



# MEGAHERTZ TIMES



March 2022

W3AI

PO Box 336, Perkasio, PA 18944

## RF 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

**The March Club meeting will be held Thursday the 31st at 7:30 PM via Zoom.**

**Invitations will be sent out via the IO reflector. See you on Zoom!**

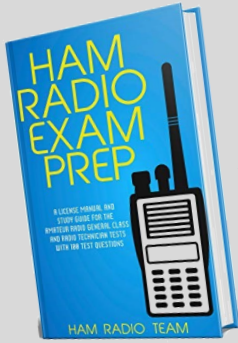
**Mystery program: No details received at the time this issue was being put together. So there's some extra motivation to show up on Zoom and see what's cooking!**

**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

- May 16
- July 18
- September 19
- November 21
- 

Direct questions to Kevin KW3P at [kw3p@arrl.net](mailto: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

03/27 KS3Z	06/05, 06/08 WA3YLQ
03/30 W3WTT	06/12 KS3Z
04/03, 04/06 KB3DEN	06/15 W3WTT
04/10, 04/13 WA3YLQ	06/19 KS3Z
04/17 KS3Z	06/22 W3WTT
04/20 W3WTT	06/26, 06/29 KB3DEN
04/24 KS3Z	07/03, 07/06 WA3YLQ
04/27 W3WTT	
05/01, 05/04 KB3DEN	
05/08, 05/11 WA3YLQ	
05/15 KS3Z	
05/18 W3WTT	
05/22 KS3Z	
05/25 W3WTT	
05/29, 06/01 KB3DEN	

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](mailto: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)



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# March 28 VE Session

Four candidates tested for technician privileges and all four passed. There were 6 volunteer examiners present. Kevin KW3P

Thanks to Jesse N3RSG for the photos!



# The WA3NFV/B 10 Meter CW Beacon Transmitter

by Dan Mitten, WA3NFV

The basis of my 10 Meter CW Beacon transmitter is an old Pace 23 channel CB base station, model CB 162 (See Fig 1.), which is very compact. Since it is a base station it includes a 120 VAC power supply and presumably can work from 12 VDC, as well. The built in power supply and size had much to do with the radio selection.



Figure 1

Very little is known about the radio including this particular radio. I have no schematic or other documentation, although at the time of the conversion I did a very thorough search of the world wide web. The radio was purchased on eBay as a parts radio and the seller was far more interested in selling parts than a radio. The unit was simply thrown into a box, taped closed and shipped. When received, part of the radio was protruding from the box and the rear of the radio was very seriously bent up. The radio was stored after attempting to straighten the rear panel as best I could. Dismayed, I had lost interest at that point.

After about three years I became recommitted to the project. I don't believe the radio was received with a power cord or if it was, it wasn't the right one or was faulty. I managed to fashion a plug for the radio end of the cord, and shorted the AC / DC switch for AC

operation. The radio was not functional initially, as one of the oscillators was not running and the transmit indicator lamp was intermittent. The oscillator needed alignment as part of the conversion so, nothing was lost.

Since the beacon radio is not intended for receive operation the ANL switch was removed from its circuit and rewired to the PTT circuit at the microphone connector, thus providing a means for putting the transmitter into stand-by. When placed into stand-by, the receiver is functional and has no problem hearing beacons on nearby frequencies.

The conversion and modification of the radio requires that all of the RF circuitry in the transmitter is aligned for the 10 Meter amateur radio band and more specially, 28.270 MHz. The radio uses crystal mixing as the method for frequency generation. I successfully located a crystal at a frequency that when mixed with one of the existing channel 12 crystals, would produce an output very near my assigned frequency of 28.270.0 MHz. A small trimmer was added to the crystal oscillator circuit which allows for trimming to the exact frequency. Post conversion the transmitter produced 6 Watts at the desired frequency, utilizing the onboard AC power supply.

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Remember, the radio was originally intended for the AM mode, not CW and has no provisions for CW. I chose the transmit mixer as the stage to be keyed, thus allowing CW to be successfully transmitted. It seemed reasonable to assume that the current would be low in that circuit and that backwave might be reduced over that of other stages of the transmitter. Finding the mixer circuit without a block diagram or schematic was somewhat difficult, but I ultimately prevailed in locating it, and the associated emitter circuit wiring. I simply removed the emitter bias resistor at the ground return end and added a small value RF bypass capacitor to that lead.

The actual keyer is a unit readily available from eBay and Amazon for under \$30, it seemed the best way to go and I think it was. The keyer goes by model MX-K2 CW Keyer (see Fig. 2). You need only open the case (four screws) and install two AAA batteries and supply one cord for the radio and one for the key.



Figure 2

The keyer has a provision for “can't stop automatically”, which I have determined to be Chinese-English for continuous operation! All of the programming is done by sending Morse code characters to the unit, in the correct order, with the key. Once it is programmed you simply press the memory button and send the message to be remembered, press the button again to indicate it is complete and the message is saved. Those that know me, know that I couldn't send “SOS” in Morse code to save my life, so getting the actual message into memory is a real chore! In addition to saving the message, it is very important to do it with well executed spacing and lengths of the dits, dahs and characters, assuming you expect the computerized skimmers to decode the beacon call sign.

Operation requires attaching power, keyer and antenna, turning the unit on, taking the radio out of stand-by, starting the keyer and verifying operation. Reception reports follows! That's it! The unit has now been operating for approximately six thousand hours, since first activated.

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## Website Report

The web site has been updated to include the new board members, updated year heading, and latest MHZ Times. In the past month we had a approximately one day intermittent outage due to our hosting service. This has now been resolved.

Dave N2VUZ

## RF Hill SEPPATN Report

For February 2022:

QNI = 72

QTC = 5

In 8 Sessions

Jim KB3DEN

## What's Up with "Ham" Radio?

Ever wonder why radio amateurs are called "hams"? The word "HAM" as applied to 1908 was the station CALL of the first amateur wireless station operated by some amateurs of the Harvard Radio Club. They were ALBERT S. HYMAN, BOB ALMY and POOGIE MURRAY. At first they called their station "HYMAN-ALMY-MURRAY". Tapping out such a long name in code soon became tiresome and called for a revision. They changed it to "HY-AL-MY", using the first two letters of each of their names. Early in 1901 some confusion resulted between signal from amateur wireless station "HY-ALMU" and a Mexican ship named "HYALMO". They then decided to use only the first letter of each name and the station CALL became "HAM".

Thanks to Cary NI2Q for sending the link to this article which may be found in its entirety at <https://vigyanprasar.gov.in/what-is-ham-radio/>

# RF Hill ARC Feb. 24 Meeting Minutes

## Attendees:

K3ALV	KW3P	NQ3T	WA3NFV
K3KKI	N2VUZ	W2GLF	WA3YLQ
K3UCI	N3EOE	W3EX	WB3ABH
KC3LXV	N3HGX	W3RKL	WS2K
KS3Z	NI2Q	WA3JRS	Pat Wilson-Schmid

The meeting was called to order at 7:35 PM by Cary NI2Q (Vice President), in the absence of John KB3EWV (President).

The corrections to the previously amended meeting minutes were accepted. Motion to approve by Len N3EOE, 2nd by John N3HGX; Approved by majority vote.

**Treasurer's Report** was read by John WA3JRS

All accounts are in good standing.

Motion to approve the report by KC3LXV, 2<sup>nd</sup> by WA3NFV; Approved by majority vote.

**Program Committee Report** given by Cary NI2Q

Cary has contacted NASA and the plan is to have one of the astronauts give a presentation at the April or May (2022) Club meeting on the topic of International Space Station (ISS) communications. Exact date not yet determined. John WA3JRS suggested possibility of contacting Barry Feirman K3EUI to give a presentation on using the new, very inexpensive Network Vector Analyzer (VNA). Barry has given several iterations of his presentation to various amateur radio clubs. Cary will reach out to him.

**VE Committee Report** given by Kevin KW3P

No new people have signed up for the next session, scheduled for the last Monday in March.

**Repeater Report** given by Charles KS3Z

There has been no movement of the repeater equipment from its current location, Perkasi Regional Authority tank, yet. The original deadline given by the township to move the repeater was the end of February, 2022. Charles and Dan had requested a 1 month extension to allow time to secure a new location for the repeater. As far as known now, there is no immediate problem with staying there another couple months.

An engineering study is needed by the County of Bucks to consider placement at its facility on Tower Road, and the Club needs to identify the costs and fees needed to cover the installation. Charles has tried multiple times to contact the engineer who previously provided the engineering study but that engineer has been unresponsive. Charles requested that if anyone is aware of a qualified structural engineer to please contact Charles with that information.

Physical and environmental requirements for the shack are approx. 3' x 3' space, a single 15 amp circuit and moderate temperature control. Charles reported that Bob Nice has removed the non-ham related gear from the current repeater shack.

Dan WA3NFV will contact Pennridge Airport to inquire about hosting the repeater.

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# Feb. 24 Meeting Minutes Continued

## **Web Site report** given by Dave N2VUZ

Dave updated the web site with the list of new Club officers as of the January elections. He is having some annoying issues with the GoDaddy hosting site. Dave passed one new contact request for general ham radio information that came through the web site to John WA3JRS. John has reached out to the new person with the requested info.

**Newsletter Report** – Bill W3WTT was not in attendance to give any updates.

## **Audit Committee Report** given by Len N3EOE

Len said the most recent audit of the Club's financial records showed that the records were complete and accurate. Len thanked Kevin KW3P and Joe WS2K for their service on the Audit Committee, and thanked Jim KC3LXV for his excellent record keeping.

**Field Day/Hamfest updates** – John KB3EWV was not in attendance to report.

## **SEPEATN Net Report** given by Charles KS3Z

The net operations are proceeding well and made a call for additional volunteers for Net Control for some of the nets.

## **CW Net Report** given by Len N3EOE (in lieu of Griff NE3I, who was not in attendance)

Len said the net has been sparsely attended as of late but hoped that activity would resume.

## **10m Net Reports** given by Dan WA3NFV

Dan said the 10m SSB net on Tuesdays is continuing well with many topics being discussed; John WA3JRS said attendance is down a bit for the 10m AM net on Sunday nights; also, John is unavailable for net control for 10m AM net control duties on 2/27 and 3/6, but that Geoff KC3HEQ and John N3HGX may be able to step in (as they have done very nicely) for those nights.

## **New Business**

### **Membership Report** given by Len N3EOE and Jim KC3LXV

52 members paid and up to date, 12 members not paid but have been contacted; 1 of those 12 has responded.

A first reading for membership application by Brian N3EXA was made by the Secretary.

A second reading was made for Gary W2GLF. A motion to accept was made by Charles KS3Z and 2<sup>nd</sup> by Kevin KW3P. A majority vote approved Gary's acceptance. Welcome, Gary!

## **Adjournment**

With no further new or old business Cary asked for a motion to adjourn; motion made by Len N3EOE and 2<sup>nd</sup> by Joe WS2K; motion approved by majority vote and the meeting was adjourned.

Minutes submitted by John Stewart WA3JRS, Secretary