



The VHF Transmitter



Keystone VHF Club, Inc.

W3HZU

Founded 1955 – York, PA

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CIRCULATION 200

April, 2017

What's the Big Deal with DMR?

By Dick Goodman, WA3USG

Greetings Gang Well we've had three (3) DMR Tech Sessions since the last meeting. I believe that we have about a dozen guys who have purchased DMR radios and I have been having fun hiking with my DMR HT. Most of the club members who have purchased DMR radios have obtained the TYT MD380 For a whopping \$85! A pretty cheap price to pay to get experience in digital voice (\$102 now).

I was appalled by what happened at the club meeting last month. We are a progressive club and I was under the impression that we encourage experimentation in all aspects of Amateur Radio. Additionally, back in September of 2015, there was a good bit of discussion in reference to getting on digital voice. The club even considered purchasing a Yaesu repeater capable of running Fusion (C4) as well as analog. We put a hold on it because we didn't know what digital protocol was going to become prevalent. Another issue is that we didn't want a repeater being split between analog & digital on a regular basis.

Well it's been a year and a half since then. Additionally, it's pretty plain what protocol is dominating this area. There are two DMR repeaters in Harrisburg, One on Blue Mountain, One in Cornwall, One in Shrewsbury, and one that will be installed by the SMRA near Carlisle. There are also DMR machines in Thermont and Towson, Maryland. I can hit the Thermont repeater with an HT on an external antenna from my QTH.

I was greatly surprised that some club members thought that we were talking about the 2 meter machine. We will never replace the 2 meter machine with digital ... at least not until the FCC forces us to, and I don't think that will happen.

We have about \$900 in donations made by members to purchase this repeater. It is apparent that there are a lot of club members who want to try this out. The only concern expressed by anyone was with using the 440 repeater to transmit data during the TMI & Peach Bottom Nuclear Power drills. The DMR machine can run in an analog mode to meet this requirement. We are also going to keep our current analog 440 repeater.

I don't really know how much time that I will actually spend on DMR ... Personally, I think that analog is better for back & forth casual chat.

Continued on Page 4

The Radio Amateur Is ...

Thanks to Jeff, W3JVU & Brad, KO3T for reminding all of us of the below ... we've got to keep it civil!

Considerate – never knowingly operating in such a way as to lessen the pleasure of others.

Loyal – offering loyalty, encouragement and support to other amateurs, local clubs and the American Radio Relay League, through which Amateur Radio in the United States is represented nationally and internationally.

Progressive – with knowledge abreast of science, a well built and efficient station, and operation beyond reproach.

Friendly – with slow and patient operation when requested, friendly advice and counsel to the beginner, kindly assistance, co-operation and consideration for the interest of others. These are the hallmarks of the amateur spirit.

Balanced – radio is an avocation, never interfering with duties owed to family, job, school or community.

Patriotic – with station and skills always ready for service to country and community.

2 Meter Repeater Switchover at the Club



Tim, W3TWB, Rich, W3OKU, Dan, KB3JSV, and Dick, WA3USG spent a long evening at the club last Thursday getting our Kenwood Repeater on the air. Up until now, this has been our "backup repeater" and has been used briefly during times when our primary 2 meter machine, a Motorola MSF5000 , was having minor problems. The Kenwood TK-750 repeater is now our primary and the MSF5000 is relegated to backup.

About 2 weeks ago, we had problems at our receive site near Dover. The equipment is located up on top of Conowago Mountain. The site is extremely remote and a bear to access..

On Saturday, February 25th a sizeable group of us drove up the rutted road and made it up to the site. We found that the 220 MHz exciter used to link the 146.37 back to the club site had a failed output transistor. Probably caused by high SWR on the antenna due to an accumulation of snow. Additionally, the 12 volt power supply that ran everything was only putting out 10 volts. We needed to take everything off the mountain to make the necessary repairs. Eric, KB3CNH and Rich, W3OKU took the 220 exciter back to the club and made repairs that day! They then proceeded to drive back up the mountain and reinstall everything ... **thanks guys!**

We now have two 2 meter machines. The Kenwood repeater is outputting a bit over 100 watts after the duplexers.



NEXT TWO MEETINGS

**Thursday April 6th at the York County EOC
Thursday, May 4th at the Club Site**

Schedule of Keystone VHF Club Sponsored VE Testing for 2017

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

Location is the York EMA Office at 120 Davies Road, York,

Testing dates: May 13 Jul 8 Sep 9 Nov 11

Keystone VHF Club sponsored testing by the Laurel V.E. Group. These sessions are held in the Training Room at the York County EOC, 120 Davies Rd., York, PA. Testing starts at 10:00 AM. Preregistration is appreciated. *Contact Ralph Brandt at: Ralph.brandt@comcast.net or phone 717-792-1017 to register.*

VE exams will be sponsored by Southern Pennsylvania Communications Group (SPCG). These sessions are held at the Shrewsbury Borough Building, 35 Railroad Ave., Shrewsbury, PA. Testing starts at 9:30 AM. *The point of contact for these sessions is Nate, WN3I at wn3i@comcast.net.*

Apr 8 Jun 10 Aug 12 Oct 14 Dec 9

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.

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.

The Keystone VHF Club Digital Net on **Tuesday at 8 PM** on the York 146.97 Repeater ... *to restart on September 6.*

The Keystone VJF Club ELMER Net on **Tuesday at 9 PM** on the York 146.97 Repeater right after the Digital net

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

South Central PA 10 Meter Net **Friday at 8 PM** 28.495 MHz USB

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

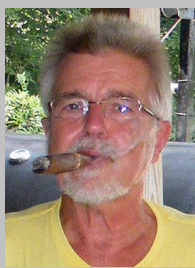
10 Meter Ragchew Net - Every evening starting 7:30PM: 28.600 Mhz

6 Meter Magicians Net from Pottstown Wednesdays at 8:30 PM on 50.130 USB. At 9 PM, they switch to 50.400 and run A.M. modulation and call themselves the Mini Boat Anchor Net.

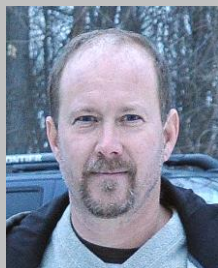
Trustee's Report



Tim, W3TWB



Dick, WA3USG



Jeff, KB3RCT

Spring clean up! Yep ... it's beginning to look a lot like Spring. We are planning an April 8th Spring clean up work party with a April 15th rain date. We are also thinking about "rebuilding the outhouse." We would remove the tank where all the icky stuff goes and build an insulated Outhouse. This will have to be seen to be believed!!

Scheduled Club P.S. Events for 2017

- * **April 9, 2017 - Buckridge Burn Hike Pine Grove ***SJ**
POC: Dick Goodman, WA3USG rickwa3usg@gmail.com
- * **Date April 11, 2017 - TMI Nuclear Power Drill**
POC: Sandy Goodman, N3ECF n3ecf@arrl.net
- * **April 23, 2017 - York MS Walk**
POC: Sandy Goodman, N3ECF n3ecf@arrl.net
- * **April 30 2017 - Ironmasters Challenge Hike *** SJ**
POC: Dick Goodman, WA3USG wa3usg@verizon.net
- * **May 14, 2017 - The York Marathon *** SJ**
POC: Jack Dellinger, KC3JD jdelli@aol.com
- * **May 7, 2017 - March of Dimes March for Babies**
POC: Jack Dellinger, KC3JD jkdelli@aol.com
- * **June 11 2017 - 5K/Walk Run (Rudy park)**
POC: (Brian, KC3CFW bkimes@klimesgroup.com)
- * **June 17, 2017 - Double Creek Half Marathon**
POC: Sandy, N3ECF n3ecf@arrl.net
- * **July 29 - 30, 2017 - Camp Muckelratz Horse Performance Ride**
POC: Sandy, N3ECF n3ecf@arrl.net
- * **Date August 12, 2017 - Red Lion Street Fair**
POC: Jack Dellinger, KC3JD jdelli@aol.com
- * **Sept 9, 2017 - KTA Superhike *** SJ**
POC: Ken Wiggins, N2DYK n2dyk1940@yahoo.com
- * **Date TBD, 2017 - Kings Gap Time Trials**
POC: (Micah Neff, KB3TGY tortmentor@aol.com)
- * **Oct 14 - 15, 2017 - MS Bike Tour Gettysburg *** SJ**
POC: Sandy Goodman, N3ECF n3ecf@arrl.net
- * **Oct 29, 2017 - Michaux Team Challenge *** SJ**
POC: Dan McGlothlin kb3mun@mcglothlin.us
- * **Dec 24-25, 2017 - Glen Rock Carolers** ** SJ - Your Slim
Jim is advisable here
POC: Stan Walters, AB3EM abacuspc@comcast.net

Eastern Pennsylvania ARRL Section Convention...

We are pleased to announce that this year's EPA Section Convention will be held at the Warminster Amateur Radio Club Hamfest on Sunday May 7, 2017. The Hamfest will be held at a new location this year at the Bucks County Community College - lower Bucks campus, 1304 Veteran Highway, Bristol, PA. and has inside vendor spaces with electricity available at all tables in addition to paved parking and tailgate area. This is a new location for the Hamfest this year with convenient access to major highways. We are hoping to have a staff member from Newington headquarters attend as a guest speaker.

We will have more information as the club finalizes it's plans and publishes it's new flyer for 2017. Their website is at www.k3dn.org and can be reached via email at k3dn@arrl.net

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Advice to New Hams on What HT to Buy

By Eric Symder, KB3CNH

Choosing your gear is somewhat like a religious or political discussion. I tread lightly on such subjects and try to keep objective. You have to ask yourself how you plan to use the equipment you plan to purchase, and what features you wish to embrace. Look at all the angles before you make a choice. I won't even say which one's I own. Reading reviews, specification sheets to choose your very first gear can be intimidating for the new ham.

If you plan on being portable, and want to stay dual band VHF / UHF then the basic Chinese-made HT is fine. Cheap and Cheerful is fine for repeater usage and close range simplex. Also consider how far you plan to be from the nearest repeater. There are 8 watt Baofeng units available, with an antenna upgrade you've got a useful radio that is lightweight and portable. Cheap and Cheerful also means that you don't have to just invest in one radio. You can afford more than one, and if you break it ... then it's not the end of the world. Read some reviews from a trusted and local source. The big names here are BAOFENG, POFUNG, WOXUN, TYT. There were some Baofeng radios on eBay for under \$20 !!! but you have to wait for the slow boat from China.

The Cheap and Cheerful Chinese-made HT's may not have a full feature set. Maybe you want to wait for one of the digital voice modes to mature, or if you are clairvoyant enough (or educated enough) to choose the one that you wish to use. There are DMR and Fusion repeaters already in the area. Digital voice modes mean that you won't need as much power to reach the same receiver as on FM and have clear transmissions. On the other side, digital voice is all or nothing past the "digital cliff". The nice thing about the Yaesu Fusion system is that you can always switch back to FM to talk to anyone. The battle of the digital voice modes is not yet won, choosing an HT for that purpose alone is probably not the best choice. Not everyone has one yet, even though there's great interest in the digital voice modes.

There are other features to consider. Some HT's are more than just dual band. There are three or four band radios available. If that makes you excited, then it might be a feature you would consider to get an HT that does 220, or even 6m.

What about Automated Packet Reporting System? [APRS](#)? Kenwood, ICOM, and Yaesu offer HT's with this feature. Some have GPS built in, some have an add-on. Some come with a digital voice mode as a bonus. Take a look at them all. APRS tracking is handy and SMS Group Messaging texts are a nice way to stay in touch.

If you are shy about owning Chinese-made equipment, there is always the trusty FT-60 and other basic Japanese-made HT's. They are tough and will last, have basic features, and are easy to use. The downside is that the digital revolution is coming, we're just not sure what will win out. If you spend a modest amount on a good radio, it will still be worth something later when you want to upgrade. FM isn't going away. The big names are here to stay. ICOM, YAESU, KENWOOD... don't forget ALINCO.

Here's something to consider outside-the-box. Don't automatically assume an HT is what you want. If you want to think about operating outside of VHF and UHF, upgrading to General Class privileges, think about an all-mode mobile like the FT-817. Yes, it's a little expensive, but look at what you get. You will spend almost as much as a full-featured Japanese HT, but get more options and still be portable and battery powered. If you are operating in field beyond the reaches of repeaters a modest 5 watts of power on VHF and UHF won't be heard. Adding HF will get you heard, and you can also add data modes with the aid of a computer, tablet, or personal computer. If 5 watts isn't enough, there are linear amplifiers (think Wimo and Mirage) for VHF and UHF that can take that modest 5 watts and put out ten times or more.

Mobile units packaged as a GO KIT in a lightweight suitcase with small batteries is also an option. You can take it in your vehicle and

also camp with it as needed. Working emergency communications or public service events will give a GO KIT operator more power and the comfort and features of a big mobile rig. Many (like the FT-8900 Quad Bander) can also cross-band repeat simplex. This way even if you can't get out on your HT to the whole group, your very own radio can cross-band repeat at low power from UHF on a cheap and cheerful Chinese-made HT to the event frequency on VHF

The most important thing right now for the new ham is to tune in and listen to the local VHF / UHF activity. You CAN do that without owning a radio. To just listen to ham radio activity use <http://www.websdr.org> from your personal computer or mobile device, or tune into [Broadcastify](#). Listen to conversations and listen to nets. Practice your phonetic alphabet and recording skills by keeping track of the callsigns that you hear. This helps you learn who the active people in the reception area are.

Your newly earned technician privileges give the new ham access to two amazing Voice over IP amateur radio services. You can log into [ECHOLINK](#) or [ALLSTARLINK](#) and talk to hams all over the world, or in your backyard, without a radio. ECHOLINK runs on a personal computer or android / iphone mobile device. ALLSTARLINK allows you to dial a phone number and Reverse-Auto-Patch into the network. You can connect to nodes around the world and talk to anyone about their radio purchasing experiences before you take the plunge. As soon as you can, sign up for Echolink and get one of the applications installed. We run Echolink on our 2m W3HZU repeater at 146.97 Mhz listed as W3HZU-R. Using Echolink you log into that repeater and control all the many watts it has available, the huge antenna, and talk to anyone in the wide coverage area.

All I'm saying to the new ham is educate yourself, talk to people and see what they like about the radio's that they use. Think about what features excite you. If you can figure out those things, the club Elmer's can guide you to some specific suggestions. Hope to hear all the new hams on the air.

73 de KB3CNH

Hello All:

It's the time of year where we start asking for volunteers to operate at public service events.

Our first event is the MS Walk on April 23, in John Rudy State Park in York event registration starts at 9 am, with the walk officially starting at 10 am the walk is on the paved path

We man posts around Rudy Park and watch the crowds walk by. This is the perfect event for any one new to public service. We use HTs on simplex. New operators will be paired with experienced operators. We need to cover 9 or 10 positions, including a walker or 2 to join the crowd.

If available, please contact Chip Diamond, W3FJD@w3fjd@yahoo.com or sign-up at the next Keystone VHF Club or YARS meeting.

Thanks for helping.

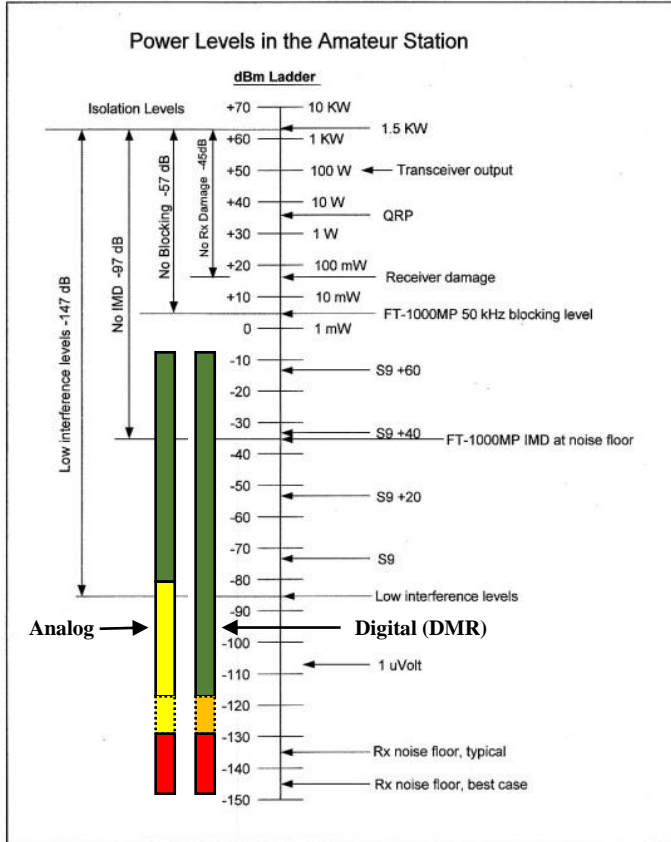
Sandy Goodman N3ECF, Secretary Keystone VHF Club, York County ACSO/E

Hey! For all of you outdoor types ... The Buckridge Burn Hike is taking place this coming Sunday (April 9th). We just got the e-mail asking for help. If you want to hike or just be one of the communicators sitting at a Check Point, drop Sandy, N3ECF an E-Mail at: n3ecf.good@gmail.com

Did you know that Verizon is discontinuing e-mail service? Your verizon.com E-Mail address will be shut down on May 2nd, 2017. From what I understand, if you are willing to switch over to AOL e-mail, you can keep your Verizon e-mail address but it will be hosted by AOL. Our wise guy I.T. guy, Dan Melato, KB3JSV highly recommends switching over to Google E-Mail. I did several months ago & I really like it ... not a single SPAM E-Mail in 3 months! Do it soon or be stuck with no e-mail!!

Especially through repeaters. DMR forces one to refrain from the quick back & forth operating techniques that in many cases prevents people from joining a QSO. While this is beneficial most of the time, there are scenarios, where time is critical, where the ability to have a rapid fire response may be desirable. I would rather improve my operating techniques through self discipline rather than having the hardware do it for me.

A strong advantage with any form of digital communications, is that there is no noise mixed in with the receive audio that you hear. This advantage has some limitations.



- No detectable receiver noise
- Noticeable receiver noise that gets worse as you move down the dBm ladder
- Very high noise level, but voice traffic can still be copied with effort
- Dropouts, digital artifacting, loss of syllables & words
- Total loss of signal ... the end brother!

Unless you are running SSB, CW, or one of the weak signal modes such as JT65 for EME, communications on the VHF & UHF bands should be as noise free as possible. We use these bands for utility communications for public service, local chat, and EmComm. One should not have to listen through high noise levels to get their message through. That's why we have repeaters, remote receive sites, and known coverage areas.

Analog FM meets this requirement quite well until signal levels drop to down below about -90 dBm. Then it gets progressively more difficult until you run out of string at about -130 dBm. With analog FM, you have reasonably noise free conditions for about 60% of its communications range.

With DMR (and other digital formats) you have total noise free conditions for about 90% of its communications range. For the type of utility communications on these bands, the performance improvement is noteworthy. There is one spot that is open to considerable controversy however. On the above chart, that is the area between -130 & -140 dBm.

In this area, communications via analog will be very spotty. You will be copying the signal through a very high noise level but the

signal will be copyable even though it may be an arduous task to squeeze out the intelligence. In these same conditions, DMR (or any other digital mode) will be broken as the signal levels required for successful Analog to Digital conversion fall below the necessary threshold.

Is this any reason to be overly critical about digital? Again, that spot below the -120 dBm level will affect less than 10% of the total communications range. Analog on the other hand is affected by noise for almost half of its communications range.

Antenna Erection at the QTH of George Klinedinst, KC3IJX

"That is one mighty BIG antenna!"

New club member, George Klinedinst, KC3IJX is on the air big time with the largest multiband vertical I have even seen!

On Saturday, March 11, Eric, KB3CNH, Craig, WA1HEW, Ryan, KC3FSJ, Dick, WA3USG, and George, KC3IJX erected a new HyGain AV-640. We started work at 10 AM and had it up and set to frequency by 4 PM.



Everything went quite well for an antenna that has a couple hundred parts. There were a few times during its assembly that there were confused expressions on all of our faces. It sure looked impressive, standing tall in the air. It's total height including the 8 foot supporting pipe was about 35 feet. While HyGain claimed that it was free standing, it did require guying. I think that George has the highest structure within a square mile or two. The SWR looked great on all 7 bands.

The Ironmasters Challenge Hiking Adventure Coming up Sunday, April 30 ... we need your help!

Looking below, we still need a few more communicators to take part in this event. This is a real adventure, you are out in the woods most of the day, and believe me ... a lot can happen. Checkout our March 2015 Newsletter on our website for details of this event.

Station	Position	Name	Call	T	Times
Start/Finish	NCS (Shift 1)				0600 - 1200
Iron Masters	NCS (Shift 2)	Jack Dellinger	KC3JD	XL	1200 - 1800
mansion	Second Op	Thierry Mathieu	KB3TPX	L	
	Operator-Runner	Sandy Goodman	N3ECF	none	
	Third Op	Donna Lee Hoover	N3VPJ	L	after WS1
	Driver/Runner	Tim Barefoot	W3TWP	XXL	
Start	50K Sweep 1 - Start to CP1	Dick Goodman	WA3USG	L	0700
	50K Sweep 1b - same route	Evan Rosser	W2EDT	M	
Start	Sweep 15 - 15K hike	Joe Imgrund	KB3TCM	XL	0830
First Aid Station	Primary OP	Ralph Brandt	K3HQB	XL	0730-0900
	Second Op	Anne Zarlenga	KB3ZLJ	L	
Checkpoint 1	Primary OP	Dan Shortencarrier	N3EEI	2 XL	0830-1100
Forest Rd off	Second OP				
Ridge Rd	Standby OP	Nick Rylatt	AA3T	XL	
	50K Sweep 2- CP1 to CP2	Andy Hahn	KB3CHT	L	
Water Stop 1	Operator	Donna Lee Hoover	N3VPJ	XL	W1 0730-0900
Water Stop 2	Operator				W2 0915-1200
Woodrow Rd					
Check Point 2	Primary OP	Tom Alsted	N3PNF	2XL	0945-1400
Brickyard Pavilion	Second OP	Brian & Ben Klimes	KC3CFW	L & M	
	Standby OP	Mike Weiss	KC3GEM	XL	
	50K Sweep 3 - CP2 to CP3	Dan Melato	KB3JSV	XL	
	50K Sweep 3b - same route	Cameron Bailey	KT3A	M	
Water Stop 3	Operator (Shift 1)				0930-1230
Laurel Lake canoe rental	Operator (Shift 2)				1230-1600
Water Stop 4	Operator (Shift 1)	Ralph Brandt	K3HQB	n/a	1000-1300
Cold Springs Rd	Operator (Shift 2)				1300-1700
Checkpoint 3	Checkpoint Captain	Rich Diem	W3OKU	L	0915-1730
spur off Cold	Primary OP	Doug Good	KC3AB	XL	heavy 1000-1130
Springs Rd	Second OP	Tony McMonagle	KC3EED	XL	
	Operator-Runner	Tim Barefoot	W3TWP	2XL	
	50K Sweep 4 -CP3 to end	Charles Martin	KB3CO	XL	
	Support Ops	Chris McMonagle		L	
	50k Sweep 4b	Dick Goodman	WA3USG	n/a	after 1st section
Repeater Support	Primary Operator	Ryan Duke	KB3FSJ	L	0600-1800

Please see Page 9 for details in reference to the help still needed

FOR SALE/WANTED

I have the following for sale----

RF Concepts Model 2-317 solid state amplifier
 Operating range 143 to 149 MHz
 12 VDC
 30 watts in produces 170 watts out
 FM or SSB
 GaAs-Fet Pre Amp
Price \$100.00

RF Concepts Model 4-110 solid state amplifier
 Operating range 430 to 450 MHz
 12 VDC
 10 watts in produces 100 watts out
 FM or SSB
 GaAs-Fet Pre Amp
Price \$100.00

Bob Gundlach N3NBT
2829 Glen Hollow Dr.
York, PA 17406-9706
717-309-7159

\$175.00 for the pair

Both amplifiers are currently set for ground keying but can be changed to plus voltage keying. Both come with original Owner's Manual

***** FREE Looking for a good home.**

Something I came upon and thought it had potential for making a GO kit. After some consideration, since I already have a GO kit and have no plans of GOing anywhere, it would be a waste of my time, effort and money to create something I have no need or use for.

Therefor I am offering it free to anyone who can make use of it. It is a "hard" case with the following outside dimensions (see below): 20 5/8" Wide 13 1/4" Deep 11 3/4" High. As the one picture will show, there was a divider in place which I removed in order to proceed with the cleanup. All I ask is for some pictures of the completed project.



The following items are for sale from the estate of Silent Key Charlie Kuhn, KC3DRS. Charlie was very active in many of our Public Service Events during his short stint in the club. He also arranged for over 4 cubic yards of concrete to be donated for the EME dish project. The items below were used very little and are in excellent condition.

Item Name & Model	Current Price	Asking Price
Yaesu FT-8900 Quadband FM Transceiver.	\$324.00	\$250.00
Yaesu FP-1030A Switching Power Supply (13.8 Volts, 30 Amp)	\$229.00	\$180.00
Ameritron RSC4 Remote Antenna Switch	\$150.00	\$120.00
Icom Model IC-718 HF Transceiver	\$654.00	\$520.00
Yaesu FT-60R Dual Band HT (includes charger & all accessories)	\$154.00	\$120.00
Diamond V2000A Tri-band base Antenna (6M, 2M, 70cm). In the air for about 2 years	\$159.00	\$ 90.00
12 Volt Gel-Cell battery, about 35AH Used very little, excellent for Go-Kits	\$100.00	\$ 50.00
Deltran Battery Tender, good Condx Will keep above battery well charged	\$45.00	\$30.00
Two Fan Dipole Antennas, Homebrew Will cover seven (7) HF Bands (see picture below)		\$ 30.00



The Fan Dipoles were pruned to the proper length for each band at Charlie's QTH. Minor alterations will most likely be necessary at your location.

Please contact Dick, WA3USG at rickwa3usg@gmail.com or at 717-697-2353 if interested in any of the above items.

Up for sale is the following.

MFJ-259B HF/VHF Antenna/SWR analyzer
 1.8 MHZ - 170MHZ
 Purchased new, one owner.
 Never used outdoors.
 Non smoking environment.
 Never had internal batteries installed.
 Always powered by external supply.
 Used very little. On 4 new antenna builds.
 Excellent condition. *See pictures below*
Asking \$ 180.00.



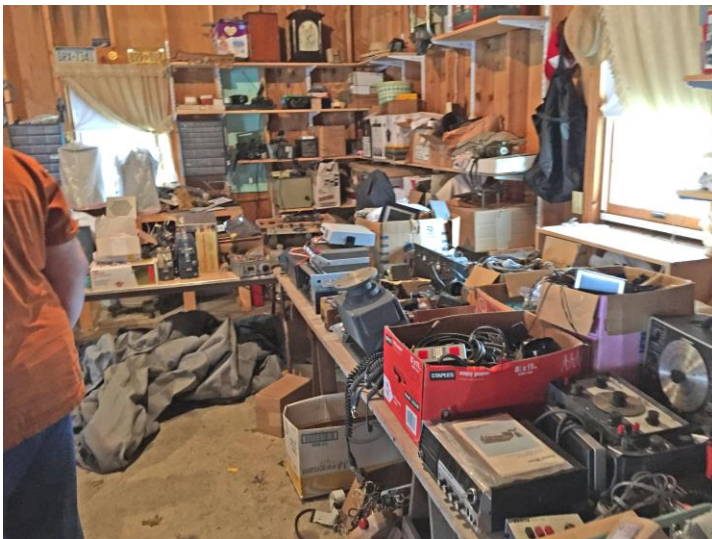
MFJ-269 HF/VHF/UHF Antenna/SWR analyzer
 1.8 MHZ -170MHZ AND 415MHZ - 470MHZ
 Purchased new, one owner.
 Never used outdoors.
 Non smoking environment.
 Never had internal batteries installed.
 Always powered by external supply.
 Used very little. On two new antenna builds.
 Excellent condition. *See pictures below*
Asking \$ 230.00.



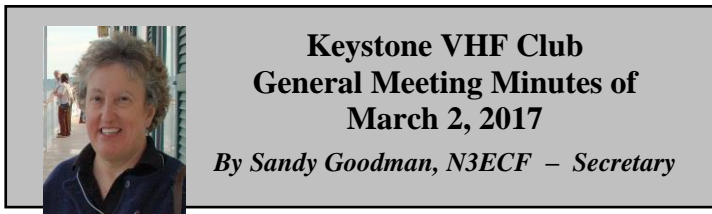
Contact Joe KB3FSY at JoeD528@aol.com.

FOR SALE/WANTED CONTINUED

The following pictures are from the estate of Silent Key, Don Baker, K3NUZ. Don became a Silent Key in August, 2013 and his obit was written up in our newsletter in September of that year. Most of Don's Ham equipment has been sold at Hamfests but we just found out that there is still quite a bit left. Tim, W3TWB and I stopped in at Don's Son's farm located off of Farmbrook Rd near within a mile of Four



Brothers Tavern on the Susquehanna Trail. In the next couple of weeks, we hope to take anyone through who thinks that they would be interested in some of this stuff. I'm sure that a good deal good be made on virtually everything. If you are interested in vacuum tubes and "older technology" then you are bound to find something that tickles your fancy! If you are interested, please contact either Tim Barefoot, W3TWB or Dick Goodman, WA3USG via telephone. Our phone numbers are in the Members section of our Web Page. We would like to take groups of up to 6 folks through at a time.



Keystone VHF Club General Meeting Minutes of March 2, 2017

By Sandy Goodman, N3ECF – Secretary

The General Club Meeting held at York County Emergency Management Center was called to order by Pres. Mike, N3VQH, at 19:12. There were 41 members present and 6 guests, of which 1 rejoined KVHFC and 1 is a new member applicant.

ANNOUNCEMENTS:

Mike asked members to sign-up to give presentations at meetings.

Anne, KB3ZLJ, described the Wilderness and Rescue First Aid training that she is preparing. She will limit each class to 6 attendees, and requires CPR First Aid certification. Those interested were asked to sign-up.

Jack, KC3JD, had things available for free taking. He is cleaning out in preparation of moving.

Ed, KB3WQI, has some TV repair equipment and an oscilloscope available free to anyone who wants it. Contact Ed at 443-309-2877.

A raffle is also being held for another Baofeng GT-3WP radio that was donated by John LaMartina from Milor.com, with a 2nd drawing for a crimper.

Several guests introduced themselves: Brad Bobbitt, KA3IN, John Sichert, KA3LAO, Craig Porterfield, KC3IPB, Ray Geigel, KC3IOY, Lynn Bortner, K3UQJ, Joli Harrington (no call – still learning).

TECHNICAL HAPPENINGS:

Craig, WA1HEW, welcomed George Klinedinst, KC3IJX, into the amateur world. He is now on the air with a Technician License. Craig will be helping George build an antenna and needs help getting it put up.

SECRETARY REPORT: Sandy, N3ECF. Joe, KC3TCM, advised that the number of members attending was missing from the February minutes. He moved to accept the minutes with the correction. Jim, N3QZS, seconded the motion. Motion carried.

TREASURER REPORT: Dan, KB3JSV, reported for February : Revenues: \$811.83; Expenses: \$2,154.10 (amplifiers \$1,562, Heil Proset \$257.90); Balances: Club CD \$7,662.50; Checking Acct \$3,570.45; Trustee Acct \$540.83; Total \$11,773.78. Bob, WB3EAF, moved to accept the report. Rich, KR3EE, seconded the motion. Motion carried.

Dan had purchases a new label machine, then discovered that Tim, W3TWB, already had one available for the club. Dan will buy back the new label maker. Jim, N3QZS, moved to accept that purchase 2nd by Jeff, W3JVU. Motion carried

COMMITTEE REPORTS:

TRUSTEE REPORT – April 8, 2017 is scheduled for the spring clean-up at the club, with a rain date of April 15. Tim, W3TWB, brought in a lot of electronic equipment from Cumberland Electronics (excess from a company that they bought out). The committee will be sorting out that and cleaning out the shed. A electronics training class will be scheduled sometime soon. Tech Sessions will also be held in the near future for the BitX40 kits.

TECHNICAL COMMITTEE REPORT - see New Business

EMCOMM/PUBLIC SERVICE NEWS – TMI Drill is April 11, with the Decon on April 12. For Public Service: MS Walk is on April 23, see Chip, W3FJD, to volunteer. Dick will be asking for volunteers for April 30 for the Iron Masters Challenge Hike. Coming up next will be March for Babies on May 7 and York Marathon on May 14. Jack, KC3JD, will ask for volunteers for those two events. As mentioned earlier, Anne will conduct a Wilderness & Rescue First Aid training

VE/ED REPORT - Ralph, K3HQI, reported that 11 new Technician operators passed exams at the York Township training session. Jack, KC3JD, moved to provide \$200 to Ralph for his expenses, seconded by Tony, KC3EED. Motion carried. Ralph chooses to pay the expenses himself, so will donate the \$200 back to the club. The Laurel VE test group must be sponsored by a radio group. Dick, WA3USG, moved to

formally have the Keystone VHF Club sponsor this Laurel group led by Ralph and to provide up to \$250 annually for expenses. Jim, N3QZS, seconded the motion. Motion carried.

CONTEST REPORT -

June 10-11, 2017 is the VHF Contest.

Field Day is Jun 24-25. KVHFC members are encouraged to join with the Hilltoppers or SPCG.

ARRL International DX is this weekend.

We had thought about going away for the September VHF contest September 9-11. But several members will be working the KTA Trail Challenge that Saturday, and Tim will be away. So members not working are invited to contest here at the club.

NEWSLETTER/WEBSITE – Newsletter got out. The membership database is up to date. Please check your information, including verify that you have paid dues for 2017. Dan, KB3JSV, is working on a new website. He displayed his plans for a variety of criteria to view the membership database. Tim, W3TWB, moved to accept Paypal for dues and donations, and to have the club pay the fees. Brad, KO3T, seconded the motion. Motion carried. After discussion about keeping some information private to members only, Dan will look into building one username/password for all members to use. Dan will also query members as to whether or not to display phone numbers.

OLD BUSINESS:

The Audit was complete. Payments to Knappers weren't timely. Dan will pay ahead from now on. From the 2015 Audit, Sandi Barefoot had recommended a way to check that incoming dues money was accurately deposited. Anne, KB3ZJJ, had started a log of dues payments that we were able to match to the deposits. Dan will continue that along with logging 50/50 money and any donations.

NEW BUSINESS:

First Readings were done for Raymond Geigel, KC3IOY, and Lynn Bortner, K3UQJ. Lynn had been a member long ago when the club was originally chartered. He is now considered a renewed member.

Spical Dates were announced: July 6, 2017 will be the night for the Ice Cream Social prior to the club meeting. August 19, at 1 PM, will be the Corn Roast and Chicken B-B-Q.

Dick, WA3USG, moved to give Lee Lindsay, WB3HNA, a Life Membership for outstanding support of the club. Lee has also been an active participant in the Digital NET. Even though Lee has only been a member for about 8 years, he donated \$3,000 for our HVAC systems. Anne, KB3ZLJ, seconded the motion. Motion was approved. The membership will be presented to Lee next month.

Tim, W3TWB, has been swayed to DMR. He researched and found that the cost would be about \$2000. He made a motion to replace the 440 repeater with a DMR repeater, and have the club pay \$1200 toward the cost, with the remaining cost to be donated by members. Dave, KC3GMQ, seconded the motion. Chris Shover, KB3TWW, and John Sichert, K3LAO, talked about how DMR works and uses Central Bridge for talk group. Members were made aware that a new radio will be needed to use DMR since this replaces the analog repeater with a digital repeater. Voting was done by count of hands: 15 in favor, 8 opposed. Motion was approved. Since Emergency Communications may still be in need of the 440 analog, it was decided that a way to switch back to the analog will need to be provided. Craig, WA1HEW, moved to postpone the purchase of the DRM machine for at least 60 days, and at least one information session be provided to explain the technology. Jim, N3QZS, seconded the motion. 17 were in favor, 13 were opposed. Motion carried. Dick will schedule some training sessions.

GOOD OF THE CLUB –

Ralph, K3HQI, mentioned that the FCC has two separate databases for licensees. Addresses need to be maintained on both the ULS and the CORES databases. Expect for the initially registering with the FCC, those two databases don't talk to each other. Craig, WA1HEW, asked about the club policy for Life Membership. The rules from the By-Laws were provided: Life membership may be extended to any Club member or person in recognition of meritorious service to the Club or to Amateur Radio in general. OR Life membership will also be awarded to

Continued on Page 9

those persons who have been a member in good standing in the Club for twenty-five (25) consecutive years.

50-50 was won by Dan Melato, KB3JSV (\$49.50).

The Baofang Radio was won by Tim Stumpo, KC3TIM. The crimper was won by Larry Frey, N3LED. The raffle collected \$86 for the club.

Motorola Solutions Sues Hytera Communications, Alleging Patent, Trade Secrets Theft

Motorola Solutions has filed complaints in federal court (US District Court for the Northern District of Illinois), alleging that Hytera Communications' digital mobile radio (DMR) products employ techniques and systems that infringe on Motorola Solutions' patents and trade secrets. Already known for its Land Mobile Radio Service products, Hytera entered the Amateur Radio DMR market last year. Motorola alleges that proprietary and patented information was taken illegally by three former company engineers who now work for Hytera, as "part of a deliberate scheme to steal and copy" its technology.

"Motorola Solutions believes that Hytera is intentionally infringing its intellectual property and misappropriating its trade secrets, which has enabled Hytera to compete unfairly by bypassing investment in innovation," Motorola said in a March 14 news release. Motorola Solutions General Counsel and Chief Administrative Officer Mark Hacker characterized the copying as brazen, blatant, and willful.

The three former Motorola engineers all signed non-disclosure agreements, agreeing to treat all Motorola trade secrets as confidential, when they left the company to assume similar positions with Hytera. According to the lawsuit, none of the three disclosed beforehand that they intended to go to work for Hytera.

Motorola contends that its digital radio products were rendering Hytera's analog systems obsolete, and rather than develop its own digital products, Hytera stole Motorola's ideas, its attorneys allege. Motorola said technology features it developed started showing up in Hytera products soon after Hytera began hiring engineers who had left Motorola in 2008, according to the lawsuit.

In a statement, Hytera, headquartered in Shenzhen, China, said it adheres to high ethical standards and complies with "the laws and regulations in markets where we operate," and "firmly believes that its business practices and operations will be fully vindicated."



This is an Amazon advertisement. This is what most of the guys in the club are getting. This includes the software & programming cable. Lots of Keystone VHFer's have a good Code Plug that will work well with this radio. We can e-mail you the Code Plug and you use the included software to upload it to your HT.

TYT MD-380 - DMR/Moto TRBO Ham Radio

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- TYT MD-380 UHF Analog/Digital DMR Radio + USB cable
- USB Programming Cable and software
- AC Charger, 2000 mAh Battery, Belt Clip, Antenna, English Manual

Ironmasters Challenge Help Still Needed

Looking at the volunteer list on page 5, there are still six (6) slots where we need someone. As checkpoints & water stops clear, I can ask those folks to move up and man the empty positions but this is an all day event and I'm trying to keep the shifts to a reasonable length.

1. We need someone to take Net Control (NCS) at the Ironmasters mansion. This would run from 06:30 to about noon. This early shift is especially important as the event participants are navigating Sunset Rocks. This section of the hike is probably the most dangerous. There are places where they are almost rock climbing and at that time of the morning, things are wet and slippery. On more hikes than not, people get hurt here.

2. We need an additional operator at Check Point 1. This would run from 08:30 until 11:00. This is about eight miles from the start and is the first check point where we have to log everyone in. The participants are still fairly bunched up here and some of them hike/run through in large groups. We have to ensure that we don't miss logging anyone in or otherwise we will be going out looking for them. This isn't as critical further along the hike route as everyone is spread out.

3. We need an operator at water Stop 2. Water Stops are not check points. No one needs to be logged in at these. These are stations where the hikers/runners can get a drink and/or rest. Sometimes a participant will tell you that someone back a bit is having problems and we need this relayed back to the NCS.

4. We need an operator at water Stop 3. This would be for 09:30 through 12:30.

5. We need another operator at water Stop 3. This would be from 12:30 until about 16:00 ... or after the last participant comes through.

6. We need an operator at Water Stop 4. This would be from 13:00 through 17:00 ... or until after the last participant comes through.

Some hints on how to survive in the woods!

1. Bring a lawn chair so you're comfortable
2. Bring some insect repellent
3. An HT will work in most places but I highly recommend an external antenna such as a Slim Jim or J-Pole. We will be using our portable repeater on 146.97 MHz. We will most likely have the 146.97 repeater at the club site turned off during this event. We will also have a secondary net on FM simplex, 144.34 MHz
4. Bring a snack and something to drink
5. Bring some wet weather gear in case it rains.



TID Industrial DMR Walkie Talkie Compatible with MotoTRBO Digital Radio TD-9800 Two way radio Military Walkie-talkie For Business Army And Ham Radio Operator

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Color: UHF

from \$165.00 Prime to \$285.00

Another choice. Water proof and commercial grade. Tony, KC3EED purchased this model and I really liked it. Has a Motorola style programming cable. Also includes software

- Support Contact list Import and 50000 contact list Compliant With MIL-STD-810 C/D/E/F/G Submersible With IP67 Rating
- Operate in both Digital & Analogue mode, easily migrate from analog to digital
- Complying with digital protocol ETSI TS 102 361-1, -2, -3, Compatible with Mototrb
- Frequency band: UHF 400-470MHz, Up to 1024 channels, Remote kill/stun/activate, Text messages in digital mode
- Secure Communication TD-9800 provides high-level digital encryption utilizing advanced 256-bit encryption algorithm: In analog mode. Program software download link: <https://s3.amazonaws.com/tidradio/software/TD-9800+Radio+Program+Software+v1.45en.rar>

KEYSTONE VHF CLUB OF YORK, PA



Membership Application

Name: _____ Phone: _____ - _____
 Address: _____ Callsign: _____ Expires: _____
 City: _____ State: _____ Zip: _____ Lic Class: _____
 Occupation: _____ E-Mail: _____

Membership Desired

	Are you a member of:
Full → Full Club Privileges \$25.00 annually & one time \$5.00 Application fee	ARRL Y-N
Family → Sponsoring members call: _____ Privileges same as Full membership \$6.25 annually & a one time \$5.00 Application fee	ARES Y-N
Associate → Repeater Support \$20.00 annually & a one time \$5.00 Application fee	RACES Y-N OCWA 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

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First Reading Date: _____	Second Reading Date: _____
Date voted IN-OUT: _____	Date Dues Collected: _____
Applicant Sponsored by: _____	