



# MEGAHERTZ TIMES



January 2021

W3AI

PO Box 336, Perkasio, PA 18944

## RF Hill Amateur Radio Club 2020

**President:** KC3HHK,  
Jeff Lapin

**Vice Pres.:** KB3EWV,  
John Morell

**Secretary:** WA3YLQ,  
Jim Soete

**Treasurer:** KC3LXV,  
Jim Reed

**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!  
Send to rfhillarc@yahoo.com

**The January 2021, Club meeting will  
be held Thursday, January 28th, at  
7:30 PM via Zoom.  
Tom, W3EX, will be our Moderator.**

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

**Show up and vote for 2021 Officers!  
(Make sure you paid your dues...)**

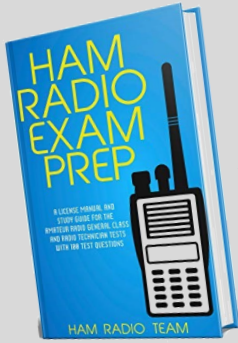
**Due to the Covid-19 threat, Peter Becker, as well as  
most senior living facilities, have closed their campus-  
es to visitors. The administrator at PBC will let us know  
when that changes.**

**Stay safe and best 73,  
Jim Soete, WA3YLQ, Secretary  
RF Hill ARC, VE Team Liaison**



RF Hill Amateur Radio Club  
W3AI

# VE TESTING



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

100 E Church Ave.  
Telford, PA 18969



*Due to various factors related to Covid-19 the board has cancelled all in-person VE Testing for 2020. If other options become available they will be announced at meetings or on the reflector. Online options are available: <https://blog.hamstudy.org/2020/04/fully-remote-amateur-radio-license-exam-administration/>.*



## 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

01/24,01/27 WA3YLQ	04/04,04/07 KS3Z
01/31,02/03 W3WTT	04/11,04/14 KB3DEN
02/07,02/10 KS3Z	
02/14,02/17 KB3DEN	
02/21,02/24 WA3YLQ	
02/28,03/03 W3WTT	
03/07,03/10 KS3Z	
03/14,03/17 KB3DEN	
03/21,03/24 WA3YLQ	
03/28,03/31 W3WTT	

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	6 PM	3.917 +/-
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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<http://facebook.com/rfhillarc>

<http://twitter.com/W3AI>

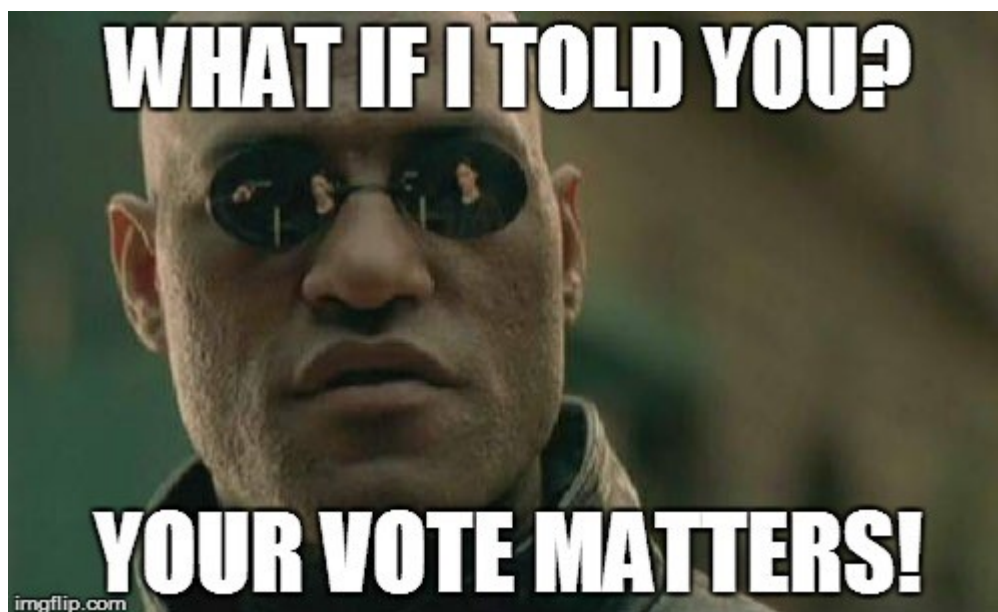


## 2021 Club Officer Elections

At the January Club meeting we will hold elections for Club officers. The Nominating Committee will present the current list of nominees and the meeting chair will ask for additional nominations from the floor.

After the close of nominations, an election will be held for each contested position. Voting will be done by a confidential Zoom poll. You are encouraged to attend.

Please note that attendees are asked to join the meeting on one device only. Also, for simplicity in polling, non-member guests are asked to check the “abstain” box on the polling form.



# Mobile Antenna Fold Over Mount

After looking at the one mobile antenna fold over mount that is available for purchase (\$120) and reading the reviews, I decided that I would try and homebrew my own, photos on the following pages.

I wanted to keep the cost as low as possible so I searched the web for motors that might fit the bill. Pretty much anything I found online would have required me to design a circuit to detect end of travel limit requiring either mechanical switches, hall effect sensors or a photocell. The cost and engineering involved to mount the motor and associated components and fasten an antenna mount just wasn't worth it.

I was cleaning out the garage a couple of months ago and remembered that I had a pair of automobile side view mirrors with power folding that I held onto after replacing them on one of my vehicles. I won't go into the details of why they needed replacing, but let's just say the score is Women 2 and Man 1.

Pulling apart these mirrors in one piece is almost impossible and after the mess (no broken glass) I had 2 folding mirror windows in my possession. The neat thing about these motors is that changing direction only requires reversing the polarity by either manually swapping the wires around or making a reversing switch from a DPDT with a mom-off-mom configuration.

I looked through what little electronic/electric junk I collected since I moved to PA in 2004 and really didn't have anything that would work. I decided that since I needed to plug this into the 12V receptacle in the car (formerly known as the cigarette lighter) that I would see if someone made a plug that I would easily be reversable and I actually found one on Amazon. To reverse polarity all one needs to do is pull out the connector on the back end of the plug, flip it over and plug it back in. I probably could have stayed with this but I really didn't want to leave it plugged in because I really wasn't certain I could do that without damaging the motor (the motor draws about 380ma when running and about 0.4 ma [400  $\mu$ a] when stopped). That and the fact that the plug had to be rotated in the receptacle to get power made it cumbersome. I decided that the motor reversing switch and a couple of different colored LEDs to indicate power in the proper direction was the way to go. Prior to mounting on the plate below, be sure to seal plastic cover covering the motor and electronics and leave a weep hole at the bottom for moisture to get out in case moisture gets in.

I used a piece of steel that was around 8" x 2" x 1/8" thick which was long enough to use a stainless-steel U clamp that I had laying around and mount the motor. That was the easy part. The hard part was how to mount the antenna to the motor. I had an NMO trunk lip mount that I could be rotated only all axis and the part that attached the antenna mount to the trunk mount was a disc with a center screw. The disc fit nicely onto the motor shaft interface, but I needed to drill holes to match the 3 holes in the motor interface and drill a half moon counter sink as the disk not flat but more like a low top hat. Once the disc was mounted, I just screwed the antenna mount into it retaining the ability to adjust the position of the antenna on the motor.

Cary, NI2Q

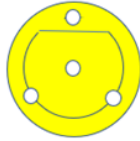
*Ed. Note: A center-off DPDT switch would cut the power to the antenna when in position. –Bill W3WTT*



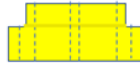
# Fold Over Mount Photos

Antenna mount interface disc

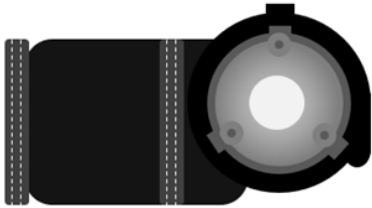
Top view



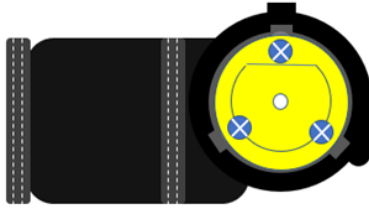
Side view



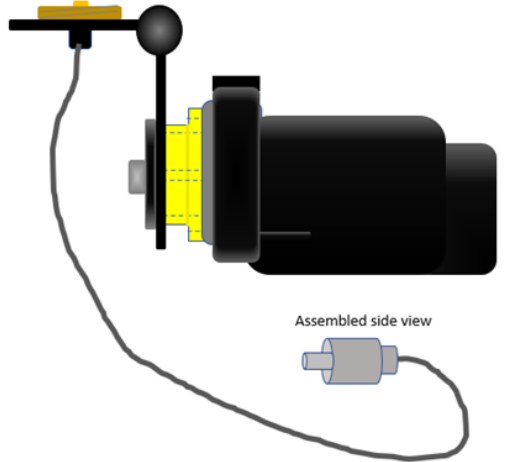
Motor Assembly



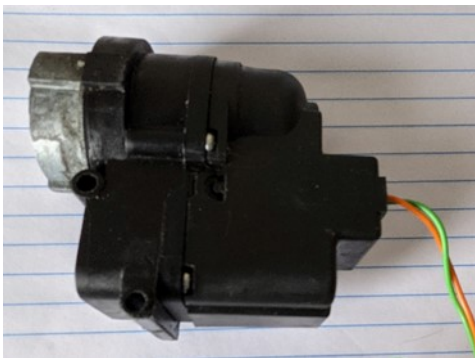
Motor shaft interface side view



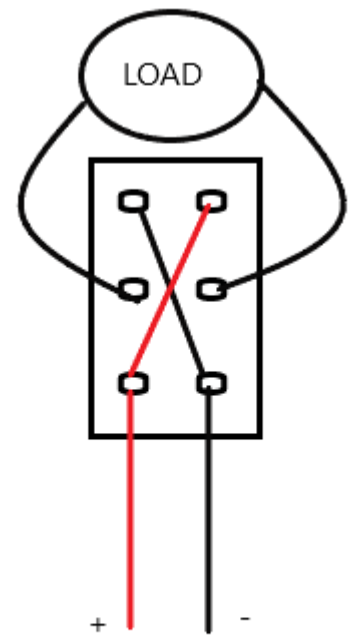
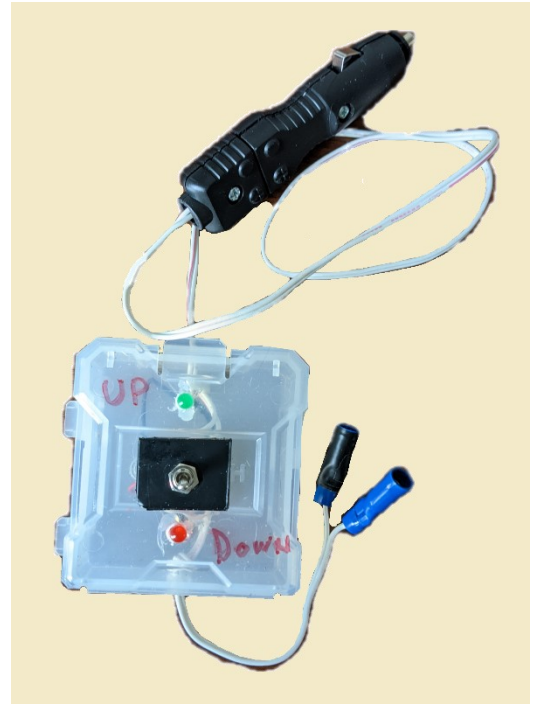
Motor shaft interface side view with disc attached



Assembled side view



# More Fold Over Mount Photos!



Wiring a DPDT switch for reversal of polarity.



# Last Zoom of 2020, Penultimate Page



# Last Zoom of 2020, Last Page





# RF Hill ARC Meeting Minutes

**Date** 12-17-2020

**Welcome/Call to Order** Secretary, Jim, WA3YLQ welcomed all and called the meeting to order.

**Roll Call** Twenty-nine ARO's were present, including two guests, KB9IBS and KC3NZE, and one-member applicant, Chris, N2OIT.

## **Officer Reports:**

**President** none

**Vice President** none

**Secretary** The minutes of the November Meeting were published in the MHz Times. A motion to accept the minutes as published was made by KS3Z, seconded by NI2Q. Motion carried. Second readings of the applications for Phil Gaffney, KC3QDL, and Tom Paparella, KB3HOV were offered. A motion to accept the application of KC3QDL was made by WS2K, seconded by WA3NFV. Motion carried. A motion to accept the application of KB3HOV was made by KC3HEQ, seconded by KS3Z. Motion carried. Welcome to RF Hill, Phil and Tom! A first reading of the application for Chris Van Brunt, N2OIT, was offered. Chris is a retired police officer who lives in Harleysville, PA. He has a family with kids and a WW2 Army Half-track in his garage ("gotta have a hobby"). He has both present day gear and some vintage military radios. Chris's application will be read a second time at the January, 2021, meeting.

**Treasurer** The Club Financial report was given by Treasurer, Jim, KC3LXV. Jim reported that the continued receipt of membership renewals and financial donations is improving the Club's financial position. Thanks to all members who have offered donations to the Club. Jim also reviewed the Club's proposed 2021 Operating Budget which was approved by the Board at the December Board meeting. The budget was published on the Reflector several days before this meeting. Being no questions, a motion to accept the Budget as proposed was made by NI2Q, seconded by KC3HEQ. Motion carried. Thanks to the Budget committee (N3EOE, KC3LXV, WA3YLQ) for their efforts.

## **Committee Reports**

**Repeater** KS3Z reported that there are still some ongoing projects. He asked that stations identify when testing on W3AI/R frequencies. There still seems to be a "whole lot of kerchunking going on".

**MHz Times** W3WTT reported that the MHz Times continues with great success. Bill is always looking for submissions. Thanks to those who have contributed over recent months.

**SEPPATN** Net Manager, KB3DEN, reported that during November there were 124 check-ins and 8 pcs. of traffic handled, in 8 sessions. Thanks, Jim, for the report.

**10 Meter AM Net** John, WA3JRS, reports that the Sunday evening AM net has many regular participants with "lively" conversation. Thanks to those who volunteer as NCS.

**CW Squad** NE3I, NCS. Members W3OTZ, N3EOE, WA3YLQ. Griff reports that new members are always welcome, and speed is slow for newcomers. Practice messages (quotes and riddles) are sent during sessions.

**Old Business** None

**New Business** Nominating Committee Report by N3EOE. Committee Chair. Len reported that committee members had contacted several Club members regarding candidacy for 2021 Officer positions. At this time, the following candidates have been identified: President, Dan, WA3NFV and Charles, KS3Z. Vice-President, John, KB3EWV (incumbent). Secretary, Cary, NI2Q. Treasurer, Jim, KC3LXV (incumbent). Members who have an interest in serving may contact the Nominating Committee. Nominations from the floor may be made at the January meeting.

**Adjournment** A motion to adjourn was made from the floor, seconded, and carried. Meeting Adjourned.

**Program:** EPA Section Manager, George Miller, W3GWM, was scheduled to make a presentation however he did not appear. Charles, KS3Z, an Assistant EPA SM offered an informal presentation on EPA activities at the leadership level. Thank you, Charles, for filling in.

**Respectfully Submitted:**

Jim Soete, WA3YLQ, Secretary