

June 2022

R F Hill Amateur Radio Club 2022

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CLUB INFORMATION

Mailing address: PO Box 336, Perkasie, 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



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



1

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



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

<u>RF Hill CW Squad Net:</u> 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.

Scheduled VE Exam Sessions

- July 18
- September 19
- November 21

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

Net Control Stations

06/19 KS3Z 06/22 W3WTT 06/22 w3w11 06/26, 06/29 KB3DEN 07/03, 07/06 WA3YLQ 07/13 W3WTT 07/17 KS3Z 07/20 W3WTT 07/24 KS3Z 07/27 W3WTT 07/31, 08/03 WA3YLQ

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. KB3DEN@aol.com Jim – KB3DEŇ

AREA NET LISTINOS			
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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ADEA NET LISTINCS



- (pl 88.5) (pl 82.5)

Battery Load Tester by David Carroll, N2VUZ

Warning: Do not try any of this at home unless you have experience discharging batteries. This can be dangerous (by over discharging a battery, especially a Lion) unless done correctly. I am just describing my project to test my batteries.

This started because I have accumulated several used gel cells from old UPS units and wanted to find out their capacity for emergency rig power. They were both 6 and 12 volt variety of varying ampere-hour capacities.

So, instead of designing one of my own (which I could do), I took a look at what was available that was relatively cheap and might work with these gel cells. There were several boards available and I found one that required little investment (\$4.30 including shipping) and fit with testing lead acid, gel cells, NiMh, and Li-ion batteries. It also runs off of a micro USB wall wart drawing only 70 mA.

The unit is a model ZB2L3 and is very available online (see Fig. 1). It has a numerical display and typically comes with two 7.5 ohm resistors. This device is capable of testing up to 10 Ah batteries. It is capable of discharging at a max current of 3 amps but I would not do that. That is the designed limit and it always safer to run it at half the rated current. This turns out to be just fine for the batteries I was testing. There are higher current models available.



Figure 1

Also, this unit has built in errors displays:

- Err1: battery voltage is above 15V
- Err2: battery voltage is lower than the termination voltage
- Err3: Battery can not load or discharge, too much resistance
- Err4: over current (current exceeds 3.1A)

The instructions were not very good but someone put online a cleaned up version. I first manually set it up with one of the fully charged 6 volt batteries with the two 7.5 ohm resistors in parallel. See schematic Fig. 2.



(~cont. next page)

Figure 2 (redrawn by editor)

When first powered up it displays what the voltage the battery is currently at (if you have the battery connected). After connecting the battery, pressing the + or – buttons will display the lower limit of voltage that the battery will discharge to. This is the unit's self calculated lower limit. I used that as a default. You can move this voltage by pressing the +/- buttons.

After pressing the OK button to start it, it then displays the lower limit of voltage that the battery will discharge to briefly and then launches in to the discharge cycle. I first displays the current Ah, then the current being drawn from the battery, then the voltage of the battery, each time lighting up a small LED next a board label of Ah, A, and V. It will continue to cycle until it reaches the low voltage limit set at the begining. When it finishes, the numerical will flash continuously with the final Ah of the battery.

It ran for approximately three hours at 1.7 amps and finally finished. The final value was I got 7.45 Ah for a 12 Ah battery. Re-charged and repeated it again with similar results. The battery was capable of a little over half it's rated Ah.

I then mounted it on a used wooden board with higher power resistors since the ones supplied were right at the power limit for testing a 12 volt battery. Wired in a switch to toggle the resistors for 6 and 12 volts. See Fig. 3.



Figure 3

Tested the rest of the gel cells I had, both 12 volt and 6 volt. Found one that was very low on capacity and recycled it.

Also tested brand new 1.5 volt NiMh D cells and it worked fine for them.

Future expansion will be to change the toggle switch to a deck switch to toggle in resistors for the 1.5 volt cells and other batteries of different voltages. Also might be looking into getting a higher current model for larger batteries.

And yes, I know there are all-in-one charger/dis-charger units out there. I have one. An old Maha. And it runs fine. But it could not do lead acid or gel cells. And this was much cheaper and easy to build.

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The "Field Expeditionary Deployment Squad" on June 5, 2022

The group was out in in force on Sunday, June 5th at the park in Blooming Glen / Hilltown. It was a great day for radio, and a perfect introduction for a possible new ham... - Andrew. He took some pics to share with the group here:



NE3I Jeep Mast Experiment with Home Brew 6 Meter Hamstick and 2 Meter Experimental Fan Dipole Driven Element* Yagis. *Look for future MHz Times article.

> 73. Griff NE3I Robert Alan Griffiths

Some additional pictures by Griff NE3I from June 5th









KC3TQT/NE3I Multi-Op Portable June 2022 VHF Contest Station

The second Sunday in June being the VHF Contest, the RF Hill Amateur Radio Club's "Field Expeditionary Deployment Squad" ("FEDS"), deployed for operations at Franconia Community Park, Harleysville, PA and focused on VHF/UHF activity. The 3 photos below show NE3I's Home Brew "Tilt Up Mast" and antenna system. From the ground up, a 2x6 under the rear tire with swivel base bracket, 5 of those 4 Foot aluminum Military Surplus poles, a TV Rotor, a 6/2 duplexer for single feed, a Home Brew 2 Element 6 Meter "Ham Stick" Yagi topped by the "Two Element VHF/UHF Fan Dipole Driven Element Yagi." Power for the rotor was supplied by the NE3I Jeep Cherokee's built in inverter. Bryan KC3TQT, a brand new Technician (and former Army Ranger), got his first experience with VHF Contesting. Using Bryan's TS 480 with 25-50 watts output, the KC3TQT Multi-Op Team made 17 Local and Sporadic E range 6 Meter SSB and CW Contest QSOs. The Team's initial Q was with the Pack Rat's W3CCX Expeditionary Force on Big Pocono. NE3I also made a few Qs later from his separate mobile station. Thanks for the Qs and many thanks to Karen and Kevin, KW3P for the photos.









This photo shows Griff NE3I, holding the mast while Bryan KC3TQT, secures a guy line. Dan WA3NFV, (in blue shirt) looks on.

73. Griff NE3I

RF Hill SEPPATN Report

RF HILL SEPPTN Report May 2022 QNI = 97 QTC = 4 In 9 Sessions That's a little over 10 Check-in's per session!

Jim KB3DEN

RF Hill ARC Meeting Minutes

Reviewed minutes were not available when the newsletter was put together. Look for them on the reflector!