



CHEESE BITS

W3CCX
CLUB MEMORIAL CALL

ARRL
Affiliated
Club



Volume LIX

April 2018

Number 4

PREZ SEZ:

Well the ARRL June contest is right around the corner and I know many Packrats are busy getting all the rigs and antennas ready for the field. There should be a work crew going to Delaware

some time in May putting the finishing touches on the trailer. Keep the contest weekend open. If you cannot make it to the Camelback site itself, please get on the air and give the club some points. We're LOUD and easy to find! Also remember assistance is permitted in this and all ARRL contests. The dates are June 8-11th. Friday the 8th is setup and the 11th is take down. We can always use extra help those two days.

Now let me comment on the great Home Brew presentations we had at the March meeting. I think the quality and thought that went into some of the projects was some of the best we've seen in years. Three Packrats were singled out for excellence and will be honored with an award at the April meeting.

Remember, there are lots of activities before June! The April General meeting will be Awards night and a presentation by Ed Hare W1RFI, with little known tales from the ARRL Lab. Ed will also be at the Meet the Speaker dinner starting at 6 pm at Giuseppe's on Street Road, just in front of the Ben Wilson Senior Center. Be sure to come out and welcome Ed.

April is also Sprint Month, 144 MHz on April 9 , 222 MHz on April 17, and 432 MHz on April 25.

These are not ARRL sponsored contests but are short (4 hours long) and can be lots of fun. See the internet (or the "Events" column at the back of Cheese Bits) for times and rules. The URL is <https://www.csvhfs.org/index.php/awards-and-programs/spring-sprints>. The contest's purpose is to encourage weak signal VHF/UHF amateur radio operation. Have fun.

There's the 44th Annual Eastern VHF/UHF/ Microwave Conference April 20 – 22, in Manchester, Connecticut. There's still time to register and go. Early registration ends April 15.

May has multiple activities. May 5th and 12th are the dates for more sprints on the Microwaves and on 50 MHz

Next a Hamfest & EPA section Convention hosted by the Warminster Amateur Radio Club on May 6th at the Lower Bucks Campus of the Bucks County Community College. See k3dn.org web site for more info. This one is usually fun.

Our May General meeting will feature several virtual Ham Shack presentations.

Finally the Dayton Hamvention is May 18, 19 and 20th at the new location in the Greene County Fair Grounds. I've been going for over 20 years and somehow it never gets old. It's always interesting. I usually travel out with 3 or 4 fellow hams. Some years are hot and sunny. Many years we have rain, but we always have a good time! Somehow I always find a way to get

Pack Rats **CHEESE BITS** is a monthly publication of the
Mt. AIRY VHF RADIO CLUB, INC. -Abington, PA.

We operate on a .PDF exchange basis with other non-commercial publications. Anything that is printed in CHEESE BITS may be reprinted in a not for profit publication, unless stated otherwise, provided proper credit is given. Deadline for articles and swap-shop is the monthly meeting date. Non-commercial swap-shop items free of charge.

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@gmail.com

EDITOR:

Lenny Wintfeld W2BVH 709 Lincoln Av., Cranford NJ 07016
(908)-272-0559 lennyw@comcast.net

CLUB TREASURER:

Dave Mascaro, W3KM 1603 Mink Road Ottsville, PA 18942
(215)-795-2648 w3km@verizon.net

TRUSTEE OF CLUB CALL - W3CCX

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

PACKRAT 222 MHz REPEATER - W3CCX/R

222.98/224.58 MHz (PL 136.5) Hilltown, PA

OFFICERS 2017-2018

PRESIDENT KA3WXV, George Altemus ka3wxv@yahoo.com
VICE PRES: WA3DRC, Ed Finn edfynn11@gmail.com
CORR. SEC: WA3EHD Jim Antonacci jjantonacci@verizon.net
REC SEC: KB1JEY Michael Davis kb1jey@arrl.net
TREAS: W3KM Dave Mascaro w3km@verizon.net

DIRECTORS:

K3JJZ Elliott Weisman (2019) k3jjz@aol.com
K0BAK Pete Kobak (2019) rxr978-vhf@yahoo.com
KB3MTW Michelle London (2018) mal61@comcast.net
W3SZ Roger Rehr (2018) w3sz73@gmail.com
Honorary Director K3TUF Phil Theis phil@k3tuf.com

COMMITTEE CHAIRMEN

January Contest Bill K3EGE billk3ege@gmail.com
Bob W2SJ bobw2sj@gmail.com
Phil K3TUF phil@k3tuf.com
June Contest: CoChairs
VHF Conference: Rick K1DS rick1ds@hotmail.com
Guy WA3JZN wa3jzn@gmail.com
Awards Chairman Joe WA3SRU wa3sru@verizon.net
Quartermaster: Bert K3IUV bsoltoff@comcast.net
Membership Chairmen: Rick K1DS rick1ds@hotmail.com
Griff NE3I signalnaut@aol.com
Michael KB1JEY kb1jey@arrl.net

PACKRAT BEACONS - W3CCX/B

FM29jw Philadelphia, PA
50.080 144.300 222.062 432.290 903.072 1296.264 **2304.043**
3456.200 **5760.195** 10,368.034 MHz (as of 1/17, red = off the air)

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 or www.w3ccx.com

to Jay's Seafood Restaurant too! If you've never been I suggest you go. I'm told it's the biggest one in North America.



This time of year is antenna rebuilding season - before the heat sets in. I know several of you had some winter storm damage. Let your needs be known to the rest of the club. Schedule an antenna party! It's amazing how hard your fellow Packrats will work for a hoagie and a beer afterwards.

The last full weekend of June is the ARRL Field Day weekend and several Packrats informally known as Team VHF will be on 6 and 2 meters as part of the WARC group. More info on when and where to find us coming soon. Also look for a reminder on the Packrats Reflector that weekend.

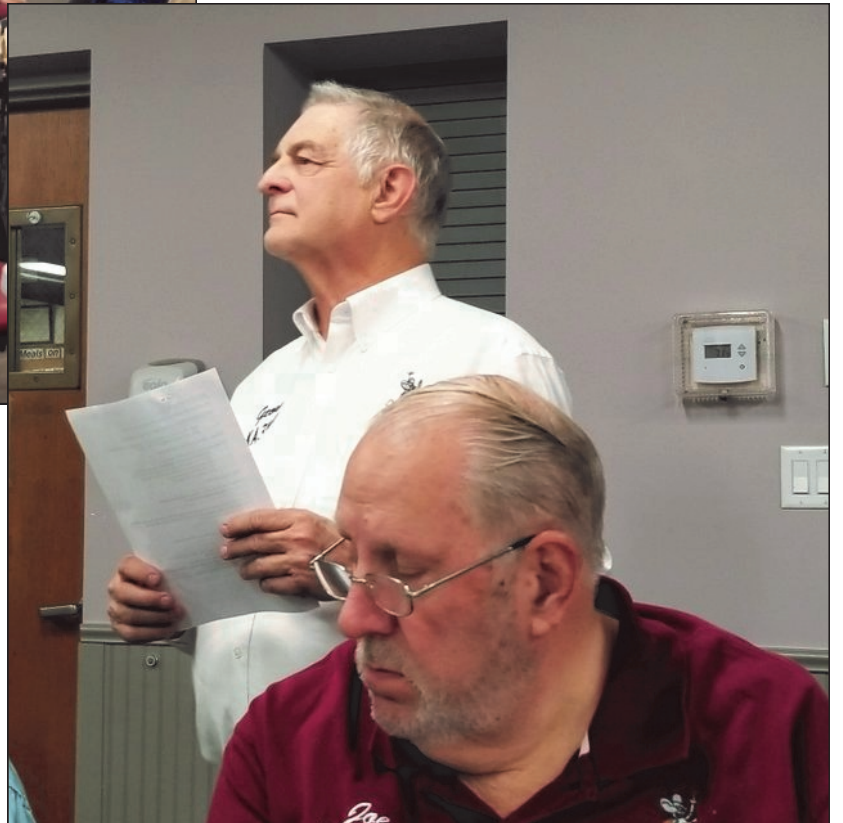
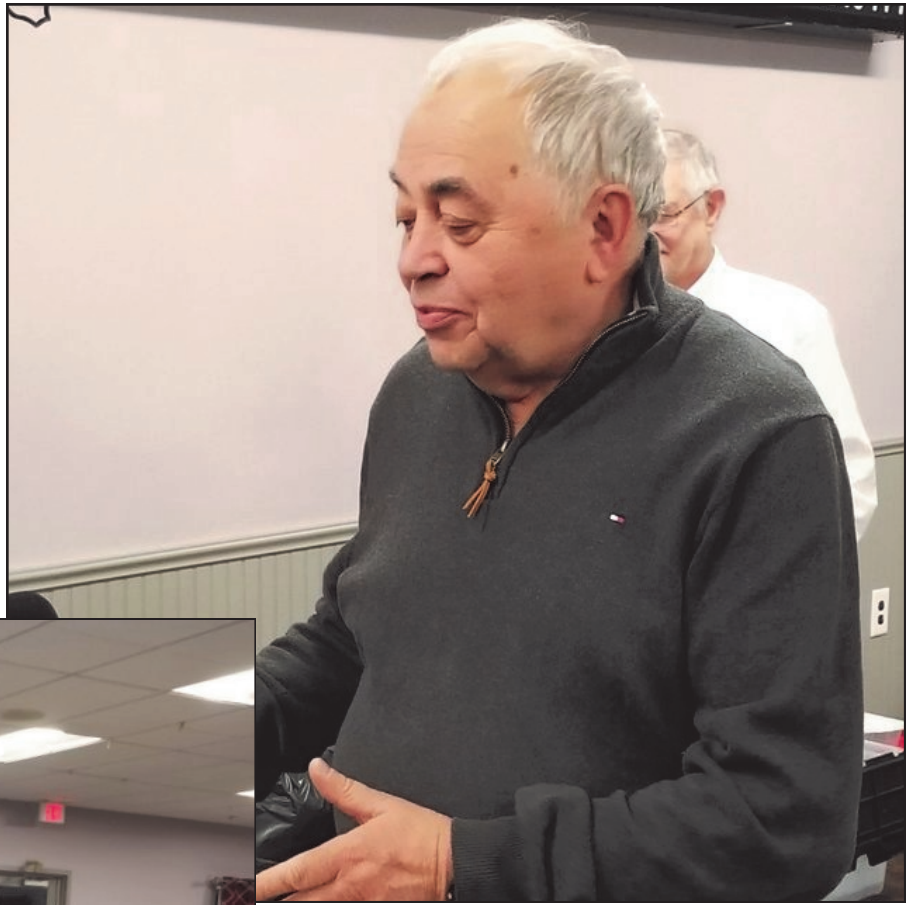
Bottom line, have some fun, learn more
Build something

MARCH MEETING PICTURES (HOMEBREW NIGHT)









Tnx K3JJZ &
KC2TN for Pix

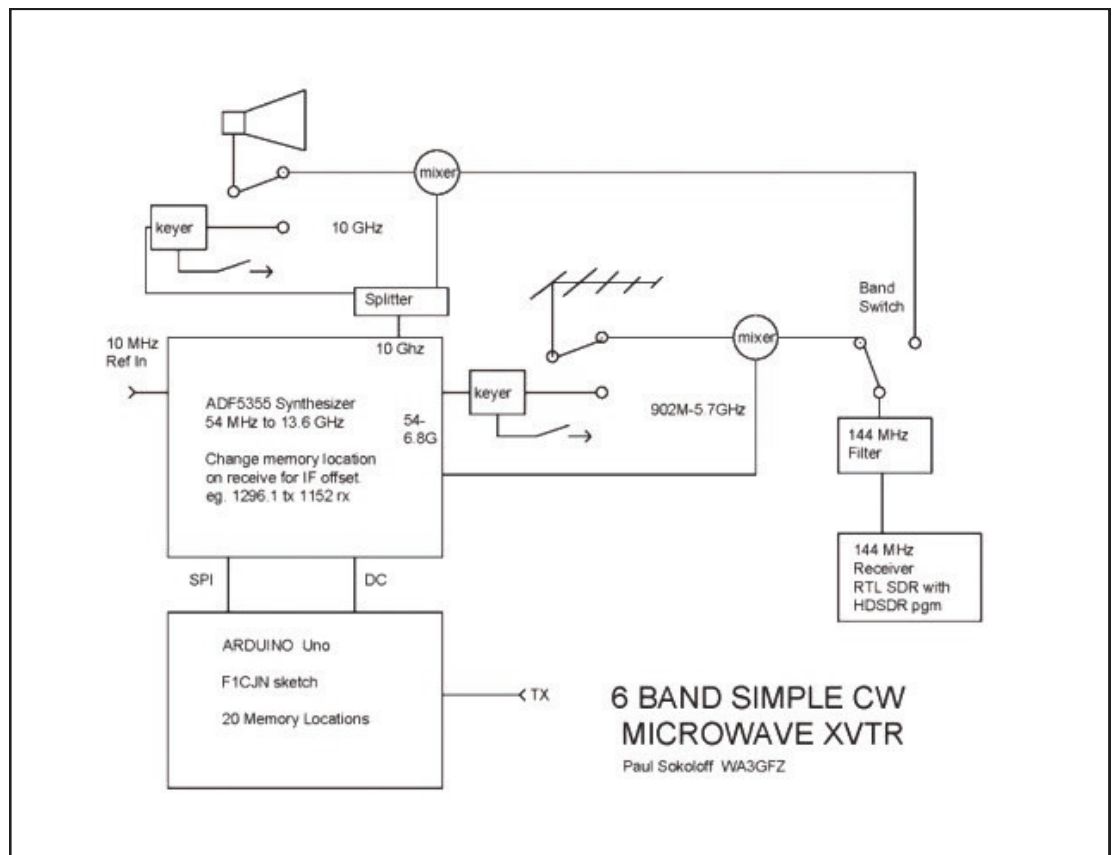
The ADF5355 54 MHz-13.6 GHz Synthesizer Board

I was excited that a board like this is available and could see using it as a test generator for the higher bands like 5.7 and 10 GHz. My N5AC Apollo 32 board is great for testing but the harmonics of the 1152 signal are weak at 5.7 and 10 GHz. Both boards can be locked to 10 MHz. The AD5355 board costs \$65 and is readily available on Ebay. It has 3 outputs with ports 1 and 2 covering 54MHz -6.8 GHz. Port 3 covers 6.8 to 13.6 GHz. It requires 6 volts, however I run mine on 5 V.

Searching the internet yielded a great sketch (Arduino program) written by F1CJN. (See <https://github.com/F1CJN/ADF5355-ARDUINO-LCDShield>). It controls the Analog Devices chip and has 20 memories. It also has settings for a reference input which will be 10 MHz for most of us. The onboard oscillator is very unstable and needs its power removed for operation with an external reference. Some jumpers on the board need to be changed to route the reference signal to the synth chip instead of the on board oscillator. The SPI inputs on the AD5355 board require 3.3 volts. Since the Arduino puts out 5 volts, an interface level converter (see F1CJN web page) was built and piggybacked between the Arduino and display module.

Once I got this system working, some ideas popped into my head. Why not build a simple CW transverter with the addition of T/R relays and mixers. My thought was to make this very simple. The following picture was my first design.

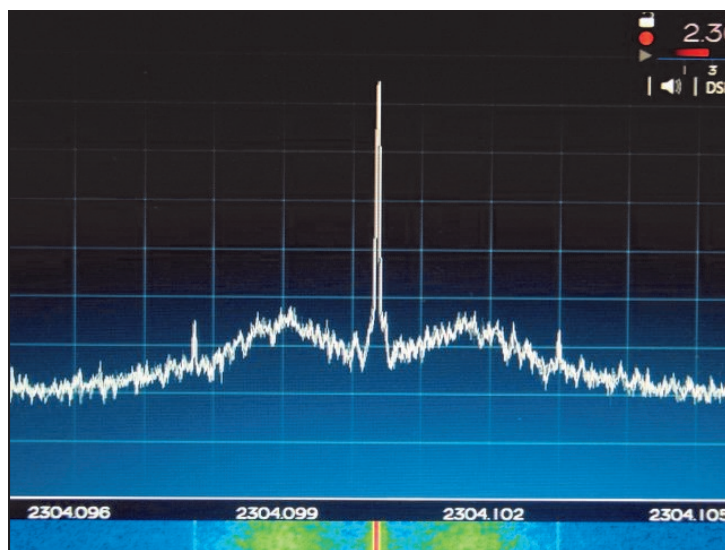
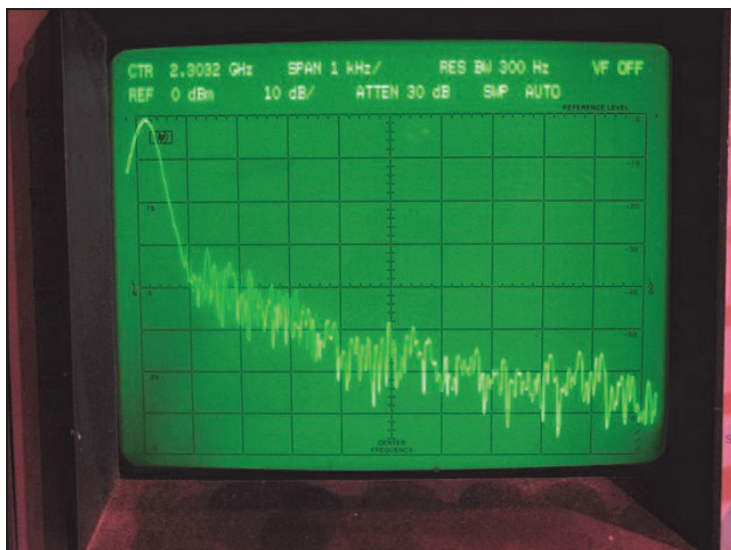
The 20 memory locations lend themselves perfectly for this application. The even numbered locations are the LO for receive and the odd numbered locations are the exactly on the transmit frequency. Example: 1152 MHz for location 2 and 1296.1 as location 3. We simply press the UP button on the Arduino controller for transmit and the down button to get us back to the receive LO frequency. Keeping it simple, the T/R relay is used for keying.



RESULTS

The transmit signals were observed on all bands at my home station. The tower is about 250 feet from the house and 110 feet high. The received signals were at -60 to -90 dBm depending on the band. As I went up in frequency, the received signals were weaker. This is probably due to decreased LO level

feeding the mixer. The mixer requires +7 dbm and at 5.7 Ghz the power out of the synth is around -10 dbm. For contrast, the synth makes +3 dbm at 902 MHz. The phase noise of these units is not great. You can see at 1 KHz out from the signal, it is about -40 db. The second picture shows the sidebands at about -50 db. The N5AC synth is much better with phase noise at minus 80 db.



The power supplies on these boards are their downfall. They cause the bad phase noise. There are modifications that can improve this, but for my application it is fine. The other issue is poor RF isolation of the relays. Some signal does leak through when not transmitting. One solution could be to modify the software to look at the key and switch to the TX frequency only when keyed.

The cost of all of the boards is about \$100. There may be a 1.5 – 4.2 Ghz mixer on ebay at \$7 that I will be testing. The relays and amplifiers may add another \$60 or so.

WHAT NEXT?

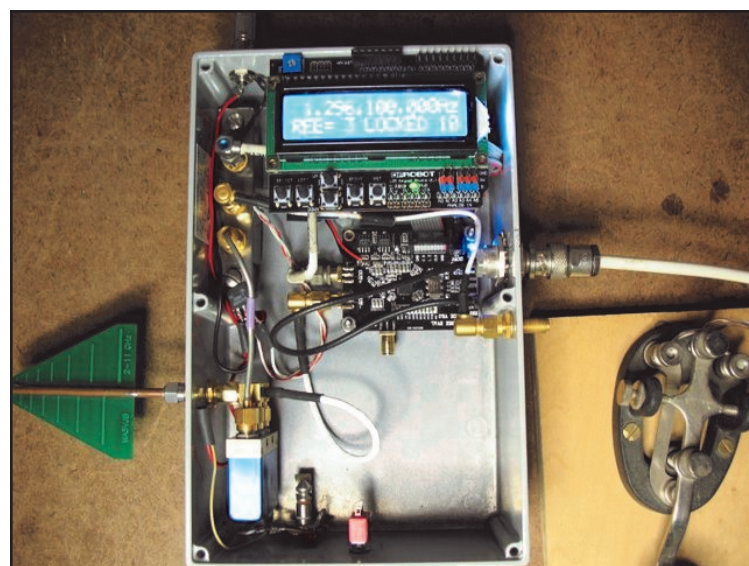
As this project is new, I will continue to tweak it for better performance.

- Add the 10 GHz receive section and test it.
- Add an RX preamp and LO amplifier for the 902-5.7 GHz system.
- Take it out for a spin and test the range with real antennas.



USES

- Rover station transverters for close range contest contacts (K0BAK style).
- Rover and home station verification tool for standard microwave installations.
- TX and RX Beacon / Test generator for the bench.
- More points at Camelback and W2EA contest efforts!



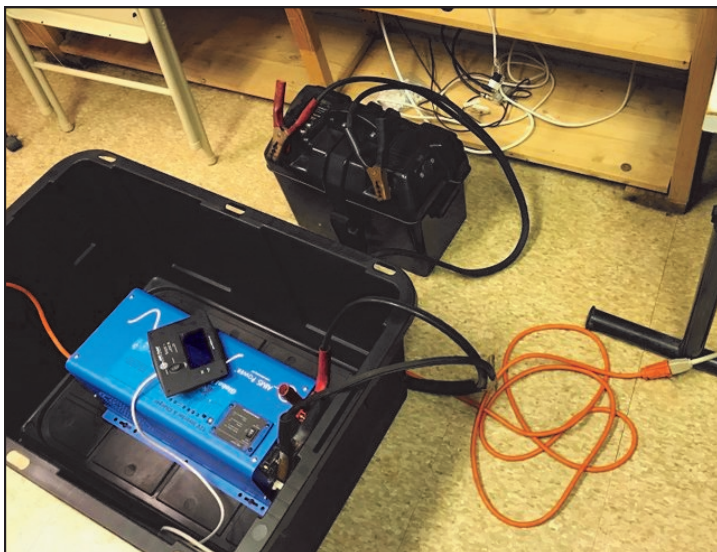
Paul Sokoloff WA3GFZ

KOBAK Rover Van Build Progress

Minor TV van progress report since my presentation at the last meeting: Below is a photo of my "fancy" test bed for medium-power testing of the 3kW inverter. Using the jumper cables, the delivered battery voltage sagged below 10.5 when I used only 400w, tripping off the inverter (which is a good thing). It looks like I might have to build proper 00 gauge cables to run it up to 1kW peak -- at least I hope that's the problem.

With the current test setup I did enough testing to be disappointed in the RF interference with the radio in the same room as the inverter. Not sure if the exposed balanced line to my antenna made it worse than if I had used coax like I will in the van. On SSB, most of the noise seemed to be removed with the PowerSDR noise reduction button, but it was still more interference than I was hoping for with a supposedly "pure sine wave" inverter.

The van is now in my driveway, so it's a lot easier to make progress compared to the 2 hour round trip where it was stored for winter. -- Pete KOBAK



Packrat AI, K2UYH at the Check-In table at the Trenton Computer Festival. AI is the Chairman of the whole shebang! An event well worth attending. Keep it in mind for next year.

Comedian Garry Shandling who passed away in 2016 was evidently a ham at some time. A New York Times article on Shandling's career can be found at <https://www.nytimes.com/2018/03/20/arts/television/zen-diaries-of-garry-shandling-hbo-judd-apatow.html>. Nothing is mentioned in the article about Shandling being a ham but a picture in the article (shown below) shows him at a nice '60s era station with a Hallicrafters SX-111, and HT-44 as well as a Benton Harbor Lunchbox (probably a "Twoer").



Thanks to Hue Miller on the "Glowbugs" reflector for the URL and description.

GPSDO

GPS disciplined 10 MHz reference oscillators are available on Ebay at [https://www.ebay.com/itm/PLL-GPSDO-GPS-Tame-Disciplined-Clock-Sine-Wave-GPS-Receiver-10M-1PPS-Antenna/172959162076?](https://www.ebay.com/itm/PLL-GPSDO-GPS-Tame-Disciplined-Clock-Sine-Wave-GPS-Receiver-10M-1PPS-Antenna/172959162076?hash=item28452b5edc:g:JqwAAOSwIFtaAWnN)

[hash=item28452b5edc:g:JqwAAOSwIFtaAWnN](https://www.ebay.com/itm/PLL-GPSDO-GPS-Tame-Disciplined-Clock-Sine-Wave-GPS-Receiver-10M-1PPS-Antenna/172959162076?hash=item28452b5edc:g:JqwAAOSwIFtaAWnN) They're more expensive than the ones Gary and Bruce have. But if Gary and Bruce run out you can look at these as an alternative.

MUD 2018 Call for Papers

Microwave Update 2018
Dayton, Ohio, October 11 – 14, 2018
Holiday Inn, Fairborn, Ohio
www.microwaveupdate.org

Microwave Update (MUD) is an international conference dedicated to microwave equipment design, construction, and operation. It is focused on, but not limited to, amateur radio on the microwave bands. The Midwest VHF/UHF Society is pleased to host this year's event. The conference will be held at the Holiday Inn, 2800 Presidential Drive, Fairborn, Ohio 45324.

Call for Presentations and Papers: The program committee is calling for papers and presentations on the technical and operational aspects of microwave amateur radio communications. Tell us about your latest project, design or operating adventures. Please e-mail your proposals, questions, and submissions to John Ackermann, N8UR, at jra@febo.com. Don't wait until the beginning of September to let us know what you're planning!

Presentations selected for the technical program may be given in person or by proxy. Please send an abstract and expected duration no later than August 25, 2018 so that we can determine and announce the program agenda the following week. Ideally, send your draft presentation by the same date. We encourage presenters to submit a companion paper for publication in the proceedings book. This paper would ideally be text based and expand on the presentation slides, but a simple copy of the slides is also okay. Either way, this material must be received no later than September 1, 2018 to be included in the book. Additional material (presentation slides, schematics, source code, more text, background info, etc.) to be included on the proceedings CD must arrive no later than September 25, 2018. All conference attendees will receive a copy of the book and CD.

Full details, including suggested topics, paper guidelines, schedule, and hotel information can be found on the MUD website:
www.microwaveupdate.org.

Mid-Atlantic States VHF Conference Call for Papers

The 2018 Mid-Atlantic States VHF Conference Sept 28-30 sponsored by the Packrats will again be held at the Holiday Inn Bensalem-Philadelphia.

We are accepting papers and presentations on any topics related to VHF and above. Please contact rick1ds@hotmail.com with your topic or title.

Conference features Hospitality, Table-top selling, Papers and Presentations, Technical testing room, Banquet, Door Prizes, Outdoor mini-tailgate-fleamarket.

Holiday Inn Bensalem-Philadelphia conference rate is \$105 +tax mention "VHF Conference." Rate includes buffet breakfast for 2 room occupants.

Tower Trouble at WA3QPX

This past storm (early March) my mast bent 10 degrees 3 feet above tower at 28 feet. I decided to work on it before it went turtle. As I recall snow on the ground makes job go quicker and better. HI!
Paul, WA3QPX



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

Nibbles from April 1968. Vol. XI Nr. 4
de Bert, K3IUV
(author's comments in italics)

- **“Our Prez Sez”.** Dave, W3LHF (later W3ZD) commented: **1)** Ladies night tickets available from the chairman, John, K3KTY. A good time promised to all. Trophies to be awarded to contest winners, together with a few other awards of merit *(another “Maybe we should do it again.” Directors please take note.)*; **2)** June 8th and 9th QSO party. Club will operate from the Hilltown site. Antenna party Friday night. Members invited to bring their receiving converters, to test with “a good antenna system.” *(Great idea. Maybe we should do it again?)* Campout space available. **3)** Election time again. W3HKZ, K3IUV and WA3BIV appointed to nominating committee. I would like to see a real election this year, with multiple candidates!” *(So what else is new? It's still a goal to be achieved).*
- **ARRL Bulletin Nr 161, 3/28/68.** Field day, June 22nd and 23rd, will include increased points for Traffic Handled, and Emergency Power Used.

Constitution and By-Laws. W3SAO, Frankie, started an informative column, discussing sections of the Packrat Constitution and Bylaws. Educational, and a refresher for the members *(If you do not have a copy, request one from the Board. Each member received (or should have) a copy of the current version).*

- **Six and Two meter net compilation.** To reduce accidental net interference, and to encourage greater activity, WA3HIT, Paul published a list of such nets covering Monday through Sunday. The list included traffic nets, various club nets, radio book review nets, and others of interest to the Ham community. He included date and time, frequency, description and Net Control station. The list included nets ranging from Pittsburgh to Baltimore, to Philadelphia. *(The Packrat nets on two at 7:30, and six at 8:30 were among those listed. As W2SJ, Bob reminds us, another long standing Packrat tradition.)*
- **Two Meter Activity Report.** W3LHF, Dave (later W3ZD) reported a few openings that offered contact with K4QIF in VA, and several stations in MD. Stations in CT and MA were also heard working K4QIF. He also reported the Saturday night sked between W8AEC, Bill in WVA and W1MEH at 145.070. Both stations will listen for other contacts after their sked. Dave reported that K2YVE, Primo purchased several hundred acres in Maine and he plans to install “a good antenna system for two-meters.”
- **432 and up Report.** K3IUV, Bert (that's me) reported a couple of openings to the South, with W4JFU signing into the net and working locals several times. W3BSV and W4JFU have nightly schedules and are looking for stations in this area. “Hal, W3HFX, is back on the air regularly, and his potent SSB signal should serve as an incentive to those of us who are still struggling with SSB on six meters” *(Hal used the Armstrong method for Antenna rotation.*

His mast extended through the roof, and he turned it by hand from inside the shack!) 1296 is heating up. K3DYO and I achieved a two-way contact on 1296, over a 2-mile path. (*Wow! But remember this was 50-years ago.*) Rig at K3DYO consisted of an APX-6 receiver, a varactor tripler for transmitter, and a helical antenna. The rig at K3IUUV included an APX-6 transmitter and a crystal controlled converter into an A4 for receiving. Antenna used was a 432 collinear on the tower. Added news flash. One-way contact made across the Delaware river was made, with WB2IDE transmitting and K3IUUV receiving (*probably around a 20-mile path.*) Signal level about S-1. Results are encouraging. W3VIR, Bill (SK) reported that a group of North Jersey enthusiasts used the 60-foot dish at Bell Labs on 4/12 and 4/13 to operate moon-bounce. They made contacts with Switzerland and California stations. They also received many "heard" reports. One of the CA stations was using a 10' dish. "How about serious consideration of a moonbounce team for the club". (*We followed up on that. The rest is history.*)

- **Noise Diversity.** An "April Fools article by K8DFR. He suggests that using paralleled resistor instead of a single one should yield lower circuit noise, since "some resistors contribute lower noise than others." (*An interesting concept. I don't recall if anyone was fooled, or tested it out!*)
- **Construction.** Our technical enthusiast, K3GAS, Doc published a list of Slug-tuned and fixed inductor design characteristics. Inductance, wire gauge and turns using various forms covered a

wide range. Useful for the home-brewers (*of which there were many in the club at that time.*)

- **Meeting Notice.** The April guest and speaker for ARRL night (*another Packrat "tradition"*) will be W1HDQ, Ed Tilton. Ed was fondly referred to as "Mr. VHF", and he conducted the QST "World Above 50-Mc (MHz) column for many years. (*Somewhere in the basement I have a long audio tape he recorded, describing VHF propagation modes. If I can find a way to convert the 7" reel-reel tape to a more convenient format, I may offer it for a club meeting program.*)
- **Swap Shoppe.** For sale by K3IPM, Stan. A pair of Telrex 2 meter, 11-element beams, new baluns and stacking harness, and 125' of RG8U included. \$50. (*Even back then, Stan was always trying new equipment, to improve his station and / or contest score.*)

Miscellany. Postage *missing from this copy (from W3KKN, so I can't report on the mailing cost. As in previous editions, many "folksy" comments about members, their families, and activities were included in this edition of Cheese Bits. If interested, or for more detail on the above items, visit www.W3CCX.COM and read the full issue scanned by K3IUUV, and posted there by our Webmaster).*

Thirty, de K3IUUV



For those bad propagation days...

SWAR-GREES® Standing Wave Improver

Have you got one of those aerials that's hard to tune? SWAR-GREES® is the answer. This patented RF lubrication launched at the start of this month dramatically improves your aerial match by making signals slide along the cable with less RF friction (hysteresis), thus improving the SWR, VSWR and Return Loss. You also get increased power handling and better 'talk power' because the faster-moving signal can build up greater RF inertia. It can give a 9dB per kHz per metre improvement on SSB and up to 12dB/kHz/m or more on weak-signal modes. On VHF and UHF systems it also reduces the noise figure. SWAR-GREES® is compatible with SSB, AM and FM, all the latest digimodes and even most legacy modes. Put SWAR-GREES® on your coax for instant better matching! Each application lasts about six months. How much will *your* system improve? Available from the RSGB Shop, with special pricing for RSGB Members. See www.rsgb.org/swar-grees



Submitted for the April issue of Cheese Bits by KA2LIM via WB2ONA

LONG DELAYED ECHOES, STATUS REPORT

By Bert, K3IUUV

Many of you may remember the "long delayed echoes" project back in the mid-70's. At that time, a committee was set up to investigate and determine the source of long delayed echoes reported by a number of HF stations. These were instances where transmitting stations were hearing echoes of their own station transmissions, however with significant delays.

Reported in QST at the time, the investigation was dropped when the number of observations (and thus data) essentially dropped to zero.

Recently, such echoes have been reported by a number of 6-meter station operators, reviving interest in collecting the data and investigating the source. (Not to be confused with valid moon-bounce operation, where we have a known source and good data on the timing and availability of such echoes.) A league committee has been asked to follow-up on this investigation. They are soliciting volunteers and reports from stations in the US (and abroad), to provide data and comments for their investigation into this activity.

If you have experienced it personally, or know of other Hams that have, you are asked to provide a legible paper copy of the data to the committee. Reports should be submitted to "**LDE committee, 1 April Lane, Newington CT**". You should include your call, Name and Address, time, date and duration of the observation, and any other pertinent data recorded, such as beam heading and apparent signal strength. The committee plans to spend about six months to complete their investigation and issue a report. They have indicated that anyone submitting data to them will be mentioned in the report. I suggest you keep a hard copy for your records, in case the committee's data is lost. You might want to also send a copy to Lenny, W2BVH, for publication in an issue in Cheese Bits (Lenny is always looking for good material.)

Events

For inclusion, please direct event notices to the editor.

2M Spring Sprint - Contest - April 9, 2018, 7:00-11:00 pm local. See <https://sites.google.com/site/springvhfupsprints/home/2018-information> for details.

222 MHz Spring Sprint - Contest - April 17, 2018, 7:00-11:00 pm local. See <https://sites.google.com/site/springvhfupsprints/home/2018-information> for details.

44th Eastern VHF / UHF / Microwave Conference - April 21-23, 2018, Manchester CT. Sponsored by N.E.W.S. Details at <http://www.newsvhf.com/vhfconf.html>. Online registration info and registration forms at the web site.

432 MHz Spring Sprint - Contest - April 25, 2018, 7:00-11:00 pm local. See <https://sites.google.com/site/springvhfupsprints/home/2018-information> for details.

Microwave Spring Sprint - Contest - May 5, 2018, 2300Z. See <https://sites.google.com/site/springvhfupsprints/home/2018-information> for details.

EPA Section Convention - May 6, 2018. At Bucks County Community College, Bristol PA. Sponsored by WARC. See <http://k3dn.org> for details.

6M Spring Sprint - Contest - May 12-13, 2018, 2300Z - 0300Z. See <https://sites.google.com/site/springvhfupsprints/home/2018-information> for details.

ARRL June VHF - Contest - June 9-11, 2018, Join us at Camelback or operate the contest from home. Let's turn in a great score in the spring classic. See <http://www.arrl.org/june-vhf> for details.

HRAC Firecracker Hamfest - Hamfest - June 30, 2018. Harrisburg Area Community College, Harrisburg PA. See <http://www.w3uu.org/> for details.

Eastern VHF / UHF / Microwave Conference

44th ANNUAL EASTERN VHF/UHF/MW CONFERENCE

Fri./Sat./Sun. April 20-21-22, 2018 BAYMONT INN & SUITES, 20 Taylor St., Manchester, CT 06042 (just a few miles northeast of Hartford, CT off I-84, at Exit 63). **Registration at www.newsvhf.com is on-line NOW!** Many of your friends have already registered!

Registration ONLY \$20! deadline April 15. (Register at door \$25) Includes: Friday nite Super Hospitality Room, Saturday Pizza+Sub Lunch & Proceedings CD

Sat. Eve. Banquet Buffet \$30. deadline April 15

SPEAKERS

=====

W2RMA -- Rover Master Control Box

W9JJ -- Update: 1st Annual 222 MHz and Up Distance Contest

N1JEZ & VE2UG -- Experiments on 122 and 241 GHz

VE2UG -- Finding Sites with Hey What's That

W1GHZ -- New Cheap & Simple Transverters

WA2AAU -- Noise on our Shared Microwave Bands

WA1TE -- K1SIG/R Rover

N6NB -- Obstacle Gain: Reinventing the Wheel in 2018

W3SZ -- Station Automation Symposium

FRIDAY SYMPOSIUM, April 20, 1:30 to 5:30 PM

=====

Roger Rehr, W3SZ, will lead a symposium on Station Automation. In the final part of the symposium, participants will have the opportunity to do some simple programming of an Arduino board and take it home for further experimentation.

QUESTIONS? Please Contact:

Paul, W1GHZ, (presentations, proceedings)

w1ghz@arrl.net or Mark K1MAP, (hospitality, hotel, swaps/vendors) map92map@gmail.com

(cell) 413-777-9828

Bradley International Airport (Hartford, CT), is close by the site (1/2 hr). The New York, Boston, Providence, Albany airports are a 2-3 hour drive. The Hartford Amtrak Train station is only about 15 minutes from the hotel.

Lunar-Link International

VHF & UHF amplifiers
for demanding modes
50 - 144 - 222 - 432 MHz
EME - Digital - Contesting



www.lunarlink.com

info@lunarlink.com
33 Ball Pond Road Danbury, CT

G AND G ELECTRONICS OF MARYLAND

JEFF GOLDMAN, K3DUA

PO Box 222 (301)258-7373
Lisbon, MD 21765-0222 EMAIL: k3dua@erols.com

-Dealers in New and used electronics-

DESTINATIONS TRAVEL

A Full Service Travel Agency

HARRIET SOLTOFF
Travel Consultant

XYL, K3IUV

229 Fairway Dr
Warminster, PA 18974-3797

Phone: 215-957-6084
Fax: 215-957-6085
E-Mail: BSoltoff@Comcast.net



Congrats to K0BAK!

Lenny: I passed my Extra exam on Monday (3/26) at Ben Wilson Center where the Warminster ARC VEC were giving the exam. Got one question wrong, so I may have to take it again. :-)

Ran into President George by surprise beforehand; in a funny coincidence, he was there to give a class to prospective Extras -- though I got my instruction from HamTestOnline.

73, Pete K0BAK

Trenton Computer Festival Coverage

A fine article on the recently conducted Trenton Computer Festival (run by Packrat AI, K2UYH) can be found at <https://hackaday.com/2018/03/23/hackaday-visits-worlds-oldest-computer-festival-tcf-43/>

It covers the 2018 activities and also the history of the oldest computer fair for the general public in the US.

Genius and Stupidity

The difference between genius and stupidity is that genius has its limits. [Albert Einstein]

As quoted in the MVUS newsletter "Anomalous Propagation"

Joel Knoblock W3RFC

www.therfc.com

The R.F.Connection

213 N. Frederick Ave. #11WWW
Gaithersburg, MD 20877 USA

World wide shipping via FED-EX or US Post Office

Tech Line 301/840-5477 Order Line 800/783-2666

Fax Line 301/869-3680

Hours: Monday-Friday 9:30am-5:30pm Eastern
All major credit cards accepted

High Performance Low Cost SDR

A nice article on making a high performance low cost SDR for your station can be found in the Twin City DX association newsletter "Grayline Report". It's at <http://www.tcdxa.org/Newsletters/March2018GrayLine.pdf>

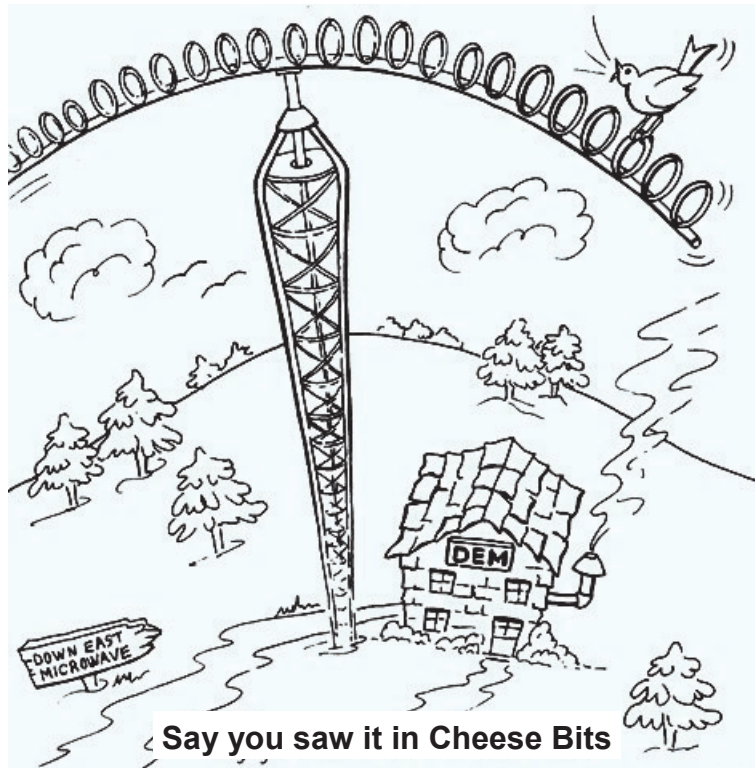
TNX Paul, G6YZC for the reference.

Cheese Bits
709 Lincoln Avenue
Cranford NJ 07016



TO:

MT. AIRY VHF RADIO CLUB, INC.



DOWN EAST MICROWAVE

Manufacturers and Distributors
Of VHF/UHF/SHF Equipment and Parts
50 to 10,368 MHz

- No-Tune Linear Transverters
- Linear Power Amplifiers
- Low Noise Preamps
- Coax Relays, Coax Cable, Connectors
- Crystals, Chip Capacitors, MMICs, Transistors, RF Modules

For All Equipment
Steve Kostro, N2CEI

<http://www.downeastmicrowave.com>

19519 78th Ter.
Live Oak FL 32060
Tel. 386-364-5529 (Voice)