Mt. AIRY V.H.F. RADIO CLUB, INC.

CHEESE BITS

W3CCX
CLUB MEMORIAL CALL

ARRL Affiliated Club

Volume LXVII | December 2024 | Number 12

PREZ SEZ:

December 2024

The November club meeting was very well received by the membership. The mix of NF testing, and contest prep presentations, along with the other activities before and during the meeting kept everyone engaged and entertained. The evening started with a pre-meeting Dutch Treat dinner with 15 Pack Rats attending. Thirty-three members attended the in-person meeting at the Ben Wilson center plus another half dozen on the zoom broadcast.

Special thanks to Gary WA2OMY and Paul W2PED for manning the NF test benches throughout the entire evening. Gary supplied all of the equipment and spent a week making sure the setup calibration was up to NIST standards. Seeing the huge response by members bringing LNA's, two test benches were prepared and W2PED volunteered to assist in the nearly 3-hour testing effort.

Our thanks also go to John N2NC and Roger W3SZ for their interesting perspectives and ideas on contest operating practices and new FT8 QSY technology that is available for January. Other than the audio problems it was a great meeting. The AV technical team cleaned up many of the laptop internet issues we were having during the past few meetings, and introduced new microphones and speakers but unfortunately Murphy intervened with a new audio echo issue. The team is now working hard to resolve the echo problem before the next meeting.

Another upside to the November meeting was the large number of Mario table items. As explained during the meeting, former President Michael KB1JEY and his family donated his radio related items to the Pack Rats. There will be more information about this soon. In the meantime, a number of "junque" box items will be filling the Mario table for the next few months.

The January VHF Contest is only 6 weeks away. The colder temperatures should be telling you there is limited time left to get your station in good working order and make whatever improvements you have been planning before the year end holidays. Get on the nets, run the bands with as many stations as you can find, and make sure all modes (SSB, CW, FT8) are working on every band. The club meeting programs for the next two months will be focused on helping members to improve their stations and operating techniques in order to increase their contest score.

The December 19th meeting is our annual Holiday Party. This event starts early at 6:30 PM at the Ben Wilson Senior Center. The party will include food selections from Giuseppe's Restaurant and the usual refreshments, all supplied by the club. Come hungry and enjoy a special social evening with fellow club members. The December meeting will also feature additional Contest Strategy presentations, an auction of several items from the KB1JEY estate moderated by our premier auctioneer El K3JJZ, and another big Mario Raffle. It's shaping up to be another great Pack Rat meeting.

See you soon at the meeting or on the bands.
Phil WA3NUF

Packrats **CHEESE BITS** is a monthly publication of the
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N3RG Ray Golley	1 Year Director
WX3K Stephanie Koles	1 Year Director

PACK RAT COMMITTEES

January Contest	N3RG, N2NC, W2SJ, AA2SD
June Contest	N3YMS, WA3YUE, W2SJ
Fall Sprints	WA3NUF, W9KXI, WA3EHD, WS3O
Pack Rat Awards	WA3EHD, W2SJ
Quartermaster	Bert K3IUV
Membership:	Ray N3RG, W2SJ, WA3GFZ

PACKRAT BEACONS - W3CCX/B
144.300 (FN21be), 222.060 (FN20tk), 432.300 (FN20tk), 903.300 (FN21be), 1296.300 (FN20dh), 2304.300 (FN20tk), 3400.300 (FN20dh), 5760.300 (FN21be), 10,368.300 (FN20tk) See https://www.packratvhf.com/index.php/on-air for details

MONDAY / TUESDAY NIGHT NETS
VHF/UHF Monday:

TIME	FREQUENCY	NET CONTROL
6:45PM	224.580 MHz	KB3MTW Michelle Even, K3JJZ El Odd Mondays
7:00 PM	Packrat Talk Group	KA3WXV George See Packratvhf.com ON AIR for details
7:30 PM	50.150 MHz	N3RG FM29ki Ray
8:00 PM	144.245 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

PACKRAT E-MAIL REFLECTORS
The Pack Rats have an E-Mail reflector that is open to Pack Rats and friends of the Pack Rats. The intent of this E-mail reflector is to have a convenient means of reaching list members on subjects of general interest to the VHF/UHF and Microwave community.

Packrats@mailman.qth.net

The Pack Rats also have a **Members Only** reflector. This list consists of, and is for the use of, **only Pack Rat club members**.

Packrats-members@mailman.qth.net

See the W3CCX Web page for specific information on joining.

Packrats on Facebook
Use the browser link "www.facebook.com/PackRatVHF", or within Facebook search for the name "Mt Airy VHF Radio Club".

November Meeting

LEFT TOP: The attendees watching the contest preparation presentation.

LEFT BOTTOM: The Prez doing the meeting introduction and displaying the new cap design from the Pack Rats Logo Wear line.

RIGHT MIDDLE: Phil giving his portion of the presentation on contest preparation.

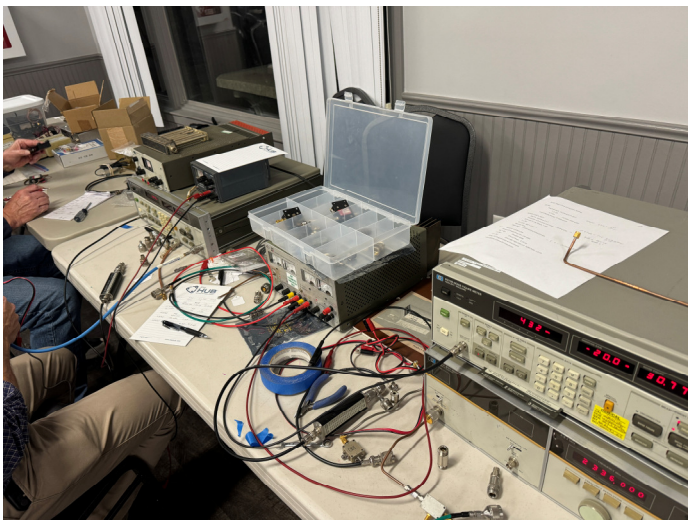
RIGHT BOTTOM: Roger presenting new extensions to WSJT-X that allow sending messages to move stations to other bands.

November Meeting

LEFT BOTTOM: The Mario table contained many desirable items most of which were courtesy of a bequest by our late club president and friend Michael Davis, KB1JEY.

RIGHT MIDDLE: Phil, WA3NUF, and Paul, W2PED having a discussion at the Noise figure measurement setup.

RIGHT BOTTOM: A look at the instrumentation brought by Gary WA2OMY, for this Noise figure measuring event.



2024 Fall Sprint Results

Phil WA3NUF

The Pack Rats took over responsibility for managing the VHF Fall Sprints for the first time this year. The sprints are now concluded, the scores have been submitted, and the final determination of the category winners in all five sprints has been completed by the Fall Sprint Committee.

The committee made a few changes for 2024. The most significant was changing the 6M sprint from an evening contest to an afternoon contest. We also increased the number of award categories by adding single operator low power as a separate award.

On the downside, we learned the difficulty of scheduling these events in between the multitude of existing major contests, conferences, and other VHF operator events. The lessons learned this year will help us improve the Fall Sprints in the coming years.

The results and operator comments we received were very favorable for our first time running the sprints. The majority of comments on the 6M time change were very positive even though the propagation in early August was no better in the daytime then it was in the past in the nighttime this year.

A total of 232 logs were submitted across the five sprint dates. The 2M (71 logs) and 6M (55 logs) sprints account for 54% of the recorded scores. The 902 and above sprint has consistently been the lowest participation of the series. It didn't help that our schedule date conflicted with the Microwave Update Conference held in Vancouver, Canada. Still, the numbers in years past were not that far from this year's total. There is more work to be done to promote and expand participation in the microwave sprint.

The complete listing of all submitted scores for the Fall Sprints can be found on the 3830 scores website. The final scores have been reviewed and confirmed by the Fall Sprint contest committee. The winning scores and runner up scores for each sprint are displayed below.

Thanks to everyone that participated in the Fall Sprints this year and **Congratulations to all of the 2024 Fall Sprint Winners!**

The Fall Sprint Contest Committee
fallsprints@packratvhf.com

2024 Fall Sprint Winning Scores

6M Fall Sprint

SOHP	(55 Logs Total)
• W4MW	1,768 pts
• N2NT(N2NC)	1,679
SOLP	
• WA2VNV	748 pts
• KO9A	560
ROVER	
• NV4B/R	825 pts

2M Fall Sprint

SOHP	(71 Logs Total)
• K1TEO	2,340 pts
• K1RZ	1,760
SOLP	
• N3RG	1,296 pts
• WA2VNV	746
ROVER	
• NV4B/R	1,218 pts

222 MHz Fall Sprint

SOHP	(46 Logs Total)
• K1RZ	1,508 pts
• K1TEO	1,456
SOLP	
• WA3NUF	738 pts
• WA2VNV	510
ROVER	
• NV4B/R	924 pts

432 MHz Fall Sprint

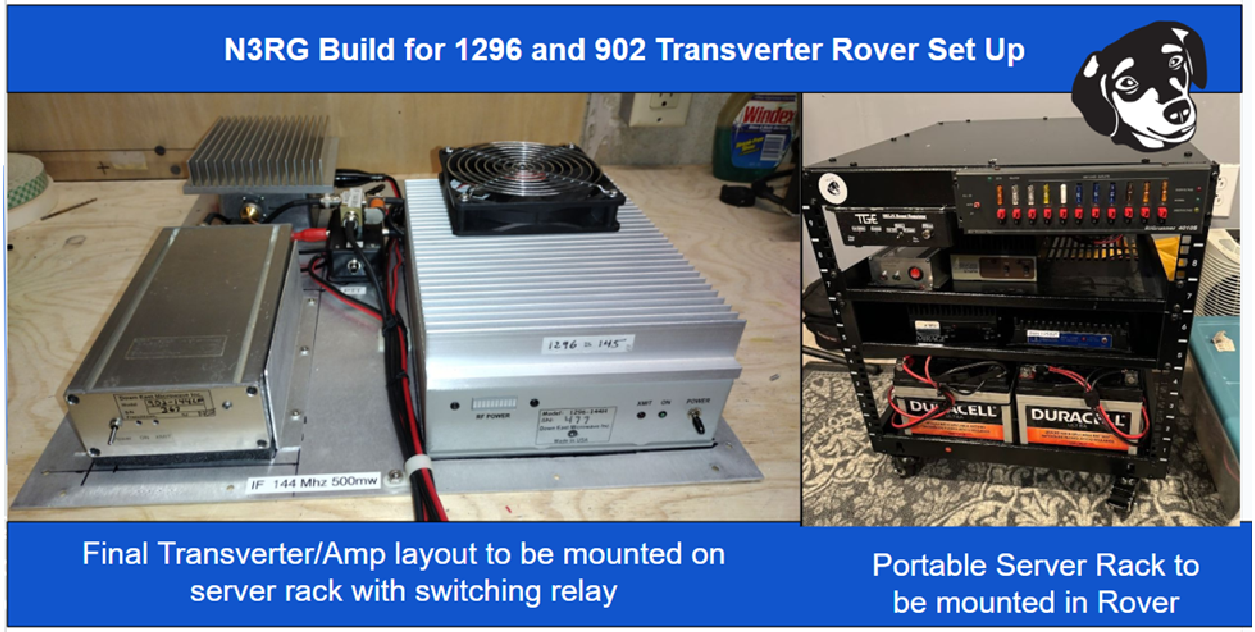
SOHP	(42 Logs Total)
• K1TEO	1,200 pts
• K1RZ	888
SOLP	
• VE3DS	345 pts
• W3LL	299
ROVER	
• NV4B/R	272 pts

902 + Fall Sprint

SOHP	(18 Logs Total)
• K1RZ	7,505 Total
• K1TEO	7,229
SOLP	
• N3RG	4,354 Total
• WZ1V	2,230
ROVER	
• NV4B/R	1,801 Total

Member Projects

Fellow Pack Rat Members Come Together to Assist AA2SD/R Rover into Expansion with 1296 and 902 Mhz for the Jan 2025 VHF Contest



AA2SD/R Rover - Nov 20-2024 - As a new novice Pack Rat Rover, I am always looking for ways to expand my contacts, support the club, and upgrade my equipment before each VHF Contest. I have talked about getting into Microwave with 1296 and 902 but did not have the equipment or experience to make the jump. With some much needed guidance from fellow Club Members I am pleased to report that I will be making my first attempt at these bands during the upcoming Jan VHF Contest.

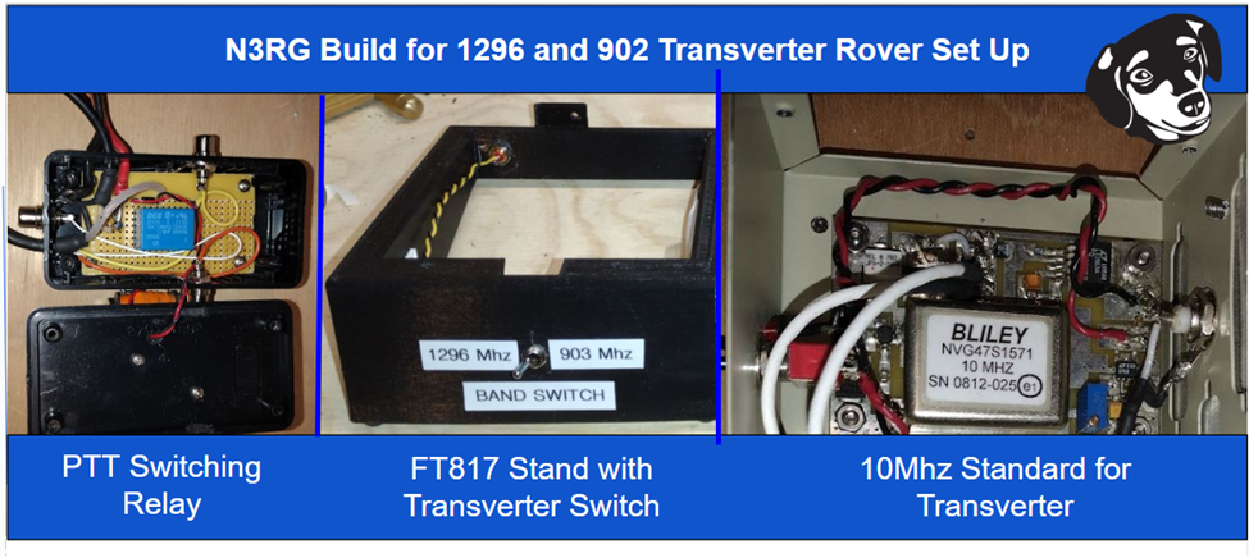
During this past summer ***"Mike N2DEQ"*** provided me with a 24 element looper for 1296 with 18.5 dB of gain that had been sitting parked in his storage shed, which prompted me to figure out how to get this on the air as a new Rover. I did not know what to do with it, but I did know I wanted to get this on the air with the Pack Rats at a later time.

With further help from experienced Rover ***"Allen K3WGR"*** I was able to acquire a 902 Down East Microwave Transverter and AMP, and a 1296 Transverter along with a rover looper antenna for 902 with all of the cables. Now with all of this equipment in hand, it came time to determine the best way to configure this for Rover use that could be easily removed out of my Subaru Outback. I am a "fast set up" Rover and use my primary daily driver vehicle for each contest and added a rack mounted (4) band antenna to the roof rack and have a rotor and mast set up for fixed operation.

Next I needed a second low signal rig as my FT991A is maxed out with the 4 bands,plus a 222 Mhz transverter, and I found a FT817 in great condition and added a base stand with the recommendation from ***"Bob W2SJ"***

Member Projects

At the suggestion of ***"Ray N3RG"*** I palletized all of my other equipment on a portable server rack. This portable server rack was purchased from Amazon, it's heavy duty and comes with wheels that are removable, this will allow me to roll the rack back into the basement shack after the contest period.



Time to Build - To simplify the build for the additional Transverters. ***"Ray N3RG"*** built out a Transverter Switching Board that mounts to the top rack with a scrap aluminum plate. To further simplify Rover operation he built an IF relay and a PTT switch box for the FT817 to key the transverters in the back of the car from the front seat with my FT817 rig. My last challenge was mounting the antennas on a quick plate mast for Rover use, keeping all of my antennas on one single mast for directional pointing.

This will be my first venture into the new bands as a Rover, and I still have lots of testing to complete, and I am not a CW Operator, please be patient. I will also have to take that challenge.

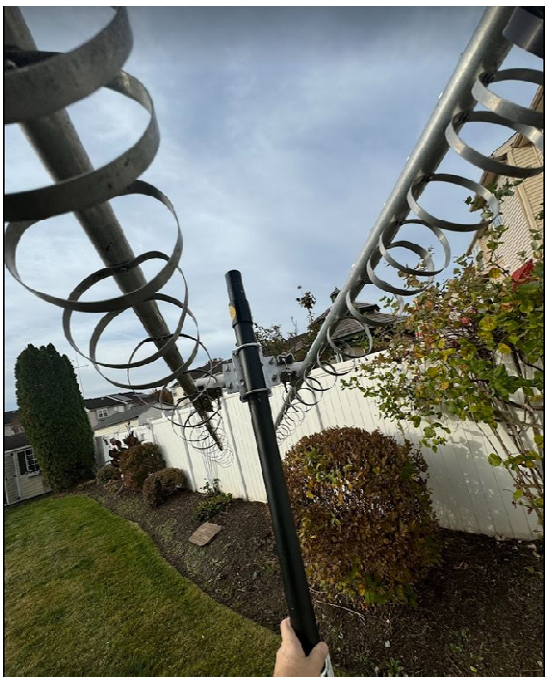
"I would like to personally thank all of the Pack Rat club members for the guidance with this project and support, you establish new friendships, challenge yourself, learn new skills with Ham Radio and get excellent support" - Scott AA2SD/R Rover

I look forward to working my very first 1296 and 902 contacts during the 2025 VHF Contest as a Rover. Listen for me calling CQ on these bands during the Winter Contest.

The link for my Rover Plan is here with Grid Squares.

Member Projects

Antenna test at the Ebright Azimuth in Delaware with Looper antennas mounted on a quick mount



Antennas mounted on single mast with a Quick Plate

Final Transverter board mounted with amps, IF and PTT Relays ready for Rack Installation

Editor Emeritus Notes

Here is a video explaining how noise figure is measured with a spectrum analyzer using the Y-factor method. It's a very clear explanation and gives a good idea of what noise figure means.
https://youtu.be/rS971cJXNWE?si=vJYi88IPlXYp1Of
73, Lenny W2BVH

YouTube video: 30 minute tour of a factory that designs, builds and tests FM and broadcast TV antennas and associated gear (matching sections, combiners, high power hardline etc.). The founders started the company in the '40s at the request of Andy Alford (the slot antenna inventor).

https://youtu.be/fXoub2nYotA?si=fTUS4If2WQzSEmUR

73, Lenny W2BVH

Here is a booklet length write up on cavity duplexers and filters. This would be a good jumping off point on learning about this subject if you're troubled by local interference. I have a commercially made "can" on 902 and it helps quite a bit.

https://www.repeater-builder.com/antenna/pdf/w6nbc-duplexer-book.pdf

73, W2BVH

archive.org/details/dlarc

The Digital Library of Amateur Radio and Communications is a library of materials and collections related to amateur radio and early communications. The DLARC is funded by a significant grant from Amateur Radio Digital Communications, a private foundation, to create a digital library that documents, preserves, and provides open access to the history of this community.

73, W2BVH

Not definitive, but a reasonable explanation:

https://hackaday.com/2024/11/05/zinc-creep-and-electroplasticity-why-arecibo-collapsed/

73, W2BVH

Here's a YouTube video of a HackRF & Portapak Combo called H4M. It's a 1 MHz to 6 GHz transceiver with built in lcd screen and its own operating system. Price runs $152 to $165 depending on options.

https://youtu.be/Ew2qDgm2hf0?si=ZaIZmyrbqo3mespb

Additional info at
https://opensourcesdrlab.com/products/h4m-receiver-and-spectrum-analyzer and at additonal web sites given in the youTube video web page.

You can also bypass the user interface and use the radio with SDRSharp, SDRAngel and SDR++ software on

Editor Emeritus Notes

your computer.

Worth investigating further.... (I have lots of questions about sensitivity, receive IMD, output power, harmonics and spurs etc etc)

73, Lenny W2BVH

Tom WA1MBA
On 11/19/2024 10:10 PM, VA3ELE Peter via Microwave wrote:

Hi all,
Sooooo... Today is that day that SOMEONE in Canada completed VUCC on 78GHz.
Congratulations Hugh VA3TO GRID #5 is in the LOG!

It was another one of those days I was driving home from work in
Niagara-on-the-Lake and the traffic going home was just brutal, there was a itsy bitsy bit of rain on my way... you know how the rest goes.

Ring ring... Hugh, it's raining down here, you up to try Grid#5? Hell yeah... ok detour to EN92XX instead of home.

Well, I got to EN92XX and it was bone dry. I'm already here so we might as well try. I'm sure you can just hear the excitement from Hugh when he heard the dashes on 78GHz even though 24GHz was only s8. I honestly was a bit skeptical that it was going to work. If you notice the path profile at the beginning of the video, you might wonder, why even try, this path sucks!

Once again, CONGRATULATIONS HUGH, we did it.

Video:

https://youtu.be/XYQSe1XYAm4?feature=shared

Now to do something about that darn crackling speaker of the Icom IC-705.

Enjoy & 73 de Peter VA3ELE

_____
Microwave mailing list

Forwarded by Lenny W2BVH

Technical Note

I saw this in the NEWS Group's news letter and it intrigued me, I had never considered using a photo-transistor as a photovoltaic device but it works for this low current application.

Tom KA3FQS

GaAsFET LNA Bias – Simple, Cheap, and Fool-resistant

Paul Wade, W1GHZ ©2024
w1ghz@arrl.net

Last year, I read an article[1] about negative bias for GaAsFETs and newer low-noise devices, using an optoisolator to generate the negative voltage. Recently I've been playing with an LNA for 10 GHz. I remembered the article and thought I'd give it a try.

How does it work? Many of us know that all diodes are light-emitting, at least for a very short time. All semiconductor junctions are light sensitive, so most devices are in light-proof packages. An LED is fabricated to emit light efficiently; it also produces a voltage if illuminated with a bright light – try it. An optoisolator contains an LED and a light-sensitive transistor; current through the LED normally causes the transistor to switch, but if we can get to all three terminals of the transistor, we can use the voltage generated instead.

The article suggested that connecting the LED in the optoisolator in series with the FET current could ensure that the FET would never operate without bias. I took it a bit further and came up with a bias circuit that is pretty fool-resistant (nothing is foolproof – there is always a bigger fool). The schematic diagram is shown in Figure 1.

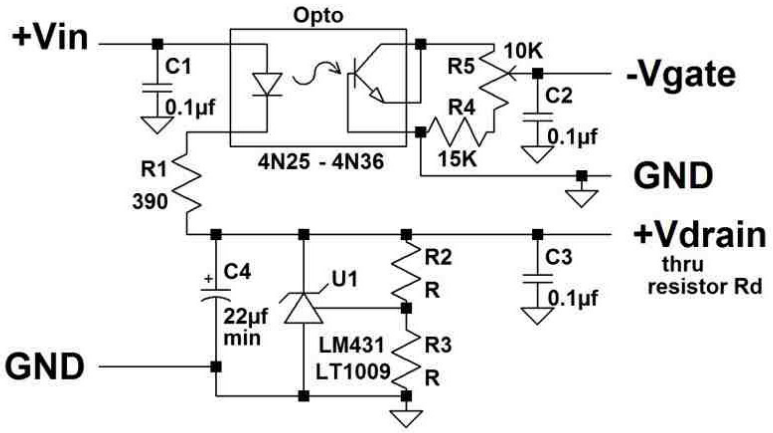


Figure 1 – Simple, Cheap, and Fool-resistant GaAsFET bias circuit

The total parts cost from Mouser should be about $2. I made a simple printed circuit board shown in Figure 2 and tested it with a couple of different optoisolators that I had on hand. They worked as expected with my LNA prototypes.

Technical Note

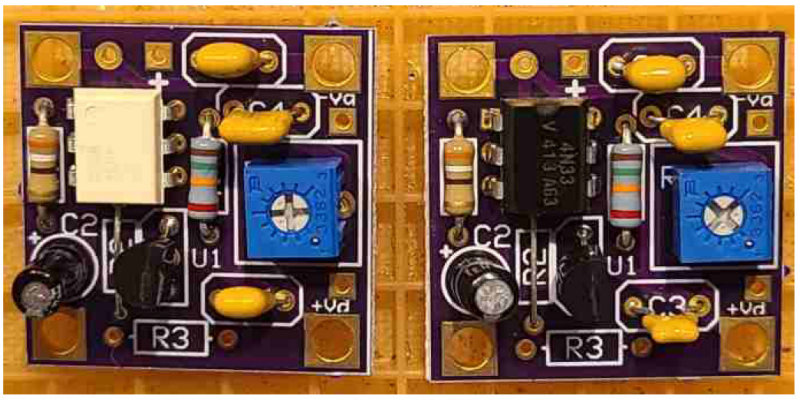


Figure 2 – PC Boards

How does it work?

The FET (or other fancy name low-noise device) drain current passes through the optoisolator, through R1 which limits total current, to an LM431 shunt voltage regulator, which limits maximum voltage. The optoisolator generates about 0.5 volts with a maximum current of around 50 microamps – plenty, since the gate should draw zero current. A typical LNA has a 51 ohm resistor in series with the drain, dropping the drain voltage, so the shunt regulator should be set to provide the desired operating voltage at the drain.

The device I am using, the CEL CE3512 Super Low Noise FET, is specified to operate at 2 volts and 10 milliamps. A current of 10 mA through the 51 ohm drain resistor is about 0.5 volts drop, so the shunt regulator voltage should be 2.5 volts. The LM431 (or TL431 equivalent) operates at 2.5 volts when R2 is zero and R3 is left open. The LM431 needs at least 5 mA for good regulation, so R1 is chosen to set the total current to at least 15 mA. For stability, C4 must be at least 22 uF. The gate voltage for 10 ma is about –0.4 volts. With R4 and R5 values shown, the gate voltage is adjustable from –0.3 to –0.5 volts. Bias adjustment is simple: turn the pot until the drain voltage is 2.0 volts – current must then be 10 mA.

For higher FET voltage, the LM431 is set to a higher voltage by R2 and R3:

$$V_{reg} \approx 2.5 * (1 + R2/R3)$$

Failsafe: maximum FET voltage is the shunt regulator voltage, and maximum FET current is limited by R1 to design current plus 5 mA or so.

Design Procedure

For a desired drain voltage Vd and current Id:

Vreg = Vd + (Id * 51) [assuming a 51 ohm series resistor in LNA]

R1 <= (Vsupply – Vreg – 1.2) / (Id + .005) [1.2 volts for optoisolator, 5 mA for LM431]

Technical Note

Example

Tommy, WD5AGO, wants to use a higher IP3 device that operates at Vd=3.5V and Id = 40 mA.

Vreg = 3.5 + (.04 * 51) = 5.5 volts

R2 = 12K and R3 = 10K will produce 5.5 volts

R1 <= (12 – 5.5 – 1.2) /(.04 + .005) = 228 ohms [220 ohms is standard value]

Higher bias voltage

The optoisolator only generates about –0.5 volts. If a higher negative voltage is needed, simply add another one in series:

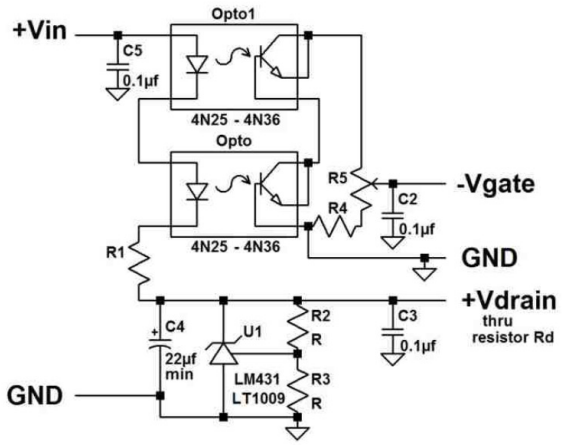


Figure 3 – Bias circuit with higher negative output voltage

The second optoisolator increases the voltage, but not the maximum current, so R4 + R5 should total at least 50K ohms.

Summary

This simple circuit provides negative bias voltage for an LNA without the need for voltage inverters and noisy switching power supplies. It is cheap and easy to build and fool-resistant.

Note

1. Aljaž Blatnik and Matjaž Vidmar , “Photovoltaic Bias for Depletion-Mode Devices in Low-Noise Amplifier Applications,” IEEE Microwave Magazine, March 2023, pp. 44-51.

The Wayback Machine

In CHEESE BITS, November, 1974. Vol. XVI, #11
de Bert, **K3IUV** (*author's comments in italics*)

"**Our Prez Sez"**. Prez Ron, **W3RJW,** encouraged the members to prepare for the upcoming contest, saying "When you joined the club, you said you were a VHF'er and further you would help out at contest time. Now is the time to prove it!" He suggested you prepare by "getting on the air, try out the equipment, and don't wait until the day before the contest." (*50 years later, the words still ring true. Are you ready?*) He provided the solution to last month's cryptogram as "Did you ever wonder who had to clean up King Kong's litter box," and threw out a new challenge thusly: KYV GLZTV FW YFEVJKP YRJE'K ZETIVRJVU. ZK NRJ RCNRPJ YZXY. Give it a try without peeking at the answer on the web. Did anyone get last month's puzzle?

Calendar of Events. Dec 19, club meeting at the library. This was to be a closed meeting, members only, with contest strategy and document kits for the contest. The Mario raffle of course. January 4-5, The Contest! Jan 8, Directors meeting at the QTH of Doc, **K3GAS**.

VHF Report. Joe, **W2EIF,** groaned about the low level of activity, saying "for all practical purposes 6 meters can be considered dead." Two meters did not fare much better, with occasional activity on AM above 145. (*How times change*.) On Nov 17th a good coastal opening occurred, but there was little activity. Joe worked Pete, **K1PXE,** with signals "pinning the meter."

220 MHz Repeater Report. Carl, **K3DLS,** reported on tests he ran using the club repeater, on a trip to Atlantic City. On the way there, he worked **WA3SPR** to within 18 miles of Atlantic City. On the return trip he picked up Rich, **K3ACR,** about 23 miles out on Rt 30. Distance was about 53 miles. Carl was using an FM21, the **Clegg** rig. (*We used to have lots of club member activity on the repeater. Sadly, like most other activity it is now greatly diminished*.)

Mario Award Established. Tony, **W3HMU,** reported on the rules associated with a new award that the club established in memory of Mario Fontana, **K3UJD**. The rules were listed, with the note that "It is the intention of the award committee that the Mario Award be presented only in outstanding circumstances and may not be diminished in value by annual use. It will not be presented more than once a year nor less than once in five years." Full details may be seen on the web site.

This is Your Life (Part #5, First Elections, First Outdoor Meeting). In this issue, Frankie, **W3SAO,** continued to present the history of the Packrats. In 1957, The Prez, Ozzie, **W3FSC,** announced plans for a club meeting on June 24th, to be held at the **WFIL** Radio Transmitter site. At the meeting we will register scouts, and set up a 13-week Ham Radio training course. A TVI committee was appointed (*before cable, it used to be a much bigger problem*). Bill, **W3OZP,** was elected as the new President. (To be continued.)

New Products of Interest to Hams.

W3NSI, Lynn somehow always managed to find several interesting new items. This issue included: **1).Comcraft CST-50 144 & 220 AM/FM Transmitter/Receiver.** This unit was just introduced, and will cover the full 2 and 1-1/4 meter bands using frequency synthesis in 5-kHz steps, both transmit and receive. Power out is 25 watts. Repeater offsets can be switch selected. Priced at $770, which Lynn thought was "a good buy." **2). Aluminum Towers.** Antenna Specialists are now offering a line of free-standing aluminum towers ranging from 30' to 90' in sections of 11" to 26" width. The 30' unit weighs just 38 pounds, and is listed at $121, plus base. **3). VHF Test Meter, ASMR-100**. Antenna Specialties also just announced a combination SWR, Wattmeter and field strength meter for 2 -meters. Full scales of 25 and 50 watts.

Price $70.

Official Bulletin Nr 509 From ARRL Headquarters. November 14, 1974 to all Radio Amateurs BT: All amateurs are invited to participate in the second annual Ten Meter Contest, starting on December 14. The rules state that contacts made using Oscar 6 will count. If Oscar 7 is operational, it may also be used for making contacts. Full rules are in **QST**.

NASA News Release 74-280, Oct 16, 1974. A full-page article described the details of OSCAR-7 which will launch shortly (*Updated by footnote to confirm the launch on Nov 15,1974*). The amateur spacecraft is intended to provide classroom access to encourage junior scientists. Reports from club members after the launch show outstanding performance. Lots more details on the web site.

Swap Shoppe. By Ray, W3ZRR. *(Always nostalgia. Now we use the club reflector.)* For sale by Lee, **K3MXM**, a Barry Rig 220 transmitter with 221.4 crystal, $13, a Hallicrafters S-95 radio covering 152 to 173 MHz, $25, and a 6' metal rack for $10. From Rich, **K3ACR**, "get on 2-meters for the contest." A transmitter with power supply and VFO for $35, and a 15-element Telrex 2-meter antenna for $35. "A real steal." Also, a **Gonset** Communicator II for $35, in good condition.

Holiday Greetings. *An annual holiday fund-raiser for the club was the inclusion of "greeting" notes from members. This issue carried 32 such greetings. Interesting to note the following "greeters" are still around after 50 years: Bill, **W3HQT (K1DY)**; Bert, **K3IUV**; Ron, **WA3AXV (W3RJW)**; Walt, **K3BPP**; and El, **K3JJZ**.*

Ads. *This issue included 24 "business card" ads, including many from HAM businesses that are "no longer there."Also included was the half page back cover ad from club member Ham Buerger; however, no sale details were included. I 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. (6 double sided, 8-½ x 11" sheets). (**Don't forget,** current postage went to 73-cents in July of 2024! And a penny postcard now costs 56-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**)

Regularly Scheduled On The Air Events

VHF/UHF Monday - Every Monday except holidays and contest nights the following nets are held, 224.58 MHz FM Repeater at 6:45, Packrat Talk Group DMR net at 7:00 PM, 50.150 MHz USB NCS N3RG FM29ki at 7:30 PM, 144.245 MHz USB NCS W2KV FN20os at 8:00 PM, 222.125 MHz USB NCS KC3BVL FM29jw at 8:30 PM, 432.110 USB NCS WB2RVX FM29mt at 9:00 PM.

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 .

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.

KC3BVL UHF+ Wednesday 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, 9:00PM-432.160

Links to other Activities

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

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

Meteor Shower Calendar for 2024 - Here's a Meteor Shower Calendar showing the dates for all the Meteor Showers in 2024. They're correct for our location in the Northeast. https://www.timeanddate.com/astronomy/meteor-shower/list.html

Upcoming Events

Straight Key Night—This annual event will be held as usual on January 1 from 0000 UTC through 2359 UTC for all of you old time radio telegraphers.

ARRL January VHF Contest—This is one of the two major contests in which the club participates. It will be held on January 18—20. 2025.

Swap Shop

FOR SALE: Audio Research LS7 stereo line stage. Very good condition. $700
CONTACT: KA3FQS, Tom Frederiksen
ka3fqs@gmail.com

FOR SALE; Audio General AGI 511 stereo preamplifier. One owner, original carton, very good condition. $600
CONTACT: KA3FQS, Tom Frederiksen
ka3fqs@gmail.com

FOR SALE: Schiit Audio Mani 2 phono preamplifier. One owner, original box and manual. Very good condition. $100.
CONTACT: KA3FQS, Tom Frederiksen
ka3fqs@gmail.com

Your Ad Here

You can advertise in Cheese Bits!

For details and rates contact Bob Fischer, W2SJ
23 Morning Glory Circle, Mullica Hill, NJ 08062
(609) 440-2916
bobw2sj@gmail.com

Editor's Note

I had to find someplace to put this so it wound up back here.

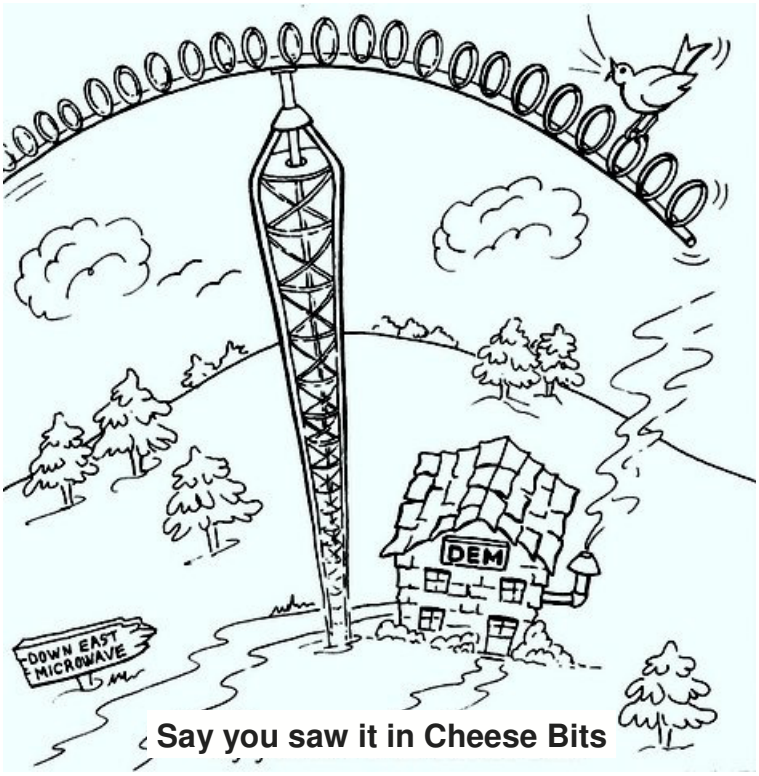
Thanks to everyone who submitted content for this edition of Cheese Bits and special thanks to Melanie, my wife for proof reading and corrections.

At the top of this column I have reintroduced the Swap Shop. Hopefully my postings will prime the pump for future Swap Shops.

Tom KA3FQS

TO:

MT. AIRY VHF RADIO CLUB, INC.



Say you saw it in Cheese Bits