



MEGAHERTZ TIMES



August 2022

W3AI

PO Box 336, Perkasio, PA 18944

R F Hill Amateur Radio Club 2022

President: John Morell KB3EWW

Vice Pres.: Cary Binder NI2Q

Secretary: John Stewart WA3JRS

Treasurer: Charles Schmell KS3Z

News Editor: W3WTT, Bill Tribley
bill@tribley.org

CLUB INFORMATION

Mailing address:

PO Box 336, Perkasio, PA 18944

Club Repeaters: 145.31 MHz; input
144.71 MHz PL 131.8 (2 meters)
444.75 MHz, input 449.75 MHz PL
103.5 (70 cm)

Meetings: The club normally meets
at 7:30 PM on the last Thursday of
the Month

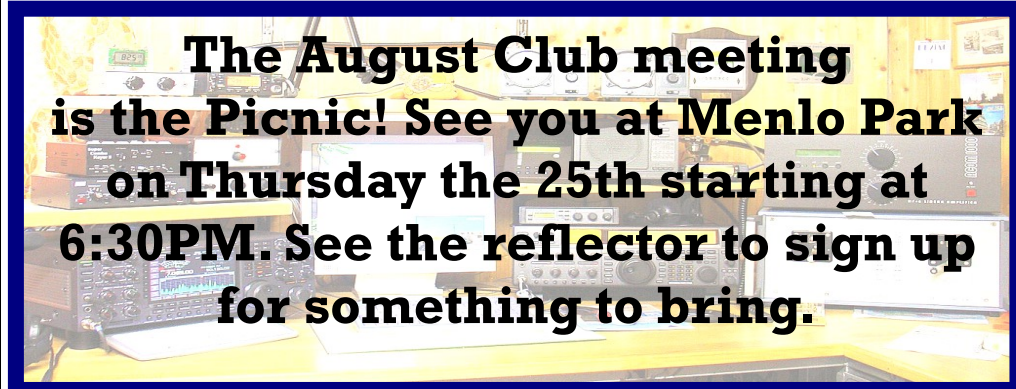
Web page: <http://www.rfhillarc.club>

Email: rfhillarc@yahoo.com

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DEADLINE for article submission is 10 days before the meeting! Please submit in Open Office (.odt) or MS Word (.docx) format.
Send to bill@tribley.org

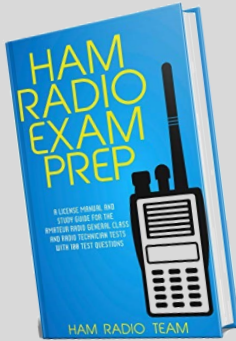


Due to the Covid-19 threat, Peter Becker, as well as most senior living facilities, have closed their campuses to visitors. The administrator at PBC will let us know when that changes.
Stay safe and best 73, Jim Soete, WA3YLQ, Past Secretary



RF Hill Amateur Radio Club
W3AI

VE TESTING



VE testing for Technician, General and Extra Class licenses is held at 6:00PM at the Indian Valley Public Library in Telford:

100 E Church Ave.
Telford, PA 18969

Scheduled VE Exam Sessions

- *September 19*
- *November 21*

Direct questions to Kevin KW3P at kw3p@arrl.net or by cell phone at 215-378-6978.



Highlighted Nets

SEPPTN traffic nets are on Sundays & Wednesdays at 8:00 PM local time at 145.310 MHz (-600). These nets are for anyone who would like to learn how to handle traffic as well as an on the air meeting place for members and future members.

RF Hill A-R-C Ten Meter AM Net: 29.005MHz on Sunday evening immediately following the SEPPTN

RF Hill CW Squad Net: Operates on 28.370.600 CW at approx. 7pm Tuesday stopping before the NPARC net at 8pm. This is a non formal CWs - slow speed - net for beginners and ranges in speed from 5-15 wpm.

Net Control Stations

08/28, 08/31 WA3YLQ
 09/04 KS3Z
 09/07 W3WTT
 09/11 KS3Z
 09/14 W3WTT
 09/18, 09/21 KB3DEN
 09/25, 09/28 WA3YLQ
 10/02 KS3Z
 10/05 W3WTT

Apologies to KB3DEN for misplacing the schedule he had sent me for last month. – ed

Any questions or conflicts, please let me know. If at the last minute, the assigned net control station doesn't show-up, any net control station on frequency should run the net.

Thanks to everyone for your continued support.
Jim – KB3DEN KB3DEN@aol.com

AREA NET LISTINGS

SEPPTN Southeastern PA Practice & Traffic Net	Su/W	8 PM	145.31-
EPAEPTN - EPA Emergency Phone/Traffic Net	Daily	5 PM	3.918 +/-
Pennsylvania Traffic Net (CW)	Daily	7,10 PM	3.585
Third Region Net	Daily	4 PM	7.243 (3.917 –alt)
Eastern Area Net (EAN)	Daily	2:30 PM	7.243
Bucks County ARES	W	9 PM	147.090+
Montgomery County ARES	Th	7 PM	146.835- (pl 88.5)
EPA echo link traffic net (EAETN) Echolink AA3RG-R	Th	8 PM	146.640- (pl 82.5)



Find us on Facebook and Twitter

Join the conversation.

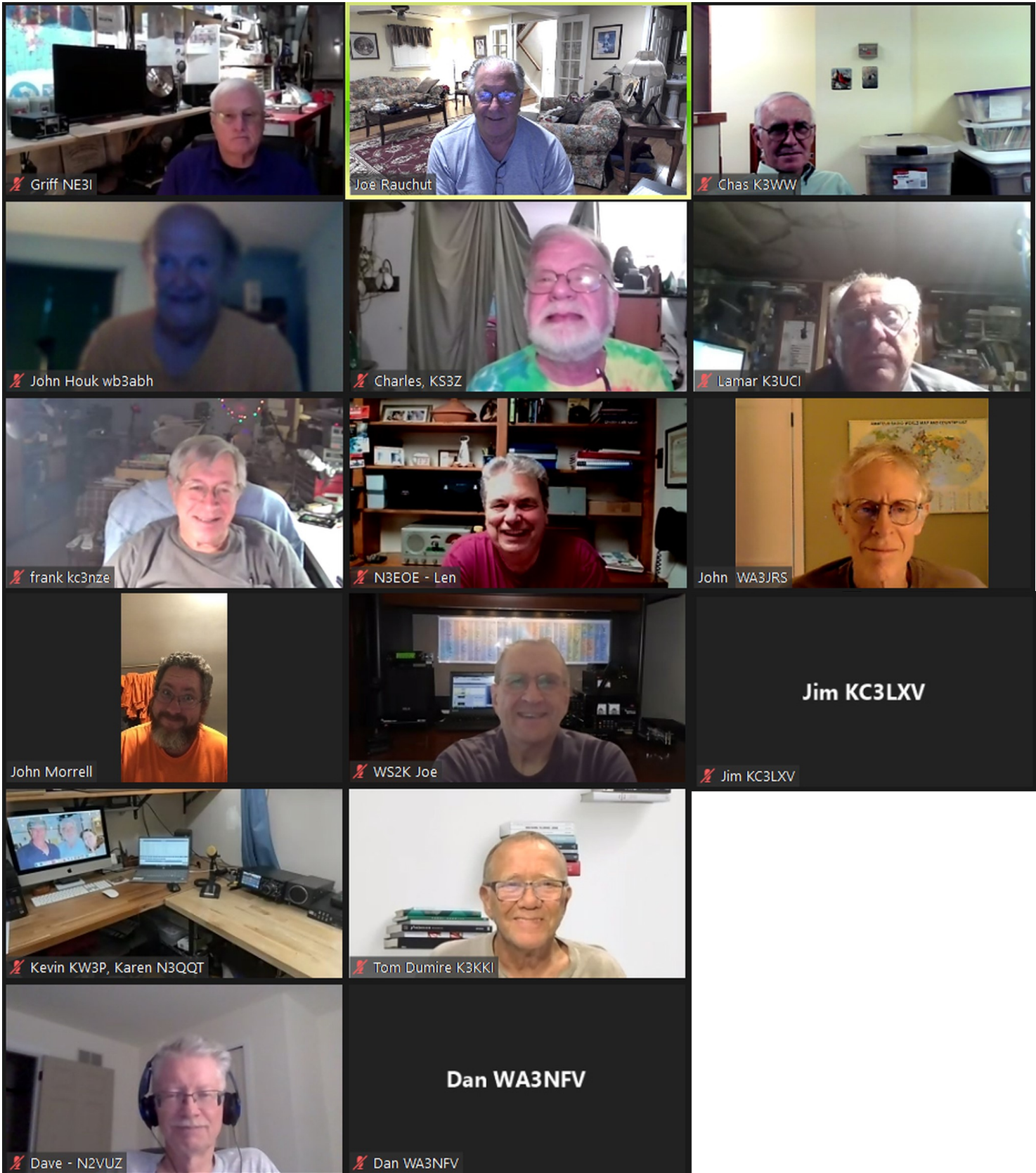
Follow us today!

<http://facebook.com/rfhillarc>

<http://twitter.com/W3AI>



July Zooming



Screen shot courtesy Joe N3CRP and the smiling cast of characters.
Great look this month! -ed.

FEDS Outing Green Lane Aug. 7



NE3I “Buddy Stick” Used for 25 Watt CW QSO with a Florida POTA station via southernly path over Green Lane Reservoir.

The FEDS “Troubleshooting Team” (Left to Right: Len N3EOE, Dan WA3NFV and Todd W3TFF seated) that field aligned Todd W3TFF’s Nano Type Analyzer for successful analysis of the W3TFF End Fed Half Wave (40M) Antenna.

Note the gray 49:1 Unun Kit Todd built at the bottom center. NE3I’s old MFJ Analyzer subsequently confirmed that Todd’s EFHW was resonant on 40, 20 and 15 and that NE3I’s Home Brew 49:1 Unun (not shown), functioned as well.



Gene, W2GXR also set up on site and rounded out the 5 man expedition. Though only a limited number of QSOs were completed, 5 portable stations plus walkie talkies were operational and tested in a short period of time.

73, Griff NE3I

Frequency Display for Old Rigs

by David Carroll, N2VUZ

This started with John (N3HGX) discovering a nice frequency counter unit that would display the frequency of a signal fed to it and could offset that frequency to account for any IF frequencies in a receiver or transceiver. If frequencies can be selected from 0 to 99.9999 Mhz. The model is PLJ-6LED or PLJ-8LED. There are other units that do this but this one is fairly inexpensive. He bought one and he told Dan (WA3NFV) about it (who bought one) and Dan told me (and I bought one). Amazing how that works! It comes in two varieties - 6 LED digits or 8 LED digits. It specifies an operation power supply of 9 - 15 VDC. This unit is about \$15 - \$20 depending on where it was bought. I bought the 8 digit version. See Fig. 1 and 2.



Figure 1



Figure 2

The manual is available online. If you can't find it, let me know and I can supply the pdf I have. It has several options that can be set by using the two push buttons on the front. Fairly straight forward to operate. It has two connections (two pin connectors), one for input and one for the power supply. It claims 0.1 Mhz - 60 Mhz on the low channel and 20 Mhz - 2.4 Ghz on the high channel. I have my doubts about the high channel.

I decided to attach it to my Knight R-100 all tube receiver to try out. The Knight is a single conversion receiver (it has a 455 KHz IF) and I had just re-capped it and performed an alignment on it. The first issue was how to pick off the local oscillator. I tried first to wrap a loop around the mixer/osc tube (6BH8) tube. See Fig. 3. The mixer/osc here is the one with the shield on it and buried partially in the metal chassis. This did partially work but because of the shield, etc. it would only consistently work on two bands out of four. And I did not want to remove the shield and cause more issues.

So, plan B. I removed the 2 pin connector on the input of the counter and replaced it with an PCB mount SMA. The traces for the two pin connector matched exactly to the spacing of the SMA. See Fig. 4 and 5. I then made up a cable using RG174 with an SMA on one end. I then attached the other end of the cable to a 20 pf cap directly to the oscillator plate with the ground shield attached near the tube using a screw mounted 2 pin terminal. See Fig. 6. - continued on the next page ->

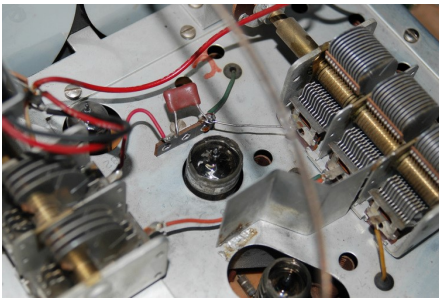


Figure 3

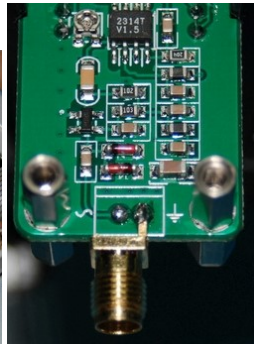


Figure 4

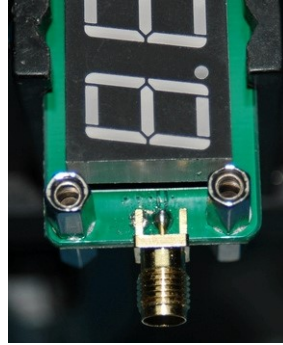


Figure 5

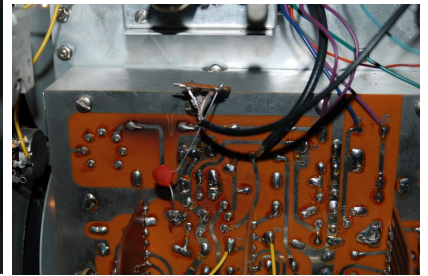


Figure 6

This worked better but still had areas in one of the bands that did not work correctly. I also added a rectifier plus to two electrolytic capacitors attached to the 6.3 AC volt filament transformer using another screw

mounted two terminal strip using a twisted pair of wires. See Fig. 7. Decided to change that to RG174 afterwards. That would provide more shielding. Routed the RG174 though the opening for the AC cord. See Fig 8. The counter has a 7805 regulator IC on the board and it ran just fine with this type of power supply.

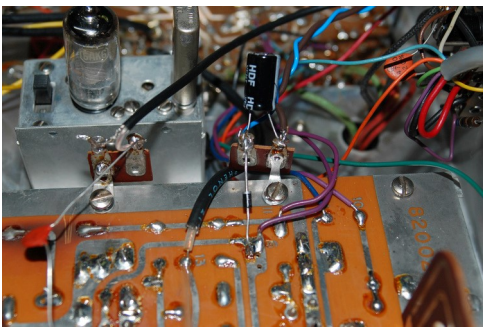


Figure 7



Figure 8

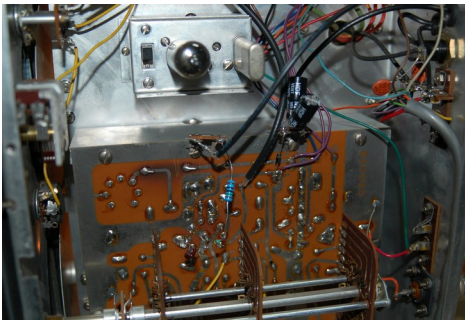


Figure 9



Figure 10



Figure 11

Finally after some experimenting and analysis of the signals from the oscillator plate, I ended up with a 15 pf cap in series with a 4.7 uH inductor and a 150 ohm resistor. See Fig 9. This operated the counter in all the bands with no errors.

I then ordered blue Acrylic sheet plastic because even on the lowest brightness setting, it was still too bright. The unit comes with mounting standoffs, so I cut the plastic to fit. I then glued another piece at right angles to the first. Because of the heat given off by the tubes I mounted ceramic standoffs on the bottom piece so it can now sit on top of the receiver. See Fig. 10 and 11. The final schematic is in figure 12.

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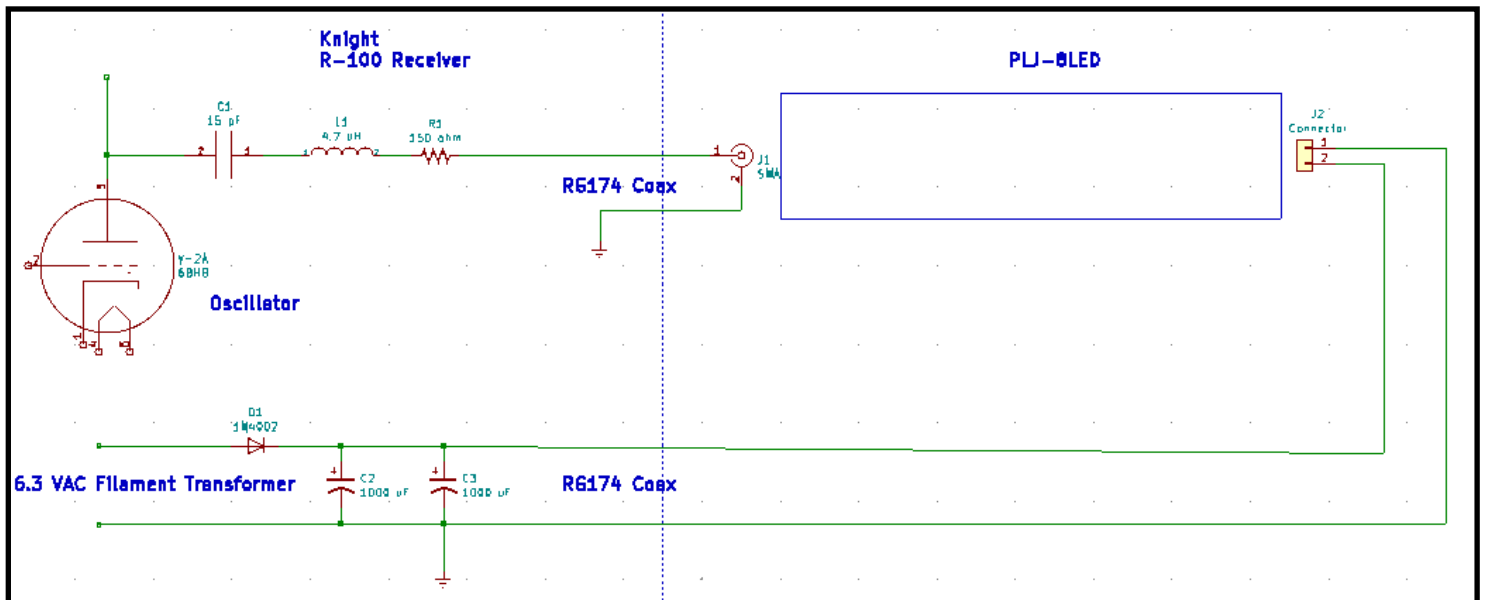


Figure 12 Schematic Diagram

This turned an old tube model boat anchor into a relatively accurate receiver. It does drift as expected but this counter made the this receiver come back to life as very usable in today's world. As you can see from the final pictures, it is accurately tuned to CHU Canada and because of the counter, I can tune very quickly to these time stations even with the frequency drift of the L0.

This of course can be added to most old tube receivers (and I have a lot of antique wooden cabinet receivers) or transceivers. Future plans of course, if I can get to them.

As always, I can help anyone to do this and I would encourage it. I can be contacted though the reflector or QRZ. This also goes for the previous article on the battery testing.

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Antenna Day Announcement

RF Hill ARC Fall Antenna day will be held on September 10, 2022 from 10:00AM until whenever. Meet at Markey park (field day site).

Everyone is welcome; bring anything you've been planning or working on. Got a rig you want to test out on something different? The club trailer and all its goodies will be there. Feel free to ask questions!

John Kb3EWV

RF Hill SEPPATN July Report

QNI = 91

QTC = 6

In 9 Sessions. That's a little over 10 Check-in's per session!

73's, Jim KB3DEN

July 28 RF Hill ARC Meeting Minutes

Attendees:

WA3JRS	KW3P	K3KKI
WA3NFV	WB3ABH	KC3NZE
K3WW	KS3Z	N3EOE
KB3EVW	K3UCI	N3CRP
N2VUZ	KC3LXV	W3RKL
NE3I	WS2K	

*No extra-club presentation was given tonight, in lieu of Field Day discussion.

The Zoom meeting started around 7:30 PM by John KB3EWV.

John highlighted tonight's topics:

Welcome

Field Day

Auction at the next Club meeting:

8/25 at Menlo Park

Food needed (several members have already declared what they will bring)

Antenna Day (some time in August at Markey Park; date TBD or announced later)

Treasurer's report was given by Charles KS3Z

No new income since last meeting, however, the \$100 deposit for Field Day (Markey Park) to be returned.

Upcoming expenses:

Picnic permit (one time)

GoDaddy hosting (yearly)

Mercer insurance (yearly)

All accounts in good standing

(All dollar amounts presented at the meeting redacted for distribution in the minutes)

Motion to accept the report made by WS2K, 2nd by K3KKI; Approved by majority vote.

Repeater report was given by Charles KS3Z

The Water Authority gave the Club a new lease on the same location, so the hunt for a new location is off for now with the following (among other) stipulations: proof of liability insurance (\$1M/\$2M), the equipment must be kept in good repair and any service must be performed by a certified person, a yearly fee of \$200 to be paid @ \$50 per quarter, written notice to the Water Authority to access the facility will be required.

Motion to accept the lease made by KW3P, 2nd by N3EOE; Approved by majority vote.

Reflector report given by Charles KS3Z

Access for nine unpaid club members have been removed from the repeater. Ample notice and leeway was given to the individuals before removal.

Program Committee report - Cary NI2Q was not present at the meeting, however, discussion of the recent Field Day results was held instead.

Here are some stats for club:

393 CW contacts

309 phone contacts

1091 points awarded

The Club operated Class 4A, Section EPA. (See <https://field-day.arrl.org/fdentriescrvd.php>)

Web Site report given by Dave N2VUZ

Nothing new to report.

Newsletter report – Bill W3WTT was not in attendance.

Membership report given by John WA3JRS

Second readings for Ned Smith NQ3Z and Dan Rose N3LLK will be at the August club meeting.

Adjournment

With no further new or old business John asked for a motion to adjourn; motion made by KS3Z and 2nd by KW3P; motion approved by majority vote and the meeting was adjourned around 8:30.

Minutes submitted by John Stewart WA3JRS, Secretary

NEW LOCATION!!!



HAMFEST 2.0



RF HILL AMATEUR RADIO CLUB

Admission
\$6.00

SUNDAY, OCTOBER 16, 2022

RAIN OR SHINE

Talk-in
145.31-
PL 131.8

AT THE UPPER COUNTY CAMPUS OF THE BUCKS COUNTY COMMUNITY COLLEGE

Blooming Glen Road, Perkasie, PA 18944

GPS Coordinates: Latitude 40° 22' 53" N, Longitude 75° 16' 31.8" W

Gates are open 7:00 AM to 1:00 PM for the General Public


Opens - 6:00 AM for vendors • No overnight parking at the College


 **FREE PARKING !!!**

 **Vendor spaces – Spaces DO NOT include admission.**

INDOOR: 8'w x 6'd with 8' x 30" table - \$12 each – 5 or more tables \$10 each.

OUTDOOR: approx. 9' frontage, first come, first served on Sunday - \$8 /space.

 **VE testing: Inside. Begins at 10:00 AM sharp. *Come ready to upgrade!***

 **Food available**

 **Door Prizes drawn throughout the day (Must be present to Win)**

Ham Equipment, Computer Hardware and Software flea market

For Hamfest information contact:

John Morrell, KB3EWV

215-399-7685

Email: john@morrellfamily.net

Club website: www.rfhillarc.club



See other side for maps & directions

**** Non-ham spouses and kids are free**

Map to the R F Hill Hamfest



Directions to RF Hill Hamfest:

From the North: I-476 south to Quakertown Exit 45; turn left on PA 663N to Quakertown. Continue straight on PA 313 east through Quakertown Turn Right on Fifth Street (2 gas stations on left, follow in to second light, turn left onto Blooming Glen Road

From northern New Jersey and New York Metro area: I-78 West to Exit 60A. Follow PA 309 South. Turn left ont Rt. 313 Ease, follow directions above.

From Central New Jersey: US 202 South to PA 313 West past Dublin to Fifth Street, Perkassie. Follow directions above..

From Philadelphia: PA 309 North to Sellersville Exit (at CarSense, immediately before expressway) Go straight to Sellersville Turn Right on Rt. 152, to Walnut Street(Perkassie) Turn left on Walnut, right on Fifth Street(at light). Follow Fifth St. north to 3rd light (Blooming Glen Road), Trun right..