



# CHEESE BITS

**W3CCX**  
CLUB MEMORIAL CALL

ARRL  
Affiliated  
Club



Volume LXII

December 2019

Number 12

PREZ  
SEZ:

law folks.

I love Turkey. I hope it's on the menu for Christmas too. Winter Holidays are great and I sometimes feel jealous of some of my Jewish friends who find themselves celebrating both Christian and Jewish holidays. The Family truly is the center of civilization.

It's almost that time! - Time for the December meeting, the Annual Packrat Holiday Social. Come and enjoy a relaxing evening of food and fellowship. We will start serving food from Giuseppe's at the Senior Center at 6:10. Try and be there at the usual 6 PM time, but we will have plenty of food throughout the evening. Don't forget to bring that Packrat friend you haven't seen at the meetings for some time. If you live some distance away consider carpooling. One last thing: if you happen to have a dish of homemade cookies that you would like to bring too, feel free. I understand that certain Packrats are also great bakers. Hopefully we may taste some of their culinary talents again this year.

We will have a special Holiday Mario Table like last year. Now's the time to dig through items you bought at those Hamfests but never got used. Bring "the good stuff" to the meeting, put them on the Mario table.

The January contest is right around the corner. January 18, and 19th 2020. The Contest planning strategy was presented at the November General meeting this year. Topics were presented by Mike, N2DEQ. Dave K1RZ and Ray N2RG. One of the takeaways was to "put more time in the seat". If you need equipment please talk to Mike very soon. We have some available. Mike has posted a lot January contest information on the Packrat web site too! You need to sign in with your call and password to access this information since it is considered Packrat confidential. Contact Bill Schaffer WS3O (snowman@sem-co.com) if you need help signing in.

This brings up an interesting topic – the Packrat web site. We hope to make the website a central site for all the latest Packrat information. Check out the Main Page for the latest activity. Check out the Meetings tab for dates and times. Check out the special Tabs for members only information like minutes of BOD, General meeting minutes, and Packrat only documents. We expect to add even more links and tabs in the coming year. Soon there will be a new way to access the Packrat forum and its historical postings. Stay tuned for this and more.

I'm glad everyone has their antenna and tower work done by now. There's won't be much good weather between now and the contest. But there's still time to put the finishing touches inside the shack. Remember, do not update your software just before the contest, but now is a good time to test the programs you installed for last years operation. Microsoft updates (especially Windows 10) has been known to "break" perfectly good and working

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**PACKRAT 222 MHz REPEATER - W3CCX/R**

222.98/224.58 MHz (PL 136.5) Hilltown, PA

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**PACKRAT BEACONS - W3CCX/B**

Located at FN21be except 2304 which is at FN20dh  
50.080 144.300 222.062 432.290 903.072 903.3 1296.264 2304.3  
3456.200 5760.3 10,368.3 MHz ( red = temporarily off the air see  
<https://www.packratvhf.com/index.php/on-air> for details)

**MONDAY / TUESDAY NIGHT NETS**

**VHF/UHF Monday:**

<u>TIME</u>	<u>FREQUENCY</u>	<u>NET CONTROL</u>
7:00 PM	224.58R MHz	WR3P FN20kb Ralph
7:30 PM	50.145 MHz	N3RG FM29ki Ray
8:00 PM	144.150 MHz	K3GNC FN20ja Jerome
8:30 PM	222.125 MHz	KB1JEY FN20je Michael
9:00 PM	432.110 MHz	WB2RVX FM29mt Mike

**Microwave Tuesday:**

7:30 Coordinate QSO's on 144.260 for all Microwave bands you'd like to work. Also setup Q's at w4dex.com/uhfqso or **Packrat Chat Page W3SZ.COM**  
Visit the Mt Airy VHF Radio Club at: [www.packratvhf.com](http://www.packratvhf.com) or [www.w3ccx.com](http://www.w3ccx.com)

software! (Can you say drivers). You might consider turning off OS updates till after the contest.

The nets on Monday evening have been doing well.

If you have a DMR radio, check into the new Packrat Talk Group net Monday night at 7:15 pm. If you haven't been on the nets lately or have made some changes to the station now is the time to test them out.

Need to borrow some equipment for the January contest? Call Mike, N2DEQ now. There is Packrat equipment available for loan. Waiting till the January meeting would probably be too late.

Many of us spend considerable time on the internet looking for radio related technical information, construction projects and equipment. Several of you have spotted a soon to be product release from DEMI and mentioned it on the reflector. This may be just the thing to start a whole new group of rovers! All you need to add is small HF rig and a Log periodic antenna to get started. When you find something new and interesting, please continue to let your fellow Packrats know about it. Consider being an early guinea pig by buying one and doing a short presentation. Doc, our Vice President is always looking for interesting topics to add to our meeting schedule.

Bottom line, have some fun, learn more.  
Build something

**73, George KA3WXV**



# November Meeting Pics







# Murphy Go Home - I Have a Contest this Weekend

Yes, just one thing went right, but there were a handful of problems that were trouble for the third weekend of the ARRL EME Contest.

I had assembled all the radio and antenna gear needed for the weekend. The new cables from RF Connection were available. The high-powered T-R relays, the sequencer and 12->24 volt step-up board was working. The time was blocked out for me to get everything assembled and set up.

Because the 1296 Yagi is 16' long, I made a 2' addition to the mast of the portable mini-tower to allow it to be almost vertical for the two moon passes of the weekend. I had a neighbor assist me with the tower and AZ-EL rotor, but as we started to take it from the garage to the rear of the building, I forgot to remove the cable connectors from the control box and the Yaesu G5500 control box fell onto the garage floor, only a foot down and onto a carpeted spot, but it managed to break the spring-loaded momentary contact switch for down elevation.

Fortunately, I have the EA4TX computer control that plugs into the back of the G5500 box and it has push buttons for control and a digital readout. It was Thursday afternoon and I had the rest of the day and evening plus all day Friday to continue the setup. Then it started to rain, and rain, and rain more for the rest of the day and on and off all day Friday.

I received a call Thursday afternoon from the contractor who was getting me new hurricane-resistant patio doors and screens. He told me previously that things would be manufactured and installed in early December. This call was to tell me that the job would start early and they would be there on Friday to deliver the material. Jani and I had scheduled a quick visit to Minute Clinic to update our immunizations on Friday at 10AM. We returned home at 11AM to find that they had delivered all of the new panels and tracks into the patio and blocked the door that I use to get to the back yard and to feed the cables and coax. A new dilemma.



Murphy cont'd...

Instead of having direct access to the back yard, I had to circumnavigate the whole building to access the tools, ladder and antennas. And it was still raining. With no hope of having the antennas ready, I resigned myself to making this a single moon pass weekend on Saturday night. I used the time to get the heavy power supplies moved into the side room where I would operate, and I fished the wires and coax through the window. I got the radios all cabled and ready.

Saturday broke clear and cool. It was unusually chilly for this time of year in Florida, but for many of us it was a welcome relief from some of the heat. I was able to get the long 2m Yagi and the 67 element 1296 Yagi attached to the cross-boom in the rotor. They were both set to 90 degrees elevation so that the entire structure could be lying down for assembly and then pivoted upright. My new upstairs neighbor Joe noticed what I was doing and asked if he could assist. He also introduced himself as N2SML!! I was able to upend the structure by myself, although it was a bit of a push. I attached the coax cables to the antennas, tried to align the unit by using the briefest of sun shadow appearances. I went back into the house to rotate the antennas and lower their elevation. We soon discovered that the weight of the LMR600 on the 1296 Yagi caused the cross-boom to slip in the U-bolts that fastened it into the rotor. Luckily I had another run of LMR400 for that contingency. Remember that 2 foot extension I made on the main mast? It put those bolts just out of my reach with the three-step ladder that we have. The whole unit needed to be lowered, and some non-slip rubber was applied to the surface between the rotor clamps and the cross-boom, and the unit was raised once again. The cross-boom is made of 2" diameter heavy wall PVC with a wooden dowel inserted through it for stiffening. It does the job well for the lightweight antennas that we use for a few days at a time.

The moon crosses the horizon after 10PM here in Florida, and nearby obstructions required me to wait until midnight before I could point at the rising moon. There was heavy cloud cover and the moon was not visible. With the unit reasonably aimed in azimuth with those brief sun shadows, I was confident that I was pointing within a few degrees of the moon. The issue was adjusting elevation - with my fairly primitive set-up I thought I could be relatively accurate - I listened on 1296 with the preamp in the shack.

Despite modest movement of the antenna, I could not hear or see any signals. Despite all the preparation, I relied on the activity on 2m WSJT to fulfill a little of my EME quest. With the limited single Yagi in horizontal polarization and only 300 watts, I managed to work 5 Europeans. I did exchange brief regards with Russ K2TXB on the N0UK logger. He was making far more contacts with a pair of long Yagis and a bit more power. K3GNC was also making EME QSOs as I was decoding his signals. Despite the adversity of all the events that Murphy threw at me, I managed to have a respectable log to submit for my efforts. If you haven't yet tried EME, it's a rewarding challenge as so many Packrats have already found out.

73, **Rick K1DS**

W3UU - **Harrisburg Radio Amateurs' Club** – WinterFest



**JANUARY 11<sup>th</sup> 2020**  
**(Saturday)**



# WINTERFEST

**“A Harrisburg Pa. Hamfest”**

**Vietnam Veterans of America**

**8000 Derry Street**

**Harrisburg, PA 17101**

**8:00 am to 11:00 am**

**TALK-IN 146.76 (PL 100 hz)**

- ◆ Admission, **\$5.00** per person.
- ◆ **First table free. Additional tables \$5.00 each!**
- ◆ DXCC/WAS/VUCC QSL Card checking on site
- ◆ Amateur radio testing at 9:00 am
- ◆ Please, be courteous to your fellow hams by using reasonable table space. If you can use ½ table, please do so. (based on demand)



No reserved table space  
Unloading can be done at the main doors, and then move vehicle  
to the parking area

**General Admission: 8:00 AM**  
Web Site: [www.w3uu.org](http://www.w3uu.org)

For further information or questions contact:

Tim Lehman  
717-982-8550  
[kb3oza@arrl.net](mailto:kb3oza@arrl.net)



# Packrat DMR Net

After discussion at the last Board of Directors meeting it was decided to add a DMR net to our Monday Night Nets.

Look for our President, George KA3WXV, as Net Control on the Pack Rats **8804 Talk Group** at 7:15 PM just following our regularly scheduled 224.58 FM repeater net. Speaking of that net, why not check in on 224.58 FM also at 7 PM! Could this be the Packrats version of "buy one, get one free"?

Of course this is a lead up to preparation for the upcoming January contest.

Hope to hear you on our latest Monday Night Net tomorrow night!

73, **Bob W2SJ**

On a timely note, we added another WR3IRS DMR repeater to the network this weekend (11/17/19). It is in Eagle, in central Chester County, PA. The frequency is **441.3000+**, **color code 1**. It carries the Pack Rats 8804 talkgroup full-time on time **slot 1** like the other cBridge repeaters.

-- **Jeff WN3A**

## DEMI PLANNING MULTI BAND TRANSVERTER

The DownEast website has some updated information regarding their long talked about new transverter. See <https://www.downeastmicrowave.com/product-p/vuxvert.htm> and make sure to click on the PDF link for additional information. Covers 2m through 1296 (5 bands), 28 MHz IF, 1 watt out with a 2 dB NF. They expect their first production run 1Q20, with a target price of \$500 (+/-), and it appears that they are now taking preorders .... see the PDF file for full details. --**Bill AA2UK**

[This could be a "category killer" product for the 5 Bands covered if the price and specs hit a "sweet spot". My 2¢ **W2BVH**]

# JANUARY CONTEST PRÉCIS

The initial January Contest Information has been posted on our web site under the contest tab. Same as last year, all information pertinent to the contest will only be found on our site.

For our members who could not make the November meeting: Prior to my strategy presentation, I made it clear that the Rochester VHF Radio Club has made great strides over the past year with strong performances in both the June and September contests. They posted better scores than our club in both contests. I consider them major competition and they threaten our long held number one position in the January contest. We will need all our club members to participate in January if we are to maintain our lead. Please take a look at the contest documents asap. Our strategy is quite different than prior years. I believe it will help us maintain our elite position but we need everybody to get on the contest and make some noise.

I encourage comments regarding the strategy I put forward. Having laid out our plans in November allows us to make changes if necessary.

Like every year, if you need help with equipment, or possibly to add a new band, let me know and I will do my very best to help you out.

I would like to publically thank Dave W1RZ and Bob W2SJ for their presentations.

Let's have the best January Contest ever.

**Mike N2DEQ**  
January Contest Chairman

[To get to the Contest plans on our web site, you need a logon password. If you don't have one please contact our webmaster Bill WS3O at [snowman@sem-co.com](mailto:snowman@sem-co.com). He can have you set up and on the web site very quickly. --W2BVH]

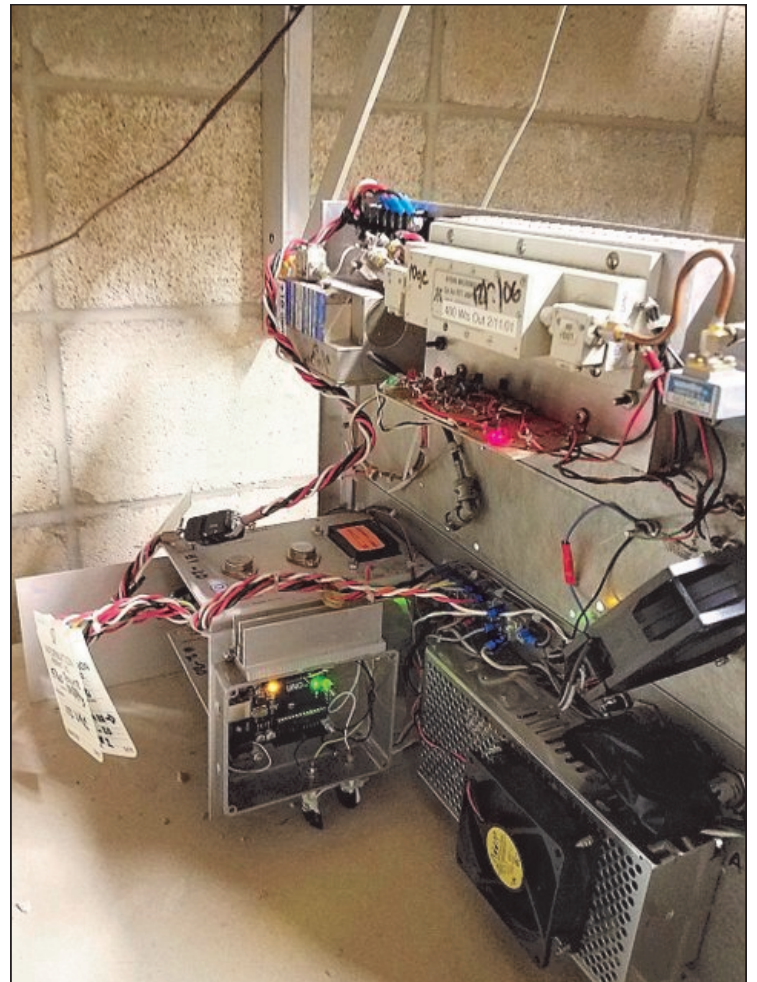
# 10 GHZ BEACON BACK ON THE AIR

10 Ghz beacon is back on the air from FM29 Same power , Same Antenna. Heard in South Jersey. Last published/measured 10 GHz W3CCX beacon frequency by W3SZ in 2018 was 10.368.027/028. For those interested: the W3CCX 10GHz beacon antenna is actually a piece of WR-90 waveguide with 16 slots milled in each wide side and fed directly with waveguide from the bottom. It's horizontally polarized and somewhat omni-directional - gain is estimated to be 10 to 13 dBd. The radome is white PVC tubing (From Home Depot) that I have measured to be nearly transparent at 10 GHz. The installation at the Peco building (FM29jw) has 30 feet of elliptical waveguide from the xmitter (400mw) to the antenna.

[http://www.w3rjw.com/Slot\\_Antenna/slot.html](http://www.w3rjw.com/Slot_Antenna/slot.html) Thanks Jack 73, **Ron W3RJW**

Likewise, congrats to all! Beacon received in Voorhees s6 - FM29mt at 10368017.7 GPS locked.

Tnx, **Mike WB2RVX**



# Tropo Scatterings

by Jerome Byrd

## Nets and public schedules

The Packrats host nets Monday evenings to promote activity and to give stations a chance to checkout their equipment. For some, this is the only time they will be on the air other than contests or during super extended band openings. A large percentage of weak signal vhf/uhf/mw types have been doing it for decades and “life” and the “dimming of excitement” is bound to diminish their activity to varying degrees. We appreciate those who do make the effort to check into the various nets and public scheds. (see “Nets and Schedules” below). For those who are retired or have a flexible work schedule, try getting on 144.190 between 0730 and 0800 local. From 0800 until 0930 there is almost always activity on 144.205. There are contacts to be made from local to 400 miles+ depending on conditions

**\*\* Please edit your QRZ.COM page to at least list your station rundown (see Aa2uk, K3tuf, Wb2rvx, etc.)**

**Nets and Schedules:** The following is a rundown of the nets and group meetings in the ‘local area’ (<= 250 miles, only nets that don’t conflict with the Packrats nets are shown).

Mondays: 2130 local – **1296.110** (group schedule with K1PXE, WZ1V, K3GNC, W2BVH, KC3BVL and others. All are welcomed.

Tuesday: 2000 local – “Mud-Toads Net”, KD8UD FM17uv net control. **144.250**, all are welcomed.

Wednesday: 2030 local - **432.150** – group schedule, WA2LTM, K1PXE, WZ1V, N2SLO, WA2ONK, WB2SIH, K3GNC and others. All are welcomed.

Thursday: 2030 local - **144.250** – N.E.W.S club net, W1COT FN31st net control. All are welcomed

Saturday: – 2130 local - **144.205** Chesapeake Net, W3BFC net control. All are welcomed

Sunday: 1030 local – **144.250**, Sunday Morning Memorial Net, Bill AA2TT FN30br net control, all are welcomed, 2030 - - **432.150** – group schedule, WA2LTM, K1PXE, WZ1V, N2SLO, WA2ONK, WB2SIH, K3GNC and others. All are welcomed.

## The Lunatic Fringe:

I participated in the second and final weekend of the 50 – 1296 MHz EME Contest. Conditions were poor for my small station so I only made 4 contacts on 144 MHz and one on 432 MHz. I didn’t feel too bad, as it was a milestone for me. I worked five stations using my remote controlled station. **The dates 12/14 – 12/19 will have good conditions** for even small stations. Give it a try.

Until next time please stay/get radioactive!

7 3, K3GNC

## SimSmith On YouTube

Larry Benko W0QE has a trove of useful articles on YouTube relating to using the popular (and free) SimSmith program to solve myriad RF design problems. There’s over a dozen pure tutorial videos on the mechanics of using SimSmith. But he also has dozens of practical articles on how to use SimSmith to solve practical problems: High Power Balun design, Directional Couplers, Matching Networks (of course), RF Transformers (and Autotransformers), Crystal Filters, Power Combiners, etc. etc. Most (not all) is presented in an informal way and he seems to be a natural educator. If you’re technical and curious, please take a look. Just go to Youtube.com and type W0QE into the search box. --**Lenny W2BVH**

From this week's ARRL letter, a link to a fascinating you tube video. Described below, it gives a snippet for a radio station at every 10 kHz of the AM band. Use the included link for access. I was fascinated listening to it. I think you will also enjoy it. **Bert, K3IUU**

### **Radio Amateur's "Tribute to a Century of Broadcasting" Video Debuts on YouTube**

Art Donahue, W1AWX, of Franklin, Massachusetts, has posted his "Tribute to a Century of Broadcasting" video in recognition of the centennial of formal radio broadcasts. The video features a complete scan of the AM broadcast band (530 - 1700 kHz), with station IDs for all 118 AM radio channels.

Donahue told ARRL he recorded these off the air using two long-wire antennas in the trees. Each slide highlights one station on each frequency with call sign, location, power, day/night/gray-line reception, distance, and year of first broadcast, accompanied by audio of an actual station identification.

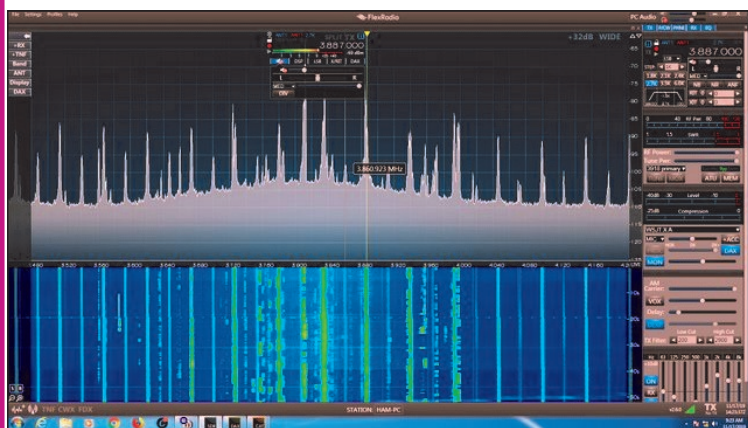
"If you ever spent evenings when you were a kid trying to hear long-distance radio stations on your AM radio, this video has what they all sound like today," Donahue said. "I wanted to do something in honor of the KDKA broadcasting centennial next year and thought I'd try to get every single channel recorded. It took a lot of time, patience, and good luck. You'll hear a lot of surprises on the video."

Donahue added, "It was a fun project to work on."

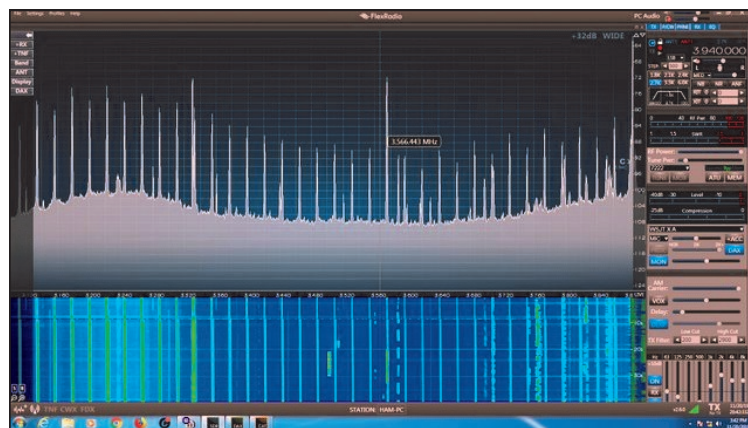
URL: <https://www.youtube.com/watch?v=iKRZJ5uO2Mw&feature=youtu.be>

### **"Modified Sine Wave" Inverters: Bad News for HF and Computer Equipment**

My problem was solved by using a Samlex "Pure Sine Wave" inverter. I tried two different "Modified Sine-wave Inverters" first. One from Harbor Freight and the other from Best Buy. They made HF **unusable** along with putting a lot of hash on computer. The Samlex inverter runs the computer, switch and modem. I also bought a Samlex 15 amp fully automatic 12v power supply/battery charger. It has two isolated charging banks. One I use for the Flex 6300 batteries and the other for a deep cycle battery for computer, switch and modem. I strongly suggest going to Samlex site and downloading manual for one of the pure sine-wave inverters. They have a tutorial in the manual that explains **why modified sinewave inverters are bad** news for our stuff. I got the 600 watt unit which is overkill since my system only draws 6 amps in receive. 73, **Paul , WA3QPX**



Busy 80M band - Pure Sine Wave Inverter



Clobbered 80M Band - Modifier Sine Wave Inverter

## Misclassification of Emails as Spam

From time to time we've seen discussions about how Comcast sometimes mis-classifies items as Spam. Some of them show up in one's Spam folder. Others I am afraid never make it to the desired recipient. This happens frequently with club email. I've learned to browse the Spam folder frequently, looking for valid emails. The last couple of days I've had more than my share of such problems. I'm sharing this (if Comcast lets it through), in case it might help others.

After lots of experimentation, it's still hard to pin down what characteristics of emails are that my ISP (Comcast) uses to decide that an email should go into the "Spam" folder or should be deleted without warning. I have reached some interim conclusions though, and these may be food for thought for you.

Conclusions:

- The Comcast Spam filter's behavior is not always consistent.
- Currently, it will not accept (treats as Spam) an included email address which matches either the sender, or the "to."
- It will accept an included email address if it matches the "bcc." Perhaps because this is a common practice?
- It may not (sometimes does) accept (will treat as Spam) an included link (perhaps only if https rather than http?).
- Putting yourself as a bcc is a good way to verify your email got sent, and was not treated as Spam.
- I use the Comcast email reader / sender as my primary tool. I have not verified what would happen if I tried the same sequence through Yahoo or gmail (although I could, and may).
- I have not tried it using Microsoft Outlook (not currently set up).

I'd be interested in other's reaction, facts, experience or conclusions.

73, **Bert, K3IUV**

[This is a topic of ongoing interest to me since I send hundreds of emails to the Packrats every month when I distribute Cheese Bits, or when I solicit articles and discuss content with authors. When you get your Cheese Bits, there is always a companion email sent to let you know that Cheese Bits was mailed, since I never know when an ISP will decide that an email with Cheese Bits attached to it is spam. I have to admit that the situation over the years has slowly been improving but it's clear that the ISP's are still fine tuning their criteria and they need to continue to do so. --**W2BVH**]

## ***Designing and Building a 300 Watt MOSFET Power Amplifier for 2 Meters***

Here is an interesting article by ON4KHG on how he designed and built a 300 Watt 2M power amplifier. The thing that makes the article unique (or at least rare) is that Gaetan omits nothing. He shows how he designed the input and output power splitters / baluns, the input and output matching networks, and the bias design. He shows how to implement the matching networks on pcb's using design software. He did it with a commonly available transistor and only used free or inexpensive design software. He did have to make small tweaks during implementation but that's a small price to pay to get very close to your final design without spending big bucks on professional software.

Besides being a good source for building your own medium power 2M amp, I bet it can be used as a "monkey see monkey do" guide to making other amps using different parts and at different power levels on 2 Meters - or even on other vhf (and uhf?) bands. Worth a look. --**Lenny W2BVH**

[on4khg.be/300 W MOSFET 144 MHz PA\\_Final version\\_11052007\\_EN\\_Compr.pdf](http://on4khg.be/300%20W%20MOSFET%20144%20MHz%20PA_Final%20version_11052007_EN_Compr.pdf)

# ***The Wayback Machine*** **In CHEESE BITS, 50 Years Ago**

Nibbles from December 1969. Vol. XII Nr. 12  
de Bert, K3IUUV  
*(author's comments in italics)*

**“Our Prez Sez”.** Prez Ernie, W3KKN, penned another thoughtful article (*dealing with solving radio gear problems*). So apropos that I'm including this extract: “Out of this maze of activity, one thing is clear. Somewhere, somebody is probably doing the same thing. Are you using the club effectively to exchange ideas, get information, or find an easier way? Come to think about it, this is a basic reason for a club. (It's even in our constitution.)” (*Point well taken. We do some of this via queries on the reflector. Should we/you do more? What ever happened to our official “technical committee”?*)

**Did you Know?** At this time, not only was our auctioneer EI, K3JJZ the Editor of Cheese Bits, he was also the VP. (*Wearing two Packrat hats.*)

**ARRL Bulletin 244, 9/23/1969.** Amsat reports an early winter launch of the Oscar 5 satellite is likely. Downlink on 144.050. This satellite is the fruit of the Australian members. Signal reports are requested. Details in the W1AW broadcast bulletins. (*Hard to believe it has been more than 50 years that we have had Amateur satellites!*)

**SK.** Reported that member W3IK (ex W3HIX), John Specialny died. John was a very savvy engineer, and he designed the early transistor converters (using

Philco MADT transistors) that many of us used through 432. I worked with John at Philco's Kulpville plant. [*For more on Alloy Junction transistors see [https://en.wikipedia.org/wiki/Alloy-junction\\_transistor](https://en.wikipedia.org/wiki/Alloy-junction_transistor) --W2BVHJ*]

**From the Book Rack.”** The book review net, conducted by member Paul Behrman, K3WEU reviewed the book “104 simple one-tube projects.” By Robert Brown. \$3.95 in paperback, 192 pages, 104 schematics (*That's 4-cents per design!*). Paul noted that the designs included: a VLF receiver; a Q-multiplier; Capacitor checker; wireless mike; and a host of other gadgets. (*Doc, K3GAS was a gadgeteer. He must have loved this book.*)

**When I became a Packrat.** Frankie, the club historian provided a list of 18 current club members, showing the date they joined the club. Additional lists will be in future issues. (*Is there enough interest to do again?*)

**January 1970 Contest Planning.** W3CL, Harry, and W3ZD, Dave pointed out some of the benefits of the contest operation. “Station improvements, including some completely new, FB stations. The roar of activity on the bands helps justify their usage. The club demonstrates one of its primary purposes - promoting VHF activity.” (*All still true. Get on and operate on Jan 18/19/2020.*)

**Swap Shoppe. By W3ZRR.** (*Always nostalgia.*) . Thin, this month. For sale: Mobile mount for SB-101 and SB-110 (Were they the silver HF twins?), \$10; a Hy-Gain Mobile Antenna, \$60; a Heath HP-13A power supply, 800 volts output, \$55. All 3 for \$105. For sale by

Dave Hackford.

**Meeting Notice.** “Next general meeting (12/17/1969) topic will be ‘Contest Strategy.’ Note that this is a closed meeting. Only members allowed.” (*We took our contest strategy very seriously back then.*)

**Tidbits from the Back Page Ad.** The back page ad from “Ham” Buergers in Willow Grove (the store of member W3BAH) featured 5 PL259 connectors for \$2 (*And these were probably real silver on brass, not the junk imports we see today!*)

**Greetings Ads.** A full page of Seasons Greetings ads were included. The ads included business cards from members and businesses, as well as typed names of members. The annual ads were charged by the column inch that they occupied, providing expenses funds for club.

**Miscellany.** *Postage for this copy was still a single 6-cent Roosevelt stamp. (5 double sided, 8-½ x 11” sheets.) As usual, many “folksy” comments about members, their families, and activities were included in this edition of Cheese Bits [even my son was mentioned] If interested, or for more detail on the above items, visit our website (www.W3CCX.COM) and read the full issue scanned by K3IUV (me), and posted on the website by W3SO, our webmaster. Remember, 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. Have 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  
(K3IUV@ARRL.net)**

## Events

**For inclusion, please direct event notices to the editor.**

**Winterfest - Hamfest** - January 11, 2020.  
Harrisburg, PA. <http://www.w3uu.org>

**January VHF Contest - Contest** - January 18-20, 2020. See <http://www.arrl.org/january-vhf> for rules and details. Also see the Packrat web page for club specific info. (Info will be posted shortly).

**June VHF Contest - Contest** - June 13-15, 2020.  
Details to follow.

**CQ WW VHF Contest - Contest** - July 18, 2020.  
Details to follow.

**Murgas ARC Hamfest & Computerfest - Hamfest** - July 25, 2020. Plains PA. <http://hamfest.murgasarc.org>

**222 MHz and Up Contest - Contest** - August 1-2, 2020. Details to follow.

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## Weak Signal Levels: To Hear Better, Turn Down The Volume

Or so the blogger (VE7SL) claims. Read it for yourself and see what you think. Also, it's easy enough to try and see what happens.

Go to <https://www.amateurradio.com/weak-signal-volume-levels-2/>

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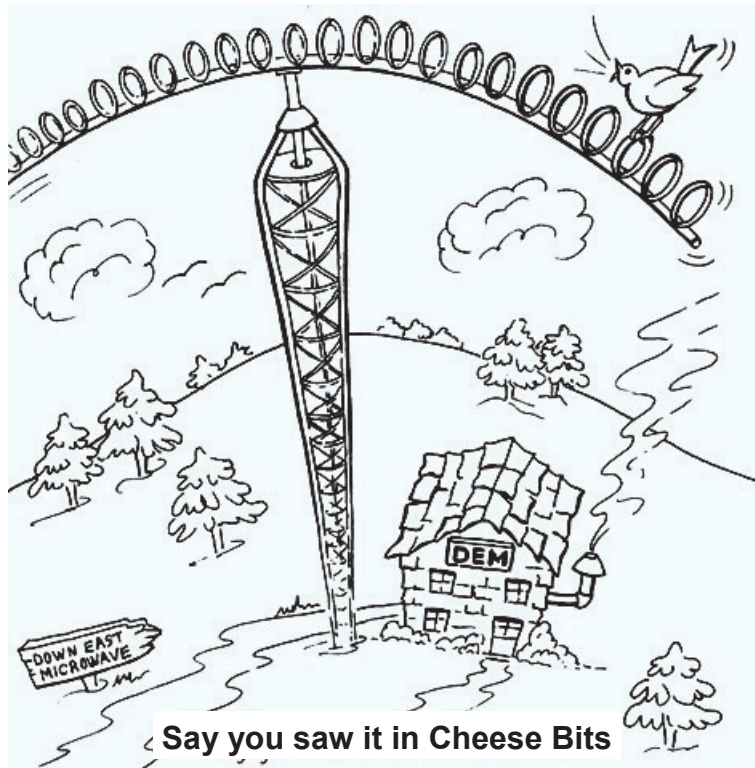


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