The York Club had a complete Motorola cabinet mounted VHF repeater that had come off of the PA turnpike and was donated to them by Nelson Stover W3BVV. They didn't have a location to install the repeater and we did so we leased the repeater from them for one dollar.

Stan Hoffman K3FOB from the York Club and myself W3AXC worked many evenings together at the Keystone VHF Club's location to put it on the air. We worked to get the repeater on the ham band and documented all changes in a notebook. We had to build and install a time out timer along with an identifier.

Neither one of us had any experience with repeaters. We bought crystals for 146.34 / 146.94 we figured that most hams already had the 146.94 receive crystal in their rigs because of the 146.94/ 146.94 simplex channel. And all rigs came from the factory with the 146.34 / 146.76 . I'll explain later how we got on 146.37/ .97

In the 1970's the FCC required a special repeater license to put a repeater on the air. The FCC had no experience with writing the requirements for a repeater for amateur service so they adapted the requirements including the antenna location information for a commercial repeater.

This was before the widespread use of GPS receivers. We had to calculate the effective radiated power and the elevation above average terrain of the center of the azimuth antenna pattern of the transmitting antenna. This required us to purchase all of the 7 ½ minute topographical maps of the area in a 10 mile radius of the club and determine the average terrain elevation.

On our original application for license we calculated the club site elevation as 870 feet above sea level and the average terrain in a 10 mile radius around the club was 491 feet. This put us at 379 feet above average terrain. We figured the windmill tower was 80 feet tall and the antenna center of the azimuth pattern was 9 feet above that. The only ground elevation higher than us is the hill at Ironville, Lancaster County. According to the topical map they are 39 Feet higher. We received the repeater license with the callsign WR3ACC. We bought a solid state identifier and had the CW message "WR3ACC York " programmed into the memory chip.

You could always tell the users that could copy code because they would always say "hey that's a great identifier putting the location on the identifier is a good idea"

Chapter Two

When we started out we put the repeater on 146.34 input and 146.94 output. For the reasons mentioned before.

The only other repeater in the area on that pair was in Baltimore and we figured we were far enough away so as to not cause interference. At this time the repeater antenna was a "Ringo Ranger" mounted on the windmill tower far below what we have today in both elevation and antenna gain.

We still had not put the repeater into full time service because we had no way to control it remotely. We only had it on in the evenings with a local control operator. This means someone had to be at he club repeater site to turn the repeater on an off and to listen for proper operation. We were working on a remote control system. The FCC requirements were that the repeater had to be controlled on a control frequency other than on the band the repeater was on. We chose to control on 439 MHz. and I built a receiver for that frequency and installed it in the repeater cabinet. Tom Emig WB3CIA was working on the interface to control various functions of the repeater including shut down as required by the FCC. Several club members were designated as control operators We all bought transceivers for 439 MHz. and installed vertical beam antennas for that frequency.

Over the next two years as we made several refinements to the repeater as we became familiar with repeater operation. Our most troubling problem was the transmitter getting into the receiver causing it to desense. We had no duplexer and no money to by one. I was working at Borg Warner at the time and so I put a drawing into the model shop for a cavity that I calculated would serve as a single cavity duplexer. I had it made from a solid copper tube about 6 inches in diameter and had end caps made from about 1 inch thick copper plate.

I had a piston made from a smaller copper tube and put gold finger stock around it to make a tight electrical bond. This would be the tuning capacitor. This arrangement helped with the desense but was far from perfect. With the repeater configured with this arrangement with a "Ringo Ranger " antenna mounted on the old windmill tower I was able to communicate with Leroy Frey K3POR (SK) as I drove to the Winchester Hamfest which at that time was held at the Winchester Armory in downtown Winchester VA.

With the repeater on 34/94 as I got close to Winchester the repeater was covered up by the hamfest talk-in station on 94/94 which was the national simplex frequency at that time. All hamfests used that frequency for talk-in. I don't know how much farther I could have communicated with Leroy.

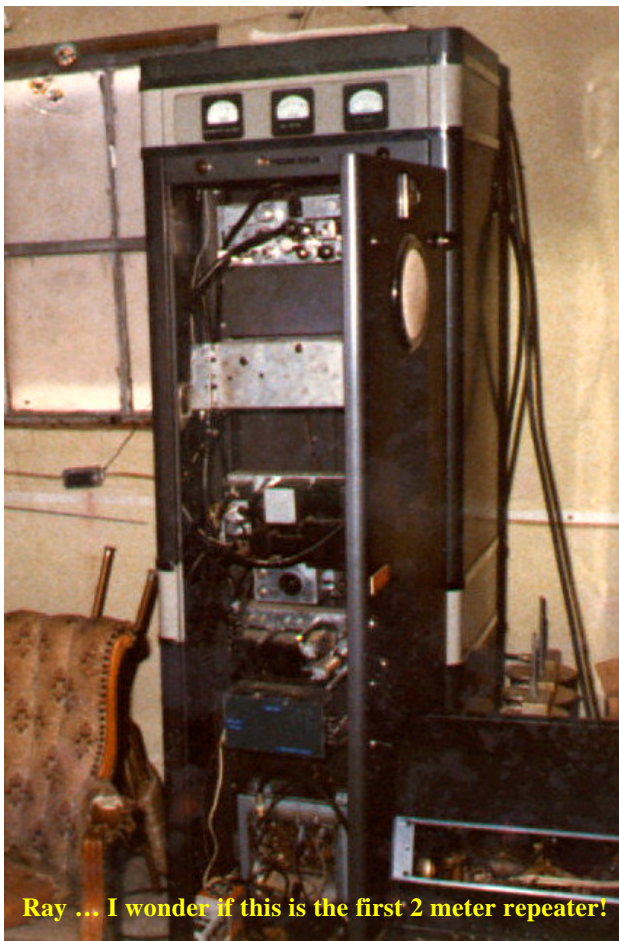
On my way to work one morning as I was monitoring 146.94 I suddenly heard some traffic on the Baltimore repeater on 146.94. Before this their repeater was never heard here. The voice said " wonder what our friends in York now think of putting a repeater on 94" Apparently they had put a beam antenna on their repeater and aimed it North to let us know that we were interfering with "their" frequency. Normally they

Continued on Page 9

could hear us but we didn't hear them. We had never considered having our repeater coordinated. Coordination was something new and was not mandatory. However to keep peace in the neighbor hood we decided to move our repeater.

The Hilltoppers had a repeater on 146.37 / .97 but for some reason had decided to shut it down. They were way ahead of the other repeater groups in the area as they had even experimented with an autopatch on their repeater. The reason they took their repeater off the air is lost to antiquity. I have tried unsuccessfully to find out why the technical crew at the Hilltopper's Club decided to shut down. They knew we were having trouble with our repeater on .34 / .94 so they graciously offered their repeater pair of .37 / .97. I'm not sure of the date, but we have been on that repeater pair ever since.

Chapter 3 to follow if anyone is interested



Ray ... I wonder if this is the first 2 meter repeater!

Back in 1976 when I first started working at the Navy Depot in Mechanicsburg, I used to commute from Baltimore. The only 2 meter rig that I had was a Heathkit VF-2031 HT kit. I built this back in late 1975 and it was a simply horrible radio. During evenings, I used to work the Baltimore 34/94 repeater. On work days, I would drive to Queen street and then catch a carpool to Mechanicsburg. Between York and Mechanicsburg ... probably right near where Route 30 connects to I-83, I would be able to work the YORK 34/94 machine. I forget who I talked to but it would only be for about 10 minutes and I would go out of range. Then one day, I heard the YORK 94 machine no more ... I suppose that this is when you switched over to 97 but I had no way to tell. I didn't join the club until 1983 so I lost contact. Like I said, that HT was terrible. One night down in Baltimore I got a phone call from a James Zackarias from the Bureau of Alcohol, Tobacco, and Firearms that I was getting into their repeater on 165.2875 MHz. I called heathkit & they sent me a replacement output transistor ... that seemed to do the trick! But from that point on, I was always a little gun shy using it.

After I found the Constitution and By-Law information I spent some time looking around the website. Wow! The compilation of membership information is amazing. I am guessing you had a lot to do with collecting that history and, of course, we have the founders and the officers who have recorded and preserved the history of the club. It is going to take some time to digest the history section, good thing Ray and Bob have good memories. I did not know that the club met at WNOW and then WSBA. My "Uncle" Jack Schuster, W3ZYM, was an engineer there but never joined the club. I believe he was a member of the Hilltoppers though - I remember going to an auction at their ex school house clue building. 73, Buzz,

The Kings Gap Time Trails

Howdy once more, folks!

I know I caught most of you as we were packing up yesterday to tell you how grateful the event organizers are for your assistance and efforts yesterday.

However, I want to personally say how grateful I am to all of you for not only this effort, but the ease and willingness you regularly show in helping out your community with your skills, talents, and equipment. It makes me proud and very happy!

From all indications, this event will continue again next year, with the goal of participant growth and wider recognition. It does sometimes take a few years before such events suddenly really catch on (several of you have witnessed the evolution of the sleepy Hike for Habitat into the now-very-popular March for the Mansion at Pine Grove Furnace State Park).

I'll be seeing/hearing many of you in the near future, at KTA Superhike for instance, and look forward to many more events in the future.

Franz Niedermeyer, N3HFS

The Time Trails is a very competitive event sponsored by the Harrisburg Bicycle Club. Riders start off at the bottom of a 4 mile road that leads to the top of a mountain and crank up to the top as fast as humanly possible. There are prizes and major Kudo's for the fastest time. We manned the starting gate, about 3 locations on the way up, and the end up by the mansion at the Kings Gap Environment center. We also provide a communicator with the medical person there.

This year we had an unfortunate incident. The second to the last rider passed the 2 mile mark on the way up. This location was manned by myself, WA3USG. Like many of the riders who passed, she looked pretty tired. About 5 minutes after she rode out of sight, I saw the last biker being followed by the sweep vehicle coming up the hill below me. After the biker passed, I got on my bicycle and also started up. I got no more than 100 yards and as soon as I turned the corner, I saw the girl lying on the side of the road. It appeared that she had managed to stop her bicycle and then passed out. She must have laid there for about 5 minutes before the last biker & I got to her. She was initially unresponsive but within 5 or 10 seconds seemed to come around. Fortunately the sweep vehicle was right behind us and we loaded both her & her bicycle into that for the ride to the top. It took me about another 10 minutes to pedal to the top. By the time I got there she was outside standing with her bicycle and feeling very embarrassed.

If this had been a normal non-competitive bicycle event, I would have been more concerned but by the time most riders reached me, they looked fairly winded!

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 Deininger Road, York, near the Rocky Ridge Park

Testing dates:

Sept 14 at York EMA Office
November 9 at York EMA Office.

HAM RADIO CLASS

CLASSROOM INSTRUCTION DEMOS FCC EXAMS NO EXPERIENCE REQUIRED

Hosted By: KOCHENDERFER CHURCH

SEPT 17, 18, 19 6 - 10 PM

Cost \$15 Exam fees

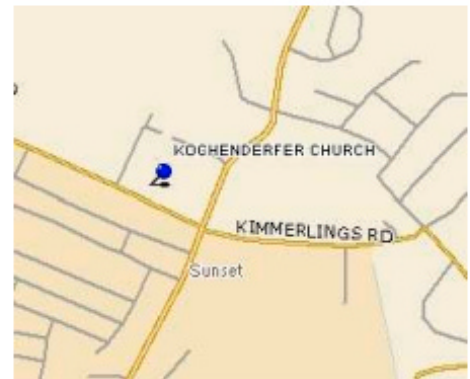
Free Parking

FCC Examinations onsite

WHAT TO BRING:

- 1 AN OPEN MIND
- 2 AN EXPECTATION TO LEARN
- 3 PEN AND PAPER
- 4 A SIMPLE CALCULATOR

ADD SUBTRACT MULTIPLY DIVIDE



This class is Tue, Wed, Thur evening 6 to 10 PM Sept 17, 18, 19 not Sat and Sun as the usual classes.

I realize it is inconvenient for some being in Lebanon but there are some who cannot do the weekend and this was designed to help them. The classes are moved from one place to another. Although no other classes are planned at this time it is likely the next one will be either in York, Carlisle or Harrisburg with York being the most likely. It depends on available space, etc.

As an FYI the last classes in Lebanon were in the Red Cross building which is no longer there. This one will be in a church and for obvious reasons it cannot be on the weekend. The ones in Carlisle have been held in the CRMC, The Masonic Lodge hall and the South Middleton Twp buildings. We did one in the Harrisburg Red Cross building.

The York 911 center has been a long term gracious host as has the Dunmore Mt Airy Fire company near Ephrata and South Middleton Twp. The classes in these three buildings have been very successful. I will take this opportunity to thank the VE teams that have supported all of these classes. They are a key to making this happen.

WEB LINKS

www.lvsra.org

www.w5yi.org

Getting to the : KOCHENDERFER United Methodist Church

FROM THE PA TURNPIKE OR PA 422 East

Go North on PA 72 to 72 the 343 split at maple street. Turn right following Pa 343. Turn left following north on 343. Continue north approx 1.5 miles to Kochendorfer road . Turn left the church will be on your right..

REGISTRATION DEADLINE: 1 WEEK BEFORE CLASS START REQUIRED

contacts : Ron Small WB2OQB wb2oob@arri.net 717-481-8589 OR Ralph Brandt K3HQI ralph.brandt@comcast.net 717-885-3063



Jamboree On The Air at Erdman Sportsman Club



www.BMARC.net

BSA Troop 151

October 18, 19, 20- 2013

Here is an event you won't want to miss this Fall.

The Jamboree-On-The-Air, or JOTA, is an international annual Scouting event that uses amateur radio to link Scouts around the world, around the nation, and in your own community. Over 700,00 Scouts participated in 150 countries last year. The Berry mountain Amateur Radio Club (BMARC.net) and the Millersburg BSA Troop 151 are sponsoring this event. There will be a full schedule of activities combining Scouting skills and Amateur Radio for some exciting results.

- | | |
|--|--|
| <ul style="list-style-type: none"> • Orienteering with radio • Making an antenna • Message passing contest with Morse code • Night activities • Emergency Vehicle visits • Simulated Search and rescue mission | <ul style="list-style-type: none"> • Lashing together a radio tower • Prizes for the most and distant contacts • Setting up Emergency antennas in trees • Gathering weather information around the world • Radio battleship • Talking around the world on radio and the Internet |
|--|--|

Requirements in the Astronomy, Camping, Cooking, Emergency Preparedness, First Aid, Orienteering, Pioneering are planned and you can complete the Radio MB.

Erdman Sportsman Club is a beautiful club outside of Gratz supporting Scouting for many years. Bring your tents and propane cooking sets for Camporee style camping. Setup Friday evening and leave Sunday after services. Register early, space is limited for this exciting event!. **Attn: The first Scout to pass their Technician Testing at or after JOTA will receive a hand-held Ham radio.**

Please email Don Kunst, ASM T151, W3LNE , to register or for questions. Please include your contact information, number attending and arrival time. Your \$12.00 per person registration includes a JOTA patch for Scouts.

Email: W3LNE@ARRL.net Deadline October 5, 2013

For additional information;

<http://www.scouting.org/jota.aspx> <http://www.arrl.org/jamboree-on-the-air-jota>

Please pass this on to others.



**Keystone VHF Club
General Meeting Minutes of
August 1st, 2013
By Sandy Goodman, N3ECF – Secretary**

The General Club Meeting held at Keystone VHF Club was called to order by Pres. Dick WA3USG at 19:05. There were 28 members present and 3 visitors.

INTRODUCTIONS: Cam, KT3A, introduced his neighbor Stephen Long, who had an uncle who was a HAM. Also, Larry Laughman, K3LWL, a member of SPARC, visited from Lancaster.

Dick talked about the plans for the Keystone Biking adventure on the Rail Trail. We will stop for dinner at the Glen Rock Mill Inn before returning. You can join us on the ride, or just meet us for dinner. Watch for emails with details.

TECHNICAL HAPPENINGS: Ed, K3LJL, showed plans he had for making a Doppole Quad antenna. Dick helped Dan, KB3JSV, adjust his dual polarized 10-element beam. They had to correct the placement of elements so that it now works.

SECRETARY REPORT: Sandy, N3ECF. Steve, WB3EFA, moved to accept the July minutes as published, 2nd by Ralph, K3HQI. Motion carried.

TREASURER REPORT: Linda, KB3EBV, reported for July: Income: \$225.00; Expenses: \$752.25 (\$394 for ATV repeater, \$294 for electric); NET Total -\$752.25. Balances: Club CD \$7,607.41; Bill Hurst CD \$2,516.36; Checking Acct \$2,162.27; Trustee Acct \$335.50; Total \$12,621.54.

Linda noted that half of the rent income was deposited into the Trustee Account to cover their costs. She also suggested that we need to Slow Down on spending. We have spent more than we've taken in this year. Linda is also concerned that our renter may pull out.

Jack, N3BBC, moved to accept the report; Don, N3OSO, seconded the motion. Motion carried.

COMMITTEE REPORTS:

TRUSTEE REPORT – Jeff, KB3RCT, reported that they sprayed on Monday and the weed should die. The refrigerator has been filled. We will also mow this weekend. No groundhog has been spotted lately. A lock was added to the upper part of the shed to prevent the wind from blowing the door open.

TECHNICAL COMMITTEE REPORT - Tim, KB3OFE - Not much since the last meeting. We need to fix the 10 meter antenna. The ATV repeater is coming together. The digital board is looking good. Tim reminds folks to sign-in on the log book when entering the clubhouse.

EMCOMM/PUBLIC SERVICE NEWS – Sandy, N3ECF - We successfully completed the MS Bike Tour. We had a fairly cool day for that. The KTA Hike on Sept 7 has posts filled. Dick is still looking for volunteers for the Three Creek Century Bike Ride on Sept 15. Jack, KC3JD, assisted at the Red Lion Fair where the Hilltoppers celebrated their 60th anniversary. Jack, Kip, and Lee did digital and slow scan demos. Jack advised that the Hilltoppers are providing support to the Red Lion EMA. Dick, WA3USG, talked about the attempt he and Dan, KB3JSV, did to sweep the Muckelratz Horse Trail Ride using mountain bikes. The first 2 miles had a 1000 foot climb. They couldn't keep up with the horses on the steep climb. Damned horses!

VE/ED REPORT - Ralph, K3HQI, advised that the next testing will be September 14. Shrewsbury will have a test on August 10. We've had some good testing sessions this year. At the HAMFEST in April an

operator passed both the Technician and General Class tests with a 35 score. But later she broke her ankle and couldn't get down to her radio to operate. There is no Technician Training class scheduled as of now. Hope to plan one in the fall sometime between August and November.

CONTEST REPORT - Mike, WS3C, reported that we had a modest 83 contacts for the CQVHF contest. The bands busted open AFTER he left the club. UHF Contest is on September 3-4.

NEWSLETTER/WEBSITE – Dick, WA3USG – The Newsletter is finally out, combining 3 months. It should be out monthly again now that things slowed down.

OLD BUSINESS:

Second reading was done for Lalrry Pontious, W8ZZZ. Steve, WB3EFA, moved to accept him into membership, with a second from Jack, N3BBC. Membership was approved.

We need to wait for Greg and Tim to climb for the antenna work. That has been delayed due to family issues for both of them.

NEW BUSINESS: First reading was done for Dave Hile, W3VRE.

GOOD OF THE CLUB –

Reminder that the Corn Roast is August 17th. Sandy is still taking orders for chicken halves. Sign up for the September bike ride.

The next Adventure Days will probably be the end of October at Mt. Davis. There might also be a hike on the Rim around PA Grand Canyon.

Hilltoppers will be a Bonus Station for the PA QSO. They will operate at 3 different locations.

50-50 - \$14.50 was won by Ralph, K3HQI, who donated it back to the club.

Adjourned at 20:00.



The guy on the Unicycle did pretty darned good at the Kings Gap Time Trails. He pedalled all the way down a 4 mile hill to the starting line and then pedalled all the way back up! Did you know that a Unicycle has no brakes? Nor does it allow you to "coast" like on a multi speed bicycle. The pedals are "hardwired" to the wheel. You gotta pedal all the time!

Pix by Franz - N3HFS

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: _____