



CHEESE BITS

W3CCX
CLUB MEMORIAL CALL

ARRL
Affiliated
Club



Volume LXVI

December 2023

Number 12

PREZ

SEZ:

EME for Me?

December 2023

Many features of radio fill me with wonderment. High on the list is Earth – Moon – Earth Communications, abbreviated as EME. My introduction to EME occurred about two decades ago at the QTH of Al Katz K2UYH. Al had a surplus Yagi that I needed so I trotted out to West Windsor, NJ. Al was a gracious host and showed me around his 28 foot Kennedy radio



dish and shack. The highlight was when he fired up his EME set-up and transmitted some Morse characters. A couple of seconds later, I heard the return signal off the moon. I understand the science of EME but still regard that moment as magic.

shack. The highlight was when he fired up his EME set-up and transmitted some Morse characters. A couple of seconds later, I heard the return signal off the moon. I understand the science of

Out of curiosity, I did a Google search about the original of the Kennedy radio dish. Kennedy radio dishes did not receive their name from the Kennedy Space Center or from President John F. Kennedy. These iconic radio dishes were manufactured by a Cohasset, Massachusetts firm, D.S. Kennedy and Company. The firm was founded by Donald S. Kennedy, Warren S. Pratt and Gilman B. Wilder in 1947.

Please see the following link:

<https://www.wickedlocal.com/story/cohasset-mariner/2008/09/05/the-business-antennas/39824075007/>

Recently Al K2UYH pressed me and the Pack Rat club into service to help plan and support the upcoming 2024 EME Conference It is scheduled to be held in Ewing, NJ (near Trenton), starting on Friday August 9, 2024 and running through Sunday August 11, 2024 at The College of New Jersey. The link to conference website is: <https://eme2024trenton.org> You can register for the conference now. In attendance will include both US and international amateurs.

Friday is devoted to the Introduction to EME course, which is a series of presentations geared to help amateurs getting started with EME or who are new to EME. If you do not wish to attend the full conference, you can register

Packrats **CHEESE BITS** is a monthly publication of the Mt. AIRY VHF RADIO CLUB, INC. —Abington, PA.

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Pack Rat Web Site: <http://www.packratvhf.com>

SUBSCRIPTION/ADVERTISING MANAGER:

Bob Fischer, W2SJ 23 Morning Glory Circle, Mullica Hill, NJ 08062 (609) 440-2916 bobw2sj-at-gmail.com

EDITOR:

Tom Frederiksen KA3FQS 522 Cedar Hill Road, Ambler, PA 19002 (215)-646-4456 ka3fqs@gmail.com

TRUSTEE OF CLUB CALL - W3CCX

Mike Gullo WB2RVX (609)-743-6643 MGullo3-at-comcast.net

W3CCX QSL CARDS:

Bill Shaw K3EGE

PACKRAT 222 MHz REPEATER - W3CCX/R

222.98/224.58 MHz (PL 136.5) Hilltown, PA

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CORR. SEC: WA3EHD Jim Antonacci correspondence-at-packratvhf.com
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PACKRAT BEACONS - W3CCX/B

144.300 (FN21be), 222.060 (FN20tk), 432.300(FN20tk), 903.300 (FN21be), 1296.300 (FN20dh), **2304.300** (FN20dh—under repair), **3456.300**, **5760.3** (FN21be under repair), 10,368.017 (FM29jw) **Note: red = temporarily off the air**; see <https://www.packratvhf.com/index.php/on-air> for details)

MONDAY / TUESDAY NIGHT NETS

VHF/UHF Monday:

| TIME | FREQUENCY | NET CONTROL |
|-------------|------------------|--|
| 7:00 PM | 224.900 MHz | KB3MTW FN20le Michelle / K3JJZ FN20lb El Even/Odd Mondays |
| 7:30 PM | 50.150 MHz | N3RG FM29ki Ray |
| 8:00 PM | 144.150 MHz | W2KV FN20os Dave |
| 8:30 PM | 222.125 MHz | KC3BVL FM29jw Jim |
| 9:00 PM | 432.110 MHz | WB2RVX FM29mt Mike |

Visit the Mt Airy VHF Radio Club at: www.packratvhf.com or www.w3ccx.com

only for Friday course for \$50. Registration for the entire conference is \$125 and includes the Saturday night dinner.



The Conference Committee is seeking papers and posters. Anticipated presentations include EME operational issues, portable and rover operation, antennas, preamplifiers, power amplifiers, transverters, synchronization, cabling and grounding.

Parallel to the conference presentations are three local tours. Thursday is a visit to the Thomas Edison National Historic Park. Friday is a tour of the Grounds for Sculpture. Saturday is the Super Outlet Shopping Extravaganza.

I am planning to attend the entire conference and encourage others to join us in Ewing.

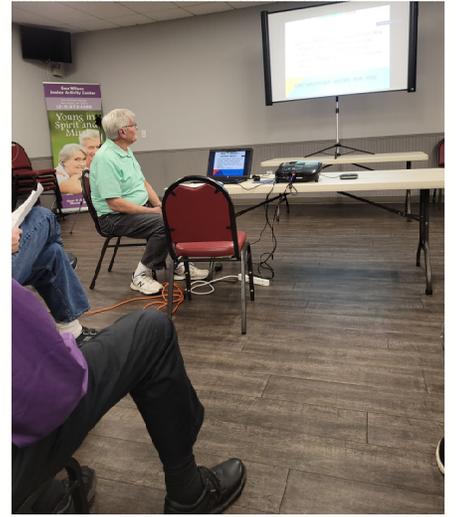
The title of this month's column hints at a question for me to ponder. What would be my difficulty in undertaking EME at my QTH? My house is ringed by rather tall trees. I have not done the calculations, but it seems like I would have a pretty narrow aperture for finding the moon from my QTH. The antennas on my tower do not have elevation control. If I pursue EME, I will probably need a different tower and antenna set-up or need to invest in a portable set-up.

I look forward to attending 2024 EME Conference to help me understand my alternatives.

Michael KB1JEY

November Meeting Pictures

From Elliot K3JJZ



SJRA Club Members and Pack Rat Members Collaborate to Activate the Green Bank NJ POTA Location and Complete a 222 MHz Antenna Test

Scott—AA2SD

Several SJRA members and supporting Pack Rat Club members in the field, activated the Green Bank NJ POTA Site on November 5th within the Wharton State Forest. During this POTA activation we completed a successful antenna test on 222MHz and also activated the Park on 6 Mtrs and 40 Mtrs HF.

AA2SD was testing a newly built 12 element 222 MHz Yagi design which was built by “Ray” N3RG to the K1FO specifications. This antenna performed flawlessly, utilizing a Demi Transverter producing 25 watts, we were able to make several contacts, and also work Alex KR1ST over 130 miles from this park location with a simple push up pole.

In addition to the antenna test, we also activated the POTA park on 40 Mtrs and 6 Mtrs, with many newer SJRA members working the bands for the first time. We had(4) SJRA members at the park location for the activation, (1) new General KE2BRA and (4) Pack Rat members on the air for testing, along with (2) additional SJRA members on the air. We had great support from SJRA Members and the Pack Rats in the field on 6 and 222 MHz..

Thanks once again to the following SJRA and Pack Rat members below for participating. You can follow along with the activation at the following YouTube Link. <https://www.youtube.com/watch?v=C2aMMjU8C5Y>

Jim KC3BVL
Alex KR1ST
Ray N3RG
Chuck WA2ONK
Alan K3WWT
Joe KC2SGV
Glen KE2BUO
Melissa KE2BWZ
Andrew KE2BRA
Jim KE2AYY
Sam KF3G



Pack Rats at the RF Hill Hamfest 2023

Tom—KA3FQS



George—KA3WXV and my tailgate. We didn't sell much. Funny when we lugged this stuff home a long time ago it seemed like it was worth something.

Drex—W3ICC with a lot more customers than we had.



I missed photographing Brian—N3EXA's setup but he had plenty on display earlier in the day.

Random Notes

Update on 222 Transverter Overload from Channel 12 (Ch 13, 210 to 216 MHz)

From Herb K2LNS

Several months ago I brought up a channel 12 issue from Penobscot in Mtn Top, PA. My older DEM transverter was getting crunched from overload.

I sent my transverter down to Downeast Microwave in Florida. They installed a filter and returned it promptly.

Due to my final move from my QTH in Bear Creek and sciatica, today was the first chance to head for my FN11 portable location to try out the modification. I put up a 10 element Yagi at about 15 feet and turned the antenna toward the W3CCX beacon. The filter worked perfectly and the beacon was 559.

I'm only bringing this up because others had mentioned they had receive problems too.

Herb

KB3MTW getting help from fellow Pack Rats to get back on the air

From Michelle—KB3MTW

Doc, W3GAD, and George, KA3WXV, showed up at my QTH to support my antenna party.

The 3 bands, 2/432 squalo and stacked 222 squalos, were put on a pvc mast (that should be replaced with a metal pole in the future).

My original dual band 2/432 antenna was not made to be put outside because it was made of materials that rusted, plus the way it was designed made it impossible to tune. At the last meeting Ray Goley - N3RG switched my inferior antenna with a better made dual band squalo that we installed.

While Doc and George were here they installed a 55 foot end fed antenna into the siding of my condo and I think used the aluminum railing as counterpoise. Very clever. This can be used for HF and maybe 6 meters.

In the future I hope to get assistance in putting the 902/3 and 1296 antennas back up on the deck.

Michelle

The story of some of KC3BVL's Elmers

From Jim KC3BVL

Bill Lentz AA2UK was uniquely encouraging of my interest in VHF+ operating. We met on 6 meter after I found MSK144 to be where most of the 6 meter activity was (according to pskreporter.info).

Bill explained that MSK144 uses meteor scatter and I did not believe him. We moved up the bands to 70 cm to continue sideband QSOs with 5 watts, an AB3XU style homebrew tape-measure yagi and I discovered airplane scatter.

Bill loaned me his 35 year old IC something (Probably an Icom IC1275..ed.), monoband, allmode 10 watt 1296 radio until I bought my own 1296 radio, an IC 9700. He entrusted me with this radio for at least a year. During that year, he found me an amp and looper from a Packrat Wayne K3MF(?).

As pyramids may have been built with pyramid schemes, early on Bill gave me some "spare

antennas". These were BIG improvements for 2 meters and 70 cm, plus some hardline spool ends.



"Big" improvements: from a 2 foot tape measure yagi on 70 cm, to 7 wavelengths. Funny for my 16 foot wide row house. Haha.

Bill was selling Vitaly, KC3ACQ, and I some old 222 Larcen pallets with which to build a 200+ watt amps. When we arrived it was snowing lightly. Vitaly and I had spoken with each other in



amazement at all the stations Bill could work on 6 meters with his Moxon. Bill could always hear more stations than Vitaly or I even though he had the most modest antenna.

In this photo we exit Vitaly's car in the late afternoon winter. Vitaly sees Bill's antenna farm through the light snow and stops in his tracks. We stand in silence for a minute trying to comprehend the global reach of the contacts Bill made with his modest antenna farm.

Eventually Bill asked if I would visit to help install antennas for more bands on his roof. Much of what I know about installing Yagi and loopers was learned by helping Bill.



Each of us owes a lot of our success in this hobby to one or more generous Elmers.

Jim

Building a 222 pallet amp From George KA3WXV and Tom KA3FQS

A while back George gave me a small copper pallet with two RF transistors and assorted matching and biasing components on a thick copper slab. This sat on my work bench until one day George gave me a particularly stout nudge to do something with it.

We began playing with the pallet in the raw but soon found out that I did not have any power supplies that when combined could come close to satiating this beast. It appeared to have gain and presented a good match at 222 MHz.

About a week later George showed up at my house with a 1000 W 48 VDC switching power supply. We saw that for brief periods of time, so as not to overheat the pallet, we were able to get as much as 300 W out of this thing.

It was time to find some way of cooling this thing. About that time the club held its White Elephant sale and I picked up a TWT mounted in a 19" rack chassis. Taking it apart we found that there was a rather nice heat sink assembly that had been used to cool the tube and some voltage regulators.



We drilled and tapped holes in the heat sink that aligned with the holes in the copper pallet and mounted the pallet along with a W6PQL low pass filter.

We then mounted the heat sink into the chassis along with a fan that George salvaged out of an old PC power supply.



We are now working on getting a read out for the NTC thermistor so that there will be a display of pallet temperature.

This project is not going quickly but with a lot of luck we could have it finished by Homebrew Night.

Tom

Tower Maintenance

From Warren WB2OMA
via Lenny—W2BVH

The picture below was provided to me by Lenny W2BVH. It makes me glad that I chose an aluminum tower and don't live close to the shore.



Taken by a local tower climber on his way up. Wow!



Inexpensive PCB's

From Tom—KA3FQS

Recently I was looking into rebuilding an HP3400a true rms voltmeter. The chopper circuit has gone bad and since it uses neon lamps and CDS cells I thought that there might be a more modern way of doing things.

An internet search turned up a design that someone in New Zealand had done using a monolithic chopper stabilized op amp. There was a link to a company that sold blank PC boards for this design.

The link took me to a Chinese concern called JLCPCB. They sold the PC boards for this design for \$5 for 5. These are 2 layer boards with plated through holes, solder mask, and silk screen. I placed an order for 5 boards. Soon after the order was placed I got an email saying that since this was my first order I was entitled to a \$5 discount meaning that the boards were free I just had to pay for the shipping and money transfer fees which amounted to \$22.

I have no idea what the RF performance of these boards is like but at prices like this it seems worth a try.

Their address is <https://jlcpcb.com>.

Tom KA3FQS

DON'T FORGET!

December 21, 2023- Pack Rats Annual Holiday/Social Party!
6:30 PM in-person only (no Zoom) at the Ben Wilson SAC.
The party will include food selections from Giuseppe's Restaurant as usual and liquid refreshments, all supplied by the club. Come hungry and enjoy a nice evening with fellow members.

The Wayback Machine In CHEESE BITS, 50 Years Ago

In CHEESE BITS, December, 1973.

Vol. XV, # 12

de Bert, **K3IUV**

(author's comments in italics)

"Our Prez Sez". Prez Dick Huntzinger, **W3FQD** requested all members to be sure to attend the December (*closed*) meeting, "at which our club plans for the January contest will be finalized." He noted that "We have won the contest for 13 consecutive years, but one way to be an also-ran is to become complacent." (*Still true today, we should all be listening carefully to the contest chairman's advice, and complying with his directions.*)

Calendar. December 20, Club meeting with topic "January contest preparation." Data packages will be distributed, Mario's raffle planned, refreshments will be available. January 5-6, the VHF sweepstakes. January 17, Club meeting with topic "Crying Towel." (*Another Packrat tradition. The winner would be the one with the saddest story!*)

New Products of Interest to Hams. **W3NSI**, Lynn always managed to find interesting new items. This issue included: **1).** Rechargeable Solid Gel Battery, produced by Elpower Corp. These units are much cheaper than Nicads, can be operated in any position, and are sealed for life. The model EP1245A is rated at 12 volts, 4.5-amp hours. It can take 100 full charge/discharge cycles, and up to 1,000 partial cycles. Cost is \$16.00. **2).** ECM Corp released the model ECM-5 modulation meter which operates from 30 to 500 MHz, to check FM transmitter deviation. Solid state design, operated on AA batteries. Cost is \$75. **3).** Low Temp Solder. Available at Allied / Radio Shack store (*alas, they are no more*), and can be melted with a match or a lighter. This solder comes in a package of 100 strips and costs \$0.89 per package (*try to find anything for that price now!*)

VHF Report. Joe, **W2EIF** reported activity continues low, but a good thermal inversion in November

allowed him to work **W8YIO** in Michigan on 2-meters. He noted that Paul, **W8III** in Ohio is getting disgusted with the lack of activity, and 'if you want to work guys like Paul in the contest, don't come on after not operating for a long time and expect to find activity!' (*After 50 years, the message is the same.*) Joe also discussed the new contest exchange requirement. You must now transmit a letter to designate your power class, and the last two digits of your license year. (*That didn't last long.*)

Six-Meter Report. Rich, **K3ACR** summarized activity on six meters. He worked **W3CQH** in Kensington, MD and pointed out that if you send a CQ you can almost always get a contact. Various nets continue to dominate the activity. Two that he has observed recently are the "Tidewater Net" from Virginia on Tuesday evening on 50.110 with net control **WA3SKT/4**, and one from N. Carolina on Thursday nights conducted by **WB4UJH** on 50.120.

Official Bulletin Nr 451 from ARRL. This bulletin noted that the **FCC** is seeking suggestions for amateur satellite service rules. These would include the areas of satellite ID, logging requirements, telecommand and telemetry requirements and other details that need proscribed rules in place. Comment deadline is January 7, 1974.

Tidbits. Frankie, **W3SAO**, is taking orders for the club QSL cards. 100 cards for \$5.75, 300 cards for \$9.75 (*wow – compare that to what you pay now*). Several members stayed until almost midnight at the last meeting, in discussions with the well-received guest speaker, Walt Maxwell, **W2DU**. A new station to look for in 1974 will be John, **WB2LAW**, operating in St Lucia and running 20-watts on 50.10.

Swap Shoppe. By W3ZRR. (*Always nostalgia.*) *Now we use the club reflector.* From Richard Duris, an EICO Stereophonic Preamp, model HF85, together with an HF-87 amplifier, two 12-inch speakers and a 4-inch woofer. All for \$100.00. [From the editor: If Richard still has

.... Wayback cont'd

these things I will gladly pay him \$100 for them.]
Wanted by Tony Sivo, **W2FJ**, an antenna base insulator to support a 90-foot aluminum tower.

Ads. *This holiday preparation issue included seasons greetings ads from 40 members/families, including (still around) El, **K3JJZ**, Walt, **K3BPP**, Bill, **K1JDY** (now **K1DY**), Dave, **WA3JUF** and Tony, **K1SFF/3** (now **W3HMU**). This issue also included the half page back cover ad from club member Ham Buerger. (An Astatic D-104 microphone with a PTT stand for \$25 and other goodies.) The usual 23 business card ads were included in this issue. I also note the current Cheese Bits Ad complement includes only 4 small ads, a ¼ page from Beko and a ½ page from Down East. If you'd like to join them, contact the ad chairman, Bob, **W2SJ**.*

Miscellany. *Postage for this issue was a single 8-cent "Flag" stamp. 7double sided, 8-½ x 11" sheets). (Don't forget, current postage went to 66-cents in July), and a penny postcard now costs 51-cents!) As usual, many other "folksy" comments about members, their families, and activities were included in this edition of Cheese Bits. If interested, or for more detail on any of the above items, visit our website (www.W3CCX.COM) and read the full issue scanned by **K3IUV** (me), and posted on the website by Bill, **WS3O**, our webmaster. I have also posted the club Officers history, club Membership history, and Packrat Inventory (updated frequently) on the **W3CCX** website. These files are password protected, and only accessible to registered members. Are you registered? I hope you enjoyed reading these bits of nostalgia as much as I did in writing the article. If yes, you might let me know. Thanks to those that did.*

thirty, de **K3IUV** (comments or corrections to: **K3IUV@ARRL.net**)



Events

For inclusion, please direct event notices to the editor.

(For contests, see Ray's "2023 VHF and Up Contests.pdf" document at the "Contest Info" tab on the club web site. Many repeated here for convenience)

WINTERHEAT 2024 will commence on January 1, 2024 at 00:00:01 UTC and conclude on January 31, 2024 at 23:59:59 UTC .

This is the fifth year for this event.

Last Year over 990 participants made over 270,000 contacts.

The event is open to all FCC licensed amateur radio operators.

All contacts shall be via FM-voice but can be either analog or digital (Fusion, D-STAR, DMR).

Event Registration will commence on or about December 1, 2023 <https://hamactive.com/Events/index.php>

Straight Key Night January 1, See ARRL for details

ARRL January VHF Contest— January 20 –22, 2024. Details to follow

Winterfest, - January 27 ARRL Midwest Division Convention, Collinsville, Illinois

Orlando Hamcation—February 9 - 11 ARRL Florida State Convention, Orlando, Florida

Greater Houston HamFest—March 1 - 2 ARRL West Gulf Division Convention, Rosenberg, Texas

1296 MHz Activity Night

There's an informal 1296 activity night in the NY/ NJ/PA/CT region (and beyond) every Monday night starting around 9:30 pm (or so) on 1296.110. No coordination, just jump in and say hello W2BVH

KC3BVL UHF+ Tuesday Net

Packrat, Jim KC3BVL conducts a Wednesday night net with schedule as follows: 7:30PM—903.100, 8:00PM—1296.100, 8:30PM— 2304.100

KC3BVL VHF Friday Net

Packrat, Jim KC3BVL conducts a Friday night net with schedule as follows: 7:30PM—144.160, 8:00PM—50.160, 8:30PM— 222.150, 432.160

Reminder: there are 3 FT8 VHF / UHF Activity Contests each month. For info see: <http://www.ft8activity.eu/index.php/en/>

For those interested in an online "Contest Only" event calendar for VHF+, see <https://www.qsl.net/n2sln/contestcalendar.html>

Meteor Shower Calendar

Here's a Meteor Shower Calendar showing the dates for all the Meteor Showers in 2023. They're correct for our location in the Northeast. <https://www.timeanddate.com/astronomy/meteor-shower/list.html>

222 MHz Activity Night

There's been an informal 222 activity night in the Northeast (and beyond) every Tuesday night starting around 7 pm (or so) Eastern Time. ON4KST is being used by some to coordinate Q's when direct CQ's are weak. Lenny W2BVH

Bob Fischer

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PLEASE SEND IN 2023 DUES

2024 dues will be due on Jan 1st.

www.qsl.net/w3km/MtAiryRC_Dues.htm

Check if your dues are due and how much, click
the [check here](#) link.

Thanks,
Dave W3KM

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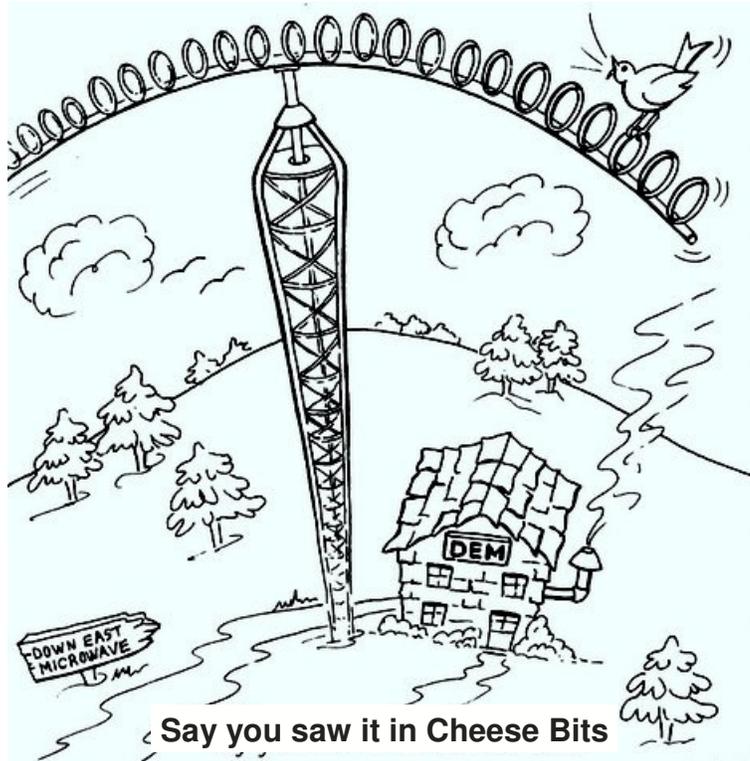
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