The QUARAE

Volume 19 Issue 10 Editor John Lindvay WB3IFD October 2018

It Seems to Me

The Pennsylvania QSO party is coming up October 13th. I plan on operating from the club station W3GV. Times are 1600Z October 13 to 0500Z October 14, and 1300Z October 14 to 2200Z October 14, 2018. The Nittany Radio Club is no longer running the party. A group of QSO party enthusiasts called the QSO Party Association has taken over. You can find the rules at paqso.org.

The Bonus Station for the 2018 PAQSO Party is N3LI operated by the Nittany Amateur Radio Club who previously sponsored the PA QSO Party for many years and especially honoring Michael Coslo, N3LI, who was the previous PA QSO Party Chairman for thirteen years.

My Technician class at the Red Cross Bldg has started. I have 6 students in the class. After 250 flyers and stops to all the major highschools and libraries I am disappointed that I have only 6 students. Oh well, it is a start.

How does Moses make his tea? Hebrews it

General meeting Minutes For Sept 6, 2018

Began At: 7:00 P.M.

Board Members Present: AD4UL-Doug, KB3ZVH-Richard, WB3DOM-Ron, KC3GBD-Bob, K3PLV-Craig, N1WXQ-Frank

Members Present: WA1YTZ-Rich, KA3CPV-Joe, KC3GBD=Bob, KC3IWD-Wendell, K3PLV-Craig, N1WXQ, Frank, N3DBC-John, KB3DAF-Sam, KC3LXG-John, K1MRK-Mark, WB3IFD-John, KC3DCU-Trish

Program: Verticals to dipoles by KE0OG Dave Casler, WSPR, Laying Ground Radials

New Hams: None

Silent Keys: Robert Hartman KA3B

Visitors: Mark K1MRK

Treasurer's Report: $1875.95 in checking, Paid $43.37 Electric Bill, $82.00 for post office box

Facilities Report: Painting of building still to be done, Ramp was painted

Repeater Report: Still waiting for report on repeater system from subcontracter

Public Service: Marathon 9-13-2018, Run for Recovery 9-22-2018

Contesting Report: PA QSO Party 10-13-2018

Old Business: None

New Business: K1MRK-Mark Voted in as new member!

Meeting End At: 7:27 Followed by Program

Submitted by Secretary KB3ZVH Richard Quinn

Why were the Indians here first? They had reservations.

3D printed parts for ham radio

By Dan Romanchik, KB6NU

One of the things that I keep telling myself that I need to learn how to do is 3D printing. This morning, I ran across a couple more 3D printing projects for ham radio that I thought I'd pass along. The first I found on reddit: 3D Printed Parts for

Portable Tape Measure Yagi Designs The summary on Thingiverse which is a website where “makers” share their designs, says: "These parts are made for use with 1-in. PVC pipe and 1-in. Harbor Freight tape measure

l. You can use electrical tape to attach the element holders to the side of the pipe, and use the driven element bridge to give structural rigidity across the driven dipole element. I have used this with up to 5 elements on 2m with good success. When not using the antenna, just pinch the elements to remove them from the holders, and store them INSIDE the tube! you can add some end caps to make this ultra portable. Use these parts with any of the multitude of tape measure YAGI design guides online." Here’s a look at an antenna made with these parts: The element holders are attached to the boom with electrical tape in the photo above. While I haven’t tried it, I’d suggest that the antenna might be a bit more robust if you could screw or perhaps glue the holders to the boom. There are lots of other cool amateur radio 3D printing projects available on Thingiverse. Browsing through the list quickly, here are just two that look like they might be useful to me: • Soldering Fingers and a case for the µBitx I bought. This looks like it might get me started. Finally getting in gear Last week, I attended a 3D printing class at our local maker space, All Hands Active (allhandsactive.org), and now I feel like I can finally attempt a 3D printing project. I'm thinking about starting out with the simple Soldering Fingers project. If that goes well, I'll try a Raspberry Pic case and finally start using that in the shack. And, while these projects all seem pretty cool, I feel like I'm only scratching the surface. Have any of you 3D printed anything cool for your ham radio projects? Is there another source of designs for ham radio 3D printed stuff besides Thingiverse? ------- When he's not 3D printing enclosures for his ham radio projects, Dan blogs about amateur radio, writes exam study guides (www.kb6nu.com/study-guides), and operates CW on the HF bands. Look for him on 30m, 40m, and 80m. You can email him about your experiences with 3D printing at cwgeek@kb6nu.com.

When you get a bladder infection urine trouble.

What If The Internet Went Down?

The Internet is about 20 years old, yet we depend on it as if it was an amendment under the Bill of Rights. It has given a quantum leap in knowledge to half of the world’s population. Probably each one of us is concerned about content, speed and how it changes all facets of our lives including our jobs. The pace of change seems to be accelerating.

I have taken very small excerpts from the well written articles listed below. They are probably the most frightening articles I have read in 10 years. We can safely presume many more hacks and viruses have made their way into our computers without becoming public knowledge. The full articles below are available on Wired Magazine and the Wall Street Journal online or mobile. Search the title and publisher for the full article (a subscription may be required to view the full articles).

The . . . hackers . . . broke into supposedly secure, “air-gapped or isolated networks owned by utilities with relative ease by first penetrating the networks of key vendors. . . “They got to the point where they could have thrown switches” and disrupted power flows, . . .

The Code That Crashed the World, *Wired Magazine*
Ukraine and Russia have been in an undeclared war for five years. Bent on destruction Russia released a

fast spreading malware called “NotPetya” along with a penetration tool called “EternalBlue” created by the NSA. Maersks, one of the top shipping companies in the world, operates in 130 countries was an unintentional victim when it spread to their computers:

I saw a wave of screens turning black. Black, black, black. The digital phones in every cubicle too, had been rendered useless . . . stopped to refuel his car and found that the gas station’s credit card payment system had been taken out by NotPetya too. . . “They couldn’t get their containers in and out of the gate . . . Soon hundreds of 18-wheelers were backed up in a line that stretched for miles outside the terminal. . . The result was more than $10 billion in total damages . . .

What happens if the Internet stops?

I would imagine a small population segment will go into a catatonic state until it is fixed. There will probably be no GPS so planes will land and drivers will get lost. All systems associated with a computer network are subject to at least a temporary failure. The intentional destruction of war has been part of history for thousands of years. The next war will be likely centered around hacks, viruses, and destruction of the internet and satellites.

I have visited Russia and love the country and the people I met. They have a huge heart produced by sorrow and tragedy we can only imagine by studying history. You can safely assume that hacking isn’t limited to one country. The U.S., China, North Korea and many more countries are quite talented when it comes to manipulating the Internet and its dependencies.

All radio is critically important until we have weathered a few major Internet failures and the already identified threats have been successfully mended. In the meantime, I would follow FEMA’s survival check list. I would also have a CC Skywave SSB radio because it has Single Side Band.

From a Bob Crane advertisement

Broken pencils are pointless.

Highlights of the Antique Wireless Association Meeting.

Frank M. Etzler, N8WXQ

I attended the AWA meeting, which was held in the Rochester, NY area from August 14-18. The AWA meeting consists of several parts. The parts include Technical Talks; A Book Fair, where rare books are available, Flea market where antique and not so antique electronic devices are sold, and an Auction. There are also several social events. Further information on the AWA can be found at their website, http://www.antiquewireless.org/ . The AWA museum is a world class electronics museum with many interesting exhibits. The museum is located at Antique Wireless Museum, 6925 Route 5, Bloomfield, NY 14469. The Museum's hours are Tuesday 10:00 AM to 3:00 PM and Saturdays 1:00 to 5:00 PM. Talks that I found to be especially interesting included a talk on early vacuum tubes, many of which predated radio. A talk about Charles Jenkins, who was an early pioneer in mechanical television, was also presented. Jenkins earliest activities with television date back to 1925. (D.G. Godfrey, C. Francis Jenkins, Pioneer of Film and Television (History of Communication), University of Illinois Press; 1st edition, 2014). Bill Burns had an interesting discussion regarding the laying of the first underwater (marine) cable. (see Bill’s website, http://atlantic-cable.com/ , for a lot of interesting material. Eric Weenas gave a talk on the Loomis wireless telegraph (1866). Eric’s careful

experiments suggest that Loomis' device was incapable of sending telegraphic messages. I will talk on this in the future. Mike Molnar gave at biographical talk on Jack Poppele who was an early broadcast engineer with WOR (New York City area). Jack also made great contributions to the Voice of America. In 1936 he was instrumental in outfitting FDR's car for sound. Jack's daughters have donated Jack's scrapbooks and notes as well as a Jenkins Radiovisor (Television), originally presented to Jack by Allen Dumont in 1926, to the AWA museum. Below are some rare items seen at the AWA meeting. I hope to see you at the meeting next August.

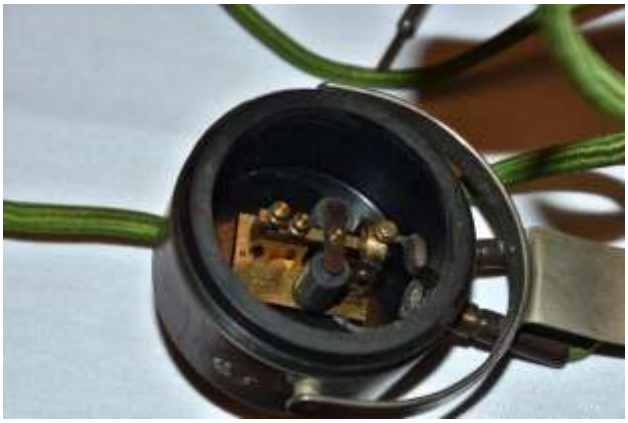

Fig. 1 Telegraph Earphone. Note tiny sounder in earphone.

Fig 2. Receiver for demonstration wireless telegraph. This device used pulse modulation similar to an old telephone to determine the letter.

Figure 3. Spark transmitter for the demonstration telegraph. Receiver is in Fig 2.

Fig 4. Jenkins Radiovisor originally presented to Jack Poppele by Allen Dumont in 1926. This is the television section. There is also the radio receiver and a horn speaker. This device uses a rotating drum and not a typical Nipkow disk.

Fig. 5 Jack R. Poppele Voice of America Transmitting station located in the AWA museum. Equipment was made by Collins Radio

Radio Calendar

October 2 – Corry Amateur Club Meeting

October 4 – Radio Association of Erie Club Meeting

October 6 - California QSO See www.cqp.org

October 8 – Columbus Day

October 9 – Wattsburg Wireless Association Club Meeting

October 11 – Union City Wireless Association Club Meeting

October 13 - Nevada QSO Party See nvqso.com

October 13 - Pennsylvania QSO Party See paqso.org

October 13 - Arizona QSO Party See www.azqsoparty.org

October 13 - South Dakota QSO Party See www.sdqsoparty.com

October 15 - ARRL School Club Roundup See arrl.org/school-club-roundup

October 15 – Conneaut Club Meeting

October 20 - New York QSO See www.nyqp.org

October 20 – VE Session

October 21 - Illinois QSO Party See www.w9awe.org/ILQP.html

October 27 - ARRL EME Contest See www.arrl.org/eme-contest

October 27 - CQ Worldwide DX Contest, www.cqww.com

October 27 - **Shootout at the OK Corral** Oro Valley Amateur Radio Club. Certificate. Email, to, qsl@tucsonhamradio.org. Email requests only. No paper QSLs, please. See www.tucsonhamradio.org

October 31 – Halloween