



The VHF Transmitter



Keystone VHF Club, Inc.

W3HZU

Founded 1955 – York, PA

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CIRCULATION 185

September 2016

Keystone VHF Club Corn Roast



A giant "thank you" to everyone who came out to the Corn Roast last Saturday. It was a hot day but we ended up with between 60 & 70 people attending. We sold all 50 chicken halves plus a few chicken breasts & drum sticks. We cut back on the corn a little this year, in the past, we have always ordered 10 dozen ears ... and had about 2 dozen left over. This year, I only ordered 8 dozen ears ... and guess what ... we had 2 dozen left over. Go figure! Everyone has to start eating more corn!

Quite a few folks helped with set up and clean up but the hero's of the day were Jeff Patterson, KB3RCT; Thierry Mathieu, KB3TPX, Tony McMonagle, KC3EED; Chris McMonagle, KC3EUV, and Evan Rosser, W2EDT. Between all of us, we actually got everything set up, the corn cooked, and the chicken cooked before everyone arrived! The covered dishes were good and I would especially like to thank whoever brought in those little Eclairs ... I love those things!

We served right on time at 1 PM and everyone sat around and socialized until about 3. The day was HOT and I think that a lot of folks who normally would have set up their lawn chairs and yakked wanted to go where it was air conditioned. By 4:30 PM, we had virtually everything cleaned up and the 2016 Corn Roast was just a happy memory.

I hope that everyone enjoyed it as much as I did!

Communications Dish Project Status

We are making good progress with our 15 foot diameter communications dish for Moonbounce (and Radio Astronomy).

The problem this year is that for the last two full months it has been so miserably HOT! The dish has been positioned to where there is a full view of the sky and that means no shade! Working up there for an hour leaves one soaked in sweat.

We do have all of the structural members assembled and are about to install the mesh reflecting surface. Once this is done, we will hopefully get Double Dog's bucket truck to lift the entire dish assembly to the top of our tower section.

While we have the azimuth drive installed, we still have to obtain a positioning arm to steer the dish in declination. More to come ...



Jack, KC3JD shot this picture of us moving the dish off of the large picnic table so we could tighten all of the hardware. The estimated combined weight of the dish, az-el mount, and the azimuth/declination drive units will probably be in the order to 300 - 400 pounds.

Possible Upgrades for the Clubhouse

While activity at the club house over the Summer months is normally reduced, this year's Summer heat has considerably exacerbated this condition. It's been too hot to work under the pavilion and if we get more than a dozen people in the club house, the air conditioner can't handle it. Turnout that we've been getting at the Thursday evening Tech Sessions has still been pretty darned good however, and I'm thinking the comradery has overcome the heat.

In the past, we have discussed getting one of those "Ductless Mini-Split" air conditioning units.

DuctlessAire Model DA1815-H2 Internet #206194978

High Efficiency 18,000 BTU 1.5 Ton Ductless Mini Split Air Conditioner and Heat Pump - 220V/60Hz

★★★★★ (14) Write a Review Questions & Answers (25)

\$1,258.60 /each

6 months* everyday financing available. Suggested Payments of \$70 per month. Learn More



Open Expanded View

Click Image to Zoom

- Quiet, ductless inverter air conditioner heat pump system
- Protected by a 5-year compressor and 1-year parts warranty
- Equipment should be sized/installed by a qualified professional

- Ship to Home
Estimated Arrival: SEP 8 - SEP 14
See Shipping Options
- Ship to Store FREE
Available for Pick Up: SEP 9 - SEP 14

The unit shown above is available from the Home Depot. Not only would it give us 18,000 BTU's of cooling in the Summer, it would provide heat at a reduced cost in the in the Winter ... it's a Heat Pump.

Something like this would keep the clubhouse pleasant year round. During the Summer, we could keep the thermostat set to about 80 degrees and when folks arrive, lower it to 75 degrees. In the Winter, have it hold the temperature to about 50 - 60 degrees and move it up to 65 when members are there. For Winter contesting, we would still use the woodstove.

Continued on Page 3

NEXT MEETINGS

Thursday, September 1st at the Club Site
Thursday, October 6th at the York County EOC

Schedule of Keystone VHF Club Sponsored VE Testing for 2016

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 York EMA Office at 120 Davies Road, York

Testing dates: Sep 10 Nov 12

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.*

Oct 8 Dec 10

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.

So entral 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

Gang ... We need a cleanup session to get us ready for autumn. There's not a whole lot of stuff to do. After we get the reflecting mesh on the communications dish the inside of the main storage shed will be fairly clear. We have some old equipment that we may want to dispose of. I think that we also may have some scrap metal items outside to get rid of. I estimate a few hours and we will be done.

Scheduled Club P.S. Events for 2016

* **Sept 3, 2016 - Kings Gap Time Trials**

POC: (Micah Neff, KB3TGY tortmentor@aol.com)

* **Sept 10, 2016 - KTA Superhike *** SJ**

POC: Ken Wiggins, N2DYK n2dyk1940@yahoo.com

* **Oct 1, 2016 - Mount Zion 3 Mile Fun Run/Walk (HT only)**

POC: Dick Goodman, WA3USG wa3usg@verizon.net

* **Oct 30, 2016 - Michaux Team Challenge *** SJ**

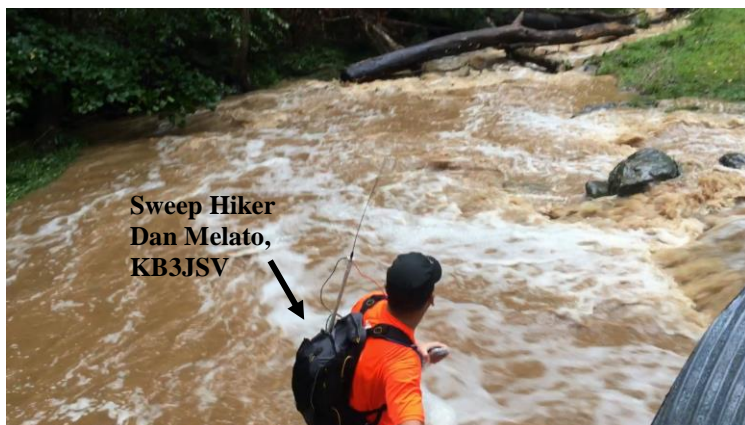
POC: Dan McGlothlin kb3mun@mcglothlin.us)

* **Dec 24-25, 2016 - Glen Rock Carolers**

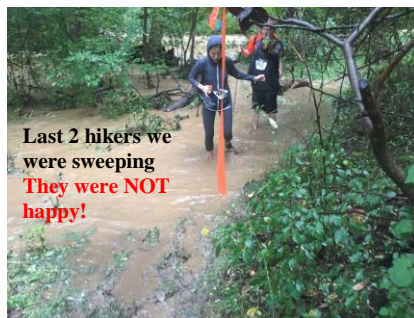
POC: Stan Walters, AB3EM abacuspc@comcast.net

*** SJ (Your Slim Jim will work here)

The Keystone Trails Association (KTA) Super Hike



Sweep Hiker
Dan Melato,
KB3JSV



Last 2 hikers we
were sweeping
They were NOT
happy!

A couple of pictures snapped near the end of the day on the 2015 KTA Super Hike. We received 4 inches of rain during the late morning and afternoon. We had to cross the creek in the image above (normally a 4 foot wide stream with stepping stones). Lower left is part of the trail ... no, not a creek or a stream, but the trail!

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Clubhouse Upgrades ... continued from Page 1

Our electric bills have been pushing \$200 per month for the last year (some higher). We are supposed to be a "High Tech" organization. We are also supposed to set an example in Emergency Preparedness. Perhaps now is the time to augment our electric usage with another source of power.

Suniva OPT340-72-4-100 Silver Mono Solar Panel

- 40 years of Research and Development
- High efficiency ratings

\$350.00

340 Watt - 38VDC



Model	Part No.	Watts	Amps	Volts	Size & Weight	Price
Suniva OPT340-72-4-100 Silver Mono Solar Panel	1524540	340W	8.99A	37.8VDC	77.6 x 39 x 1.5 in 50.7 lbs	Qty: 1 \$350.00 Add to Cart

Four (4) panels such as these would give us 1360 watts of power. This could be used to directly power an Inverter, producing either 120 VAC or 240 VAC. During times of direct sunlight, the output of the inverters could directly run our repeaters and other loads at the club (the way they do it in Grid Tie systems). Or the Inverter output could run a power supply to keep batteries charged. These in turn could run the repeaters and other loads. During periods when there is no sun, we can automatically shift the charging from solar to the grid when the batteries start to go down. We wouldn't be "Off the Grid" but we would get a considerable amount of our electricity from our own source! **** It should be noted that these panels have some down in price by about 40% in the last year. We could start off with 4 panels and then add more as they get cheaper.**

The panel shown above is to give you an example of what's available and the price range. The panels come in a variety of voltage ranges as well as power capacity. It used to be that panels only came with a 12-18 Volt output. They were meant to directly charge 12 volt batteries through a Charge Controller.

Panels these days still come with 12-18 volt output but you can also get panels with 24V, 38V, and 48V outputs. These higher voltage output panels are much more efficient at directly running a Power Inverter. Modern Inverters are about 90 to 95% efficient. With the newer higher voltage panels, it is more efficient to directly drive the inverter and then use its output to operate a 12 VDC supply to charge batteries. With the higher voltage panels, you get the same amount of power with much less current.

An interesting note is as of this year, 2016, electricity produced by solar panels is the cheapest way to make power. It is cheaper than coal, hydro, and nuclear. Solar panels now create electricity for a cost of less than \$1 per watt ... and this will drop.

In the near future, we could probably become fully self sufficient. For now four panels would give us enough to experiment with.

Approximate cost of above system

Four (4) 340 watt Suniva panels:	\$1,400
Charge Controller:	\$ 510
3 KW Inverter (120/240 VAC)	\$1,870
Total:	\$3,780

**** Note ****

With this system, if the electric utility went down, we would still have power

The costs above were derived from Solar Power vendors found on the internet. I have a feeling, that we have club members who could get us a better price and have experience with installing many of these components.

Ultimately, with the addition of additional panels, we could make this a "Grid Tie with battery backup" system. With this, when the sun is shining on our panels, our equipment would be totally powered by our panels & Inverter. Any extra capacity would go to making our electric meter run backwards (selling excess power back to the utility). If the power utility went down, we would still be powered by our inverters, with the Inverter being powered by the Solar Panels (during the day with sun) or by our batteries (which are charged by the Solar panels). With this system, if we needed more power than our Inverter

could provide, we would automatically draw it from the Power Utility.

We are an organization whose members are above average in the field of electronics and power distribution. We need our equipment, especially our Repeaters to be up and on line 24/7. A system such as described could do this but it could be configured in a lot of different ways. If we decide to pursue this at all, it will require considerable planning. It we were to be successful in this endeavor, it would be quite a feather in our cap. This would be a great way to save money and it would be the ultimate backup power solution.

Finally, in an age where green energy is just beginning to make a substantial dent in our countries total energy use, it's just the right thing to do.

FOR SALE/WANTED

This needs to find a new home. This National HRO M X has a crystal filter works that well on CW and SSB and has been re-capped. The radio dates to 1937 and was used by the English as a German monitor before WW2. This unit was probably part of the lend lease program. I got it from someone that picked it up in England.



If interested, please make offer
Bob Riese, K3DJC riese-k3dj@juno.com

FREE -- 5 band Hex-beam antenna. On a short tower above the roofline. You take down. Needs new wire strung, but all structural elements are sound. Rotator not included. Located in Hellam Township.

Call (717) 252-1054 and leave message.

Thanks, Jay Reich, W3PNZ

MD100 Yaesu microphone \$100.00



LDG Z-100 Plus Antenna tuner \$110.00



LDG YT-100 tuner for use with FT857/FT897 \$140.00



If interested in any of these three items, contact Jeff Patterson, KB3RCT at 840-9895 or e-mail Jdp1964@comcast.net

**** Note: Jeff will Haggle!**

Continued on Page 4



Keystone VHF Club General Meeting Minutes of August 4, 2016 By Sandy Goodman, N3ECF – Secretary

The General Club Meeting held at Keystone VHF Club was called to order by Pres. Mike, N3VQH, at 19:00. There were 31 members.

TECHNICAL HAPPENINGS:

Tim, KB3WZX, reported the he and Ralph, K3HQI, attended the First Night Out activities in Dover. They displayed a radio station, and handed out brochures. Two licensed HAMs and two potential HAMs showed interest.

Craig, WA1HEW, got a first place for CQ Worldwide prefix on RTTY. He operated on low power SSB on 40 meters.

SECRETARY REPORT: Sandy, N3ECF. Jim, N3QZS, moved to accept the July minutes as published, 2nd by Dick, WA3USG. Motion carried.

TREASURER REPORT: Anne, KB3ZLJ, reported for July : Income: \$630.93; Expenses: \$941.96 , including \$258.36 for electric; Balances: Club CD \$7,653.50; Checking Acct \$3,261.83; Trustee Acct \$367.01; Total \$11,282.34.

Don, N3OSO, moved to accept the report. Thierry, KB3TPX, seconded the motion. Motion carried.

COMMITTEE REPORTS:

TRUSTEE REPORT – The grass has been mowed. Will get together soon to take care of other yard care things (moving out rocks, stumps) to make mowing easier.

TECHNICAL COMMITTEE REPORT - Work continued on the dish. Echolink work continues. Th eplan is to allow calls by dialing a node. Jim, K3JIM, and Eric, KB3CNH are discussion their options.

EMCOMM/PUBLIC SERVICE NEWS – This month we have the MS Bike Tour in Gettysburg, followed by the Red Lion Street Fair. In September, we have 3 events that will need operators. Watch for emails for those events.

VE/ED REPORT - Ralph, K3HQI, is working on a list of possible weekend classes for the Technician License.

CONTEST REPORT - This weekend is the UHF contest. Coming up are the September VHF Contest, and the American QSO Party.

NEWSLETTER/WEBSITE – Website is up to date, and newsletter went out. Newsletter will return to monthly distribution next month.

OLD BUSINESS: Trustees need to update the equipment list for the insurance company. Some things need to be removed, others added.

NEW BUSINESS: First readings were done for Barry Johnson, KT4GG, and Caleb Bailey, N3AUO.

GOOD OF THE CLUB –

Berryville Hamfest is this weekend. Jeff, KB3RCT, is going. Mike, N3VQH, and Craig, WA1HEW, will be tailgating.

Tim, KB3WZX, has a couch to replace one in the club house.

Jack, KC3JD, is responding well following his surgery. Attendees were advised to call Kathy or text Jack prior to visiting him.

Keystone Corn Roast is on August 27. Chicken orders will be requested via email.

50-50 Ed, KB3WQI, won \$20.

Adjourned at 19:24.



Spectrum analyzer for sale. Refurbished sells for up to \$3k
Special KVHF Club deal at \$200 for members only. Asking \$300 for all others after offer.

Frequency Range 100Hz-22GHz, 18.6-110 GHz w/HP11970
Total Amplitude Range -134 to +30dBm
Resolution Bandwidths (-3dB) adj in 1, 3, 10 sequence 10Hz to 3MHz

If you like quiet fans, these are fairly loud. The unit powers up and works, but being sold as is, without any guarantees.

If interested, e-mail Cameron Bailey, KT3A
Kt3a@comcast.net

Gang ... I have added one public service event to our 2016 calendar. The Mount Zion Lutheran Church is sponsoring a 3 Mile "Fun Run" to benefit the CPARC Adult Family Home in Boiling Springs. I have set up the course & organized this event. I need five (5) folks to man check point along the 3 mile course. It will be over in an hour and you will get a great Church cooked dinner of Burgers, Dogs, baked Beans, corn on the Cob, and great desserts ... cooked by me of course. You also get a Great T-Shirt. Let me know if you can help, *de Dick, WA3USG*



Ham Question of the month:
What mode is being demonstrated here?

KEYSTONE VHF CLUB OF YORK, PA



W3HZU



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

FOR CLUB USE ONLY	
First Reading Date: _____	Second Reading Date: _____
Date voted IN-OUT: _____	Date Dues Collected: _____
Applicant Sponsored by: _____	