



CHEESE BITS

W3CCX
CLUB MEMORIAL CALL

ARRL
Affiliated
Club



Volume LIX

September 2018

Number 9

PREZ SEZ:

September is here already! Fall is just around the corner, but HAM related activities are still going strong!

First a little history: August 11th was the Packrat Picnic at

Michael's QTH. The weather did not cooperate at all. But Michael simply moved it indoors. Although the crowd was smaller than usual, this did not dampen spirits. Along with the hot dogs, hamburgers and a great selection of covered dishes, there was a lot of friendly and lively conversation.

What's coming up?

September is definitely a great month for uhf/vhf contests. Check the end of Cheese Bits for dates and more information.

One of the bigger ones is the September VHF contest. The South Jersey Mountain Toppers and many Packrats will be operating this contest from High Knob. The team is lead by Ken, K2WB and Bob, W2SJ.

Others are encouraged to get on the air from home and have fun. Be sure to look for and work W2EA. Dates are September 8th and 9th. You can work them on 6 meters thru 10 GHz. This is a good opportunity to check out your entire station and find out what is not working properly. Afterwards, with the cooler weather around the corner, its time to plan those tower and antenna fixes before the cold weather arrives.

If you find some time Sunday morning, September 16th, Gloucester County Amateur Radio Club is holding it's Hamfest in Mullica Hill. It is the SNJ ARRL Convention site this year with 4 different guest speakers. I like to mention this one because I always seem to find something I "need" there.

Do not miss the 2018 September Mid-Atlantic States VHF Conference 28th 29th and 30th at the Holiday Inn near the PARX casino in Bensalem. Rick K1DS, Phil K3TUF, and other Packrats have been hard at work. I've seen the speaker lineup and it looks great! There is a special Friday afternoon seminar this year with Roger Rehr, W3SZ and Phil Theis, K3TUF on "N1MM for Beginners". Friday night is the Hospitality Suite and table top selling. Saturday is a full day of seminars including several outstanding speakers including our own Joe Taylor K1JT, Dan Marlow K2QM, and Alan Wolke W2AEW. Many other interesting presentations will be given by our fellow Packrats and friends. Saturday evening is the buffet banquet with guest speaker Paul Shuch, N6TX presenting "CQ Space: Building the Interstellar Beacon". Sunday morning is an outdoor mini-fest, weather permitting.

If you haven't registered yet I suggest you do, as soon as possible. **Just go to the Packrat web site and follow the directions on the home page.**

One last thing to add to your calendar. The December general meeting is also the Packrat Holiday Social. The doors open at 6pm. Come and enjoy a relaxing time of food and fellowship.

Pack Rats **CHEESE BITS** is a monthly publication of the
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222.98/224.58 MHz (PL 136.5) Hilltown, PA

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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

With all the contests and other activities this month don't forget that project on your workbench. You remember that one you started in the spring?

Have some fun, learn more.
Build something



73, George KA3WXV

Packrat Picnic 2018

The day after the Packrat picnic, while I made the rounds to return various borrowed items, I took stock of the 2018 event and the lessons learned. Sixteen Packrats and their significant others attended this year's picnic. Everyone I talked to after the picnic said that all had a great time, enjoyed the company, and found the various food dishes tasty. I heard that the spouses really appreciated the opportunity to talk with everyone who attended and to catch up on recent events.

Unlike previous picnics, the thunderstorms, heat, and humidity caused everyone to retreat to the **air conditioned** dining room and Florida Room. Shortly before the appointed hour of 2 PM, the heavens opened and rain poured. There was a break in the rain to allow grilling of hot dogs and hamburgers by George NE2U (**thank you George !!!**). Thanks also go to another George, our president KA3WXV who helped with the set-up, beverages, prepared the corn on the cob, and did pre-picnic grocery shopping.

The weather had another unexpected effect. Mr. Drake, my four-legged companion (an orange tabby cat) went into hiding at the first peal of thunder. My girlfriend, Diane, was afraid he had made a "jailbreak" to the outside. Eventually, Mr. Drake came out from his hiding place under the recliner. He rolled on his back or side and socialized with any guest who stopped to play with him. Some thought that Mr. Drake was the friendliest cat they ever met.

We were joined at this year's picnic by Alex KR1ST and his wife Jennifer, who live near Scranton, PA (FN21 in Lackawanna County). Alex had heard about the Packrats and reached out to Rick K1DS. Rick invited Alex and his wife to the



picnic. Alex is very interested in weak-signal VHF/UHF amateur radio as evidenced by his QRZ listing. The Packrats in attendance must have made a good impression on Alex and his wife. Alex tells me that he intends to submit an application for membership.

I had heard that before I came to Pennsylvania, the Packrats hosted picnics at Fort Washington State Park with lots of children and with attendance greater than 100 persons. However, I have noticed that in recent years, the attendance is down and few children attend. Last year, 28 Packrats and their guests attended the picnic.

This year, I received several notes from regular attendees who cited conflicting engagements.

I also suspect that the heat wave caused others to retreat to air conditioned surroundings. Personally, I could not blame them. While I own a house with a dandy in-ground pool, I am partial to the air-conditioned spaces.

We will talk about a picnic in 2019 at future Packrat BOD meetings. The picnic is the major event that allows Packrat families to socialize. I would hope that this opportunity will not be lost. Some thought has been given to at least one alternative site to kindle some fresh interest. My suggestion is that regardless of where the 2019 picnic is held, that plans be made so that regardless of weather and temperature, attendees have the opportunity to escape to the great indoors to eat and socialize. --Michael KB1JEY





Tnx Rick K1DS
for pictures!

ARRL 2018 222 and Up Distance Contest Results and Comments

From Rick K1DS

I turned on the rigs three times and found three stations: K1TEO, N3RG and N2NT. I have 6 QSOs in the log and sent in to ARRL and got the robot receipt. This was our cousins' weekend and we had a big crowd from Fri afternoon til Sunday eve, so little time for radio, not to mention low power and only the attic antennas.

From George WB3IGR

18 QSO's 3180 points , K1TEO, K1RZ, NN3Q/R just to name a few and 4 QSO's on 903!

From Bob W2SJ

Hi Lenny, looks like you had a good time in the 222 & Up contest!. I had to work so I did not start until 7 PM on Saturday. When I listened there were only a few stations calling CQ. I finally brought up the ON4KST chat page and then started making contacts! Results were: 60 Q's & 6 Bands for a total of 35,836 points. My best DX was N1JEZ-FN44 at 616 km, W1GHZ-FN34 at 571 km, VE3DS-FN03 at 568, and VE3ZV-EN92 at 548 km. All contacts were on both 222 & 432 and of course on CW. The best DX on the micros was working K1GX-FN31TT 903 thru 3456 at 333 km. And let me add a note to George WB3IGR: Don't sell that 903 loop yagi yet. It might get you some more points in September and especially January!

From Lenny W2BVH

48 Q's, 5 bands, 20K+ points. Got as far as 550KM on 222 and 290KM on 2304 (6 Q's on 2304 --- yikes!)... Not bad for a setup with low antennas and trees at around 270 degrees of the compass. Most of all it was fun. One of these days I've got to change things so I don't have to twist so many knobs and switches (not to mention doing local oscillator offset math) to get to the next band. But wait...maybe that's part of the fun? Like a 6 speed manual? If you weren't in the contest consider it for next August. Fewer Q's but more points than last year.

From Dave K1RZ

Hi Lenny, Here is my score and soapbox comments. It was great fun. Results were: 9 Bands with a total score of 165834. The second ARRL 222 and Up Distance Contest now is in our records. The Distance aspect is growing on me. The points multiplier makes sense as the idea is to foster more stations to ADD bands that are less densely populated. I did not experience any enhancement this year. Band openings are sometimes localized more than you'd think. The APRS map does a good job at showing in a near real time manner what band conditions are near you, and MAY be at your location. The Rovers were out!! They keep us focused! Those in my region were W2RMA/R, KD3PD/R, NN3Q/R, N9ZL/R, KF2MR/R, WB2SIH/R, K3WHC/R, WA3USG/R and W1RGA/R. What a great showing they all made accounting for 32% of my contacts. ON4KST is very valuable resource to set up real time skeds. Calling CQ is also very important because everyone cannot reach the internet, especially the Rovers. Also a related point on band activity: On Friday I worked three new stations on 2304 including Steve K3WHC and Dick WA3USG, both sporting new transverters, and Mike W3IP with a true SDR radio controlled through a long USB cable going up the tower. And all three got in during the contest. Welcome to the Microwaves! There is more room on these frequencies. Hoping more will be encouraged to add new bands. Thanks everyone for being on and working me. This was a very fun event. Back to packing now for the 10 GHz and Up contest.

From John N2NC for N2NT

Tried to generate some activity. We participated in NAQP CW on HF as well. 72Q's 30117 pts

From Phil K3TUF

What a fun and yet trouble laden contest. I say fun because I love microwave contacts and the length of this event. Fun to work the rovers who go out and make it all the more fun. One fellow hiked three miles each way to get on a peak and carried all he needed to make it happen. But it was trouble laden because, in spite of having output indication, I had no radiated signal on 902, 1296 or 10g. 10g was on the bench for repair, so I knew that band was inoperable but very sad to lose two workhorse bands, 902 and 1296. In addition, the noise level from the week of rain we had in our county bringing

...222 and Up cont'd

floods was troublesome on 222 and 432 all of Saturday. Fortunately, on Sunday morning it had subsided enough for better contacts. Keep up the good work, I love this contest. 103 Q's 56152 pts.

From Bob W2SJ

Always a fun contest! Thanks to the sponsors! 60 Q's 35836 pts.

From Dave W2KV/2

Operated on 432 from Long Beach Island, NJ FM29vp. 50 W to a 7 element 2 meter beam at 35 feet. Best DX WA3PTV 196 miles.

From AL K3WGR for NN3Q/R

NN3Q/r was active for the ARRL 222 and UP distance contest. This is a great short contest for a rover to work out any new additions or problems with the rover, try new grids, and get a good feel for distance capability of the station. While this is a contest that rewards you with points based on distance between your six digit grids it is also a great test of your on board equipment. An opportunity to work in some new rover features.

This was a single op rove for me, working both the lower two and the six microwave bands. Although I only had to deal with one headset, and one foot switch I still had two laptops, and two keyboards to keep me alert.

FN21hb, Mount Pocono was slated for the start of the contest. Plans were for a three hour operation atop this great location. The beginning of the contest presented what appeared to be poor atmospheric conditions and low activity level. Very little microwave wave activity was to be had and those signals heard were weak. At times the signals were warbling, and QSB was evident. Nonetheless this lofty location plays well and a number of high point QSO's were made in the microwave bands. It was nice to work a lot of old and new stations. After a few hours activity and propagation improved.

FN21hb gave us the longest 5 and 10 Ghz contacts. K1RZ was very active in the contest and was very patient with me as I maneuvered the rover van to a clear spot that could confirm these two contacts. As a Distance contest this action paid off with some very high scoring.

No nighttime operating was scheduled.

Sunday morning found the rover van in FN20bi, Mount Penn, Reading with a little twist. The normal rover QTH at the fire tower was off limits due to a regional bicycle race. As it turns out the fire tower was the finish line for the race, and all non race activity was prohibited. So the rover was parked 1/2 mile downhill and mostly surrounded by trees (ouch). The microwave bands suffered but 220 and 432 were enhanced due to the elevation. Without the help of Russ, I can not raise the microwave mast. This left the microwave antennas about 4 feet lower than normal, and in certain areas that little bit of a lower height dramatically reduced the effective range. If only we could tow a crank up tower!

I moved the rover van to a second FN20 location to work W3SZ into the higher microwaves, and we had the opportunity to add to our FN20 through the logging of other stations we met in grid FN20ag.

Moving to our last grid FN10xi we discovered our normal parking area was a little crowded. This site overlooks the Blue Marsh lake (An Army Corp of Engineers project). Turns out the access road to the lake was closed. Too many days of high volume rain had the lake very high and the boat launch ramps were under water. I did find a nice little grassy area to park the van but had to point it South instead of North. Another thing I had to remember when rotating the antenna (SW was NE). This spot played well and ran us up to 1800 and the end of the contest. We closed out the log with 72 Q's, and at this point discovered N1MM+ could not properly score the contest. The udc file (User defined contest) did not recognize ALL the rover's six digit grid locations. This prompted cries of help to W3SZ. After many discussions with others, Roger helped me get the Cabrillo file in order and we got it sent and accepted by the League. Roger also learned it will take a complete re-write of the 222 and Up Distance Contest by the N1MM+ gurus to get the log to do everything necessary to log properly and then score properly. This problem is for rovers only; the log can not score with multiple grid sites of the rover.

So we have to wait until the League scores the log to find out how well we did, and actually what we did!

On the Bands

--- by Jerome K3GNC

Tropo Scatterings:

Are you a “heavy lifter” or a “heavy load”? For a large part of my VHF-UHF+ weak signal life I was a load and often a heavy load. That meant I depended on larger stations to make distant contacts. Such stations as: K1WHS, K8III, K4QI(F), Wa8WZG, K8TQK and numerous others allowed me to work grids that would otherwise had been impossible to work from my small station. This “heavy lifter” – “heavy load” relationship works out okay until the time comes when the heavy lifters don’t show for a contest or move on to other endeavors or become silent keys.

None of us are getting younger and we see our long time radio friends disappearing from the radio scene at an alarming rate. I have created a “bucket list” for myself that requires me to reach certain scoring goals in the January contest. I hope many of my fellow ‘Rats will join me and set your own personal goals to be more of a “lifter” than a load. (To be continued).

I have been away most of the summer, but since my return I have had some noted “tropo scatterings”. If you are able to get on in the mornings between 0730 and 0930 local you will have an opportunity to work some of the following: N4ASF, KD8UD, KD4AA, KO4YC, VE3HD, W8ANS, N1JEZ, W1XX, KC4MCZ, the CT crew, and others. When you’re active people go out of their way to make a contact with you during contest time because they know you. Avoid the frustration of calling and calling only to hear the targeted stations going back to other stations by their first name. Get radio-active!

**** 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 WA2LTM, K1PXE, WZ1V, N2SLO, WA2ONK, WB2SIH, K3GNC, N1TKS, W2BVH and others. All are welcomed.

Tuesday: 2000 local – “Mud-Toads Net”, KD8UD fm17uv net control. 144.175, 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: 144.205 – 2130 local - 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 Luna-tic Fringe:

EME is on hold for me. My 144 MHz, 432 MHz and 1296 MHz antennas are now working, but I haven’t figured out how to get WSJT working amidst all the remote software and sound card demands. I hope to have it solved by next month’s column. QRX.

EME Tidbits – For the first 6 hours of a moon-pass Europeans stations are available. The next 3 hours are limited to NA and SA. The final 3 hours feature the Pacific islands, AU, ZL, Japan and the far east at the very tail end of moonset.

Until next time please stay/get radioactive!

6 METER FALL SPRINT REPORTS

From Warren WB2ONA

I listened on and off for 2 hours in the 6 meter sprint. Worked one station, fellow packrat Andy, N2NT. I guess digital has really taken over or nobody was on SSB/CW. I can hear the W3CCX 6 meter beacon, with the transverter turned OFF. The beacon does go away when I unhook the antenna. So I have a good idea that my omni at 50' is working OK. Sooooo, where were ALL my fellow Packrats? whine whine whine.....

From Ken KA2KIM

Worked 9 stations in 1.5 hrs. what a bust..... Checked 50.313 and could hear the tones, if you can hear the tones, they are workable via CW Turned it off and watched a movie.

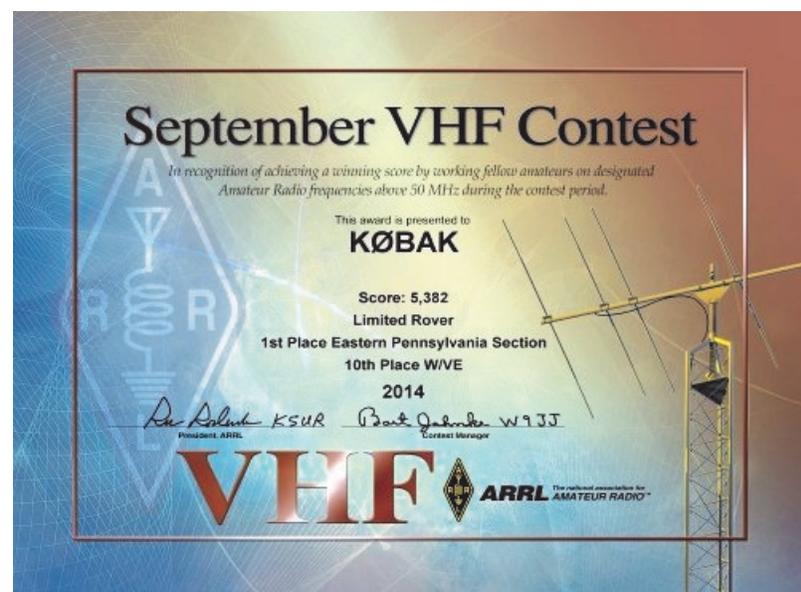
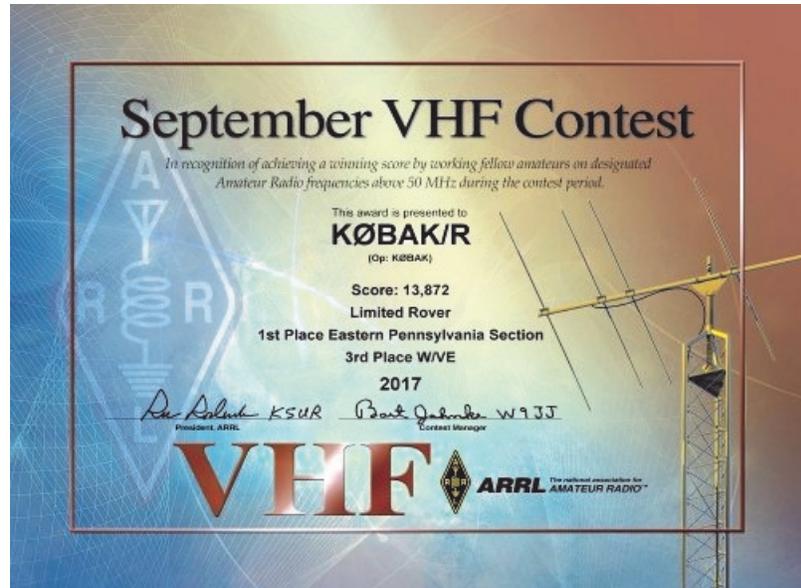
From Pete K0BAK

Operated rover around Gap PA, activating grids FM19, FN10, FM29, FN20. Thanks to all those stations who contacted me or tried to, most of whom are Packrats. Good to hear K1TEO from FN31 and KA2LIM from FN12; 7 unique grids worked. As last year, very few stations calling on SSB/CW (that I could hear), and I spent most of the time calling CQ. Are most sprinters on FT8? Is it that it's Saturday night when social people do other things? Is it the no-gain omni antenna I have to use? Didn't help that my amplifier didn't work, keeping me at 100w. There was a minor surge of contacts around 9pm, which was a surprise. I can't figure out how to work the 6m sprint, whereas the 144, 222, 432 sprints are straightforward to me. I probably won't be out again on 6M, at least until I have a zero-setup rover vehicle. 17 Q's 181 pts.

From Rick K1DS

I happened to be home for the 6m sprint and spent about an hour looking for stations on SSB and CW. I worked 10 stations on SSB in 5 grids. Nice to know that I can load up a 40-10m GRV dipole in the attic and make QSOs on 6m.

K0BAK 1st Place EPA Certificates



Mountain / Hill / Building Signal Bounce Data Solicited

Experimenters, here is something for entertainment. For several years I have been working with calculating the amount of signal received from bounces off "mountains." This has resulted in a couple of on-line calculators that seem to provide reasonable results. At this point I would like others to try these out and report their data points.

If you go out and bounce a VHF/UHF/microwave signal off of an object, like a hill or mountain (maybe a building), enter the data to the Web "Calculator to Find Mountain-Bounce Radio Scattering Efficiency from Measured Data" http://www.janbob.com/electron/Calc_MtnBounce7.html. To use this you need the obvious station parameters and also an estimate of the received power. This latter item is a good subject for separate discussion, as there are several appropriate ways to find this. For now, we assume you have a calibration from a signal generator, or have figured the power from the observed S/N, or otherwise estimated the dBm.

The result of the calculator is a number I call Scattering Efficiency. The gist of this is that there is some mountain area that is visible to both stations. This intercepts some amount of power from the transmitting station. 100% or 0dB scattering efficiency would result if that total power was radiated by an isotropic radiator. In the real world, much power is absorbed. Measurements on ice/rock mountains of the Pacific Northwest US suggest values:

Rock/Ice mountain, stations on the same side: -15 to -25 dB

Rock/Ice mountain, stations at glancing angles: -25 to -40 dB

For reference, the Moon produces an efficiency in the range of -11 dB.

The second related web page is the "Calculator to Estimate Mountain-Bounce Radio Transmission Loss (to Predict Received Signal Power)

http://www.janbob.com/electron/Calc_MtnBouncePredict5.html

This is what we would use to estimate the signal level to be received for a particular bounce path. It assumes we have an idea of the Scattering Efficiency.

One note: The observable part of the mountain is modeled as a triangle with a variable included angle at the top and some height. The resulting area is half the base times the height. All that is important is that resulting area. If the triangle model is inappropriate, create a triangle with the same area as the correct shape. Maybe this needs to be changed to allow different shapes, or just an area input. Feedback would be appreciated.

Let us know what you find!

Thanks and 73, Bob W7PUA

12 Foot Dish for 23 cm EME in the Works

Got the last part of shipment from Tek2000 in Canada Monday. Very well packed with no damage. I am impressed with the construction, light weight and sturdy. It was setup for polar mount. I have been working this week to modify it for az-el mount. Tek2000 has been very responsive. I have sent emails with questions and have gotten a reply within 24 hours. I hope to get it installed this coming week then proceed with figuring out the mount for OK1DFC 23 cm septum feed,. Remember this is supposed to be a TVRO dish with a little feed. 73 , Paul, WA3QPX

MUD 2018

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.



MID-ATLANTIC STATES VHF CONFERENCE Sept 28-29-30 2018

ARRL Sanctioned

Hosted by the Mt Airy VHF Radio Club

Holiday Inn-Bensalem-Philadelphia

3327 Street Rd, Bensalem, PA

(215) 639-9100 Early Bird rooms \$105+tax

Register on-line NOW at www.packratvhf.com

Conference Early Bird** Registration only \$40

Saturday Evening Early Bird Banquet \$40

Additional Proceedings papers sought—send to rick1ds@hotmail.com

Friday Afternoon seminar “N1MM Log-Intro for Beginners”

Friday evening hospitality and table-top selling

Saturday conference presentations & auctions

Registration includes pizza lunch and snacks

Rohde & Schwarz Technical Testing Room

Saturday evening Banquet buffet dinner with door prizes*

Sunday morning free outdoor mini-flea market

Tentative Speakers and topics:

Friday Afternoon Seminar 2:00-5:00 PM

Roger Rehr W3SZ N1MM Log: An Introduction for First Time Users

Phil Theis K3TUF

Saturday 8AM-5PM

Paul Sokoloff WA3GFZ A Compact Multiband Microwave Transverter

Joe Taylor K1JT FT8 and the Summer Es

Paul Andrews W2HRO A New Patch Feed Construction Technique

Dan Marlow K2QM Restoration of the 60' Tiro's Dish and EME Activity

Michael Davis KB1JEY My Favorite Test Gear Comes from China

Alan Wolke W2AEW Mr. Philip Smith and his Chart are Your Friend

Paul Wade W1GHZ Cheap & Simple Transverters - New and Updates

Rick Rosen K1DS Single Yagi EME

Phil Theis K3TUF Tower Mounted Microwave Gear

Joe Horanzy AA3JH LASER Communicator Update

Bob Fischer W2SJ Did Murphy Help You Prepare for the VHF Contest?

Saturday eve banquet speaker

Paul Shuch N6TX CQ Space: Building the Interstellar Beacon

details and updates www.packratvhf.com ** Early Bird price good through Sept 20.

*You must be registered and paid for conference and banquet to be eligible for door prizes

HAM RADIO FRIENDS

UR INVITED

CRAB FEAST



SATURDAY, SEPTEMBER 22

12:00 p.m. - Dusk

Rain or Shine

(in barn/picnic tables also outside)

Crabs, hamburgers, and sodas provided

Paul & Judy Domanski's Home

987 Dexter Corner Road, Townsend, DE

Bring: A covered dish
Your favorite beverage to share
A chair

Wear: Your callsign - badge, hat



RSVP Not Necessary



Directions: South on Rt. 1. As you come over the Rt. 1 bridge, near the bottom, take the right exit (to take old Rt. 13) (before toll). Follow south on Rt. 13. Approx. 5 mi. south of Odessa, turn right on Rt. 71, (at Valero gas station). Go to next road, Rattledge Road, and turn left. Go to the end of Rattledge Road and turn left on Dexter Corner Rd. We are approx. 1/4 mile on left—split rail fence, tall trees, pond in front. Look for the aerials.
Paul's cell **302-388-2679**

73

WA3QPX

Paul



THE EME CONFERENCE 2018, HOLLAND

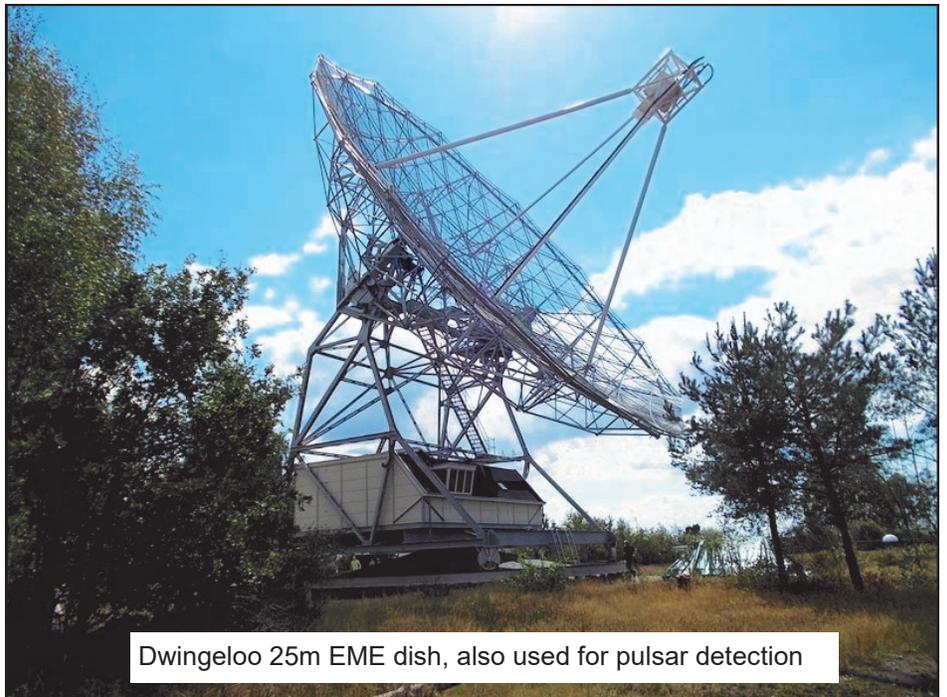
There were 2 Packrats and their XYLs at this year's EME Conference held at the Hotel Zuiderduin in Egmond Aan Zee in the Netherlands. Al K2UYH and Sally and Rick K1DS and Jani enjoyed the tours, tastes and camaraderie of EMEers from all over the world for a long weekend in this interesting location. Jani and I started out with a 3 day trip and tours in Iceland. We spent a few hours meandering through Reykjavík on our arrival day and then had all-day bus tours of the natural volcanic and glacial sights the next two days. We flew on to Amsterdam and got our ride to the conference hotel. We spent time checking out the local beach area which is on the North Sea and also visiting the shops and street fair booths on the main drag.

The conference program included 2 optional days of bus tours and we took advantage of both, also linking up with Paul W1GHZ and his XYL Beth. We met so many of the folks that we knew from previous EME conferences and also from our moon contacts. The bus took us through the countryside along canals, dikes and polders. The landscape was dotted with crop farms, horses, cows and sheep and the occasional windmill, although there were hundreds of wind turbines everywhere. In Rotterdam we boarded a tour boat that served us a nice buffet lunch and that was followed by a guided boat tour of their huge containerized cargo port. All 3 couples enjoyed a fish dinner when we returned.

The following day we were joined by more attendees and travelled to Westerbork where the XYLs had a tour of the Remembrance Camp while the EMEers went to the Radio telescope and the ASTRON Dutch Institute for radio astronomy and the restored Dwingeloo 25M dish. The Remembrance Camp was a place where WWII refugees came, but it was captured by the Nazis and 104,000 were sent to the German death camps for extermination, including Anne Frank and her family.

At the 14 radio telescope array, we took pictures of the 25m dishes that were all synchronized and pointed skyward and heard a briefing of their use and coordination with other radio telescope research in Europe. We headed over to ASTRON and were split into 4 groups. In turn, each of the groups had 2 different tours of this research facility, a prep lesson about the Dwingeloo dish and then a visit to the dish control and radio cabin. In the cabin we had a live demonstration of reception of pulsars. Once the dish was repositioned and focused on the moon, we sent transmissions and heard our **loud** lunar echoes.

The whole crowd got back together and we all stopped at a Dutch pancake restaurant for dinner. The beer and wine was flowing and we were all



Dwingeloo 25m EME dish, also used for pulsar detection



Jan PA3FXB gives us the tour of the shack and tests moon echoes with SSB and they are a solid 5x9+10!

served our choice of specialty pancake— light and thin, with fruit, ice cream or other toppings.

The actual conference presentations started on Saturday morning. The XYL's had separate tours to local towns. Most of the presentations were practical histories of various ham's efforts over decades of EME construction and communications. One outstanding presentation by Bernd DL7APV detailed his most recent antenna construction of a 11 element Yagi array of 128 antennas for 432MHz. There should not be a single Packrat who is unable to have a contact with him if their 432 antenna can "see" the moon on the horizon.

We heard of two excellent EME DXpeditions in Africa. The first was a group that went to Swaziland with gear from 6m through 3cm (10GHz) who were successful making the first EME QSOs from this country. In addition, Zdenek OK1DFC gave a well detailed review of his experience of trying to put Morocco on the moon. Despite all efforts, the customs officer complicated his mission, but fortunately Zdenek was able to find a ham friend in Cueta who got him all the entry and permits to operate from the Spanish colony in Africa. He was a one man show with excellent preparation and helped so many EMEers complete their WAC on several bands.

The Saturday evening dinner had the entire group at a restaurant buffet on the beach. We were well protected from the onshore breezes with glass panels and a tent top. Another evening of unlimited wine and beer accompanied by a filling buffet and PA0SSB on the guitar leading a singalong.

Sunday morning activity for the XYL's was a dunes walk and lighthouse tour while the hams had talks until 1PM. Three Italian hams who had been turning their antennas skyward described their results in **capturing pulsar radio emissions** using their recently developed software MURMUR. We had an entertaining presentation from Joana DJ5YL who claims to be the first YL to make a 432MHz EME SSB QSO using the Dwingeloo dish and radios. K2UYH gave a talk on the results of the EME SSB FUNTEST over the past 20 years and encouraged more participants, as even smaller stations can add points for crossmode (CW-SSB) contacts.



Al Katz K2UYH and XYL Sally on a brief ferry ride across a Netherlands canal on the way to the Dwingeloo 25m dish

The final item of the meeting was selection of the host location for the 2020 EME Conference. Al made a pitch for Trenton, NJ but the group majority voted in favor of OK1DFC's bid to have it in Prague.

73, Rick K1DS

K2LIM Contest Station Photos

As you may know, Ken KA2LIM, the “proprietor” of the K2LIM contest station will be taking his contest operation off the air after this year. He’ll be concentrating on operating rover / mobile from a full size van in the future. Here are some photos of the station you (and I) have worked over many years and contests. GOOD LUCK KEN!!

--W2BVH

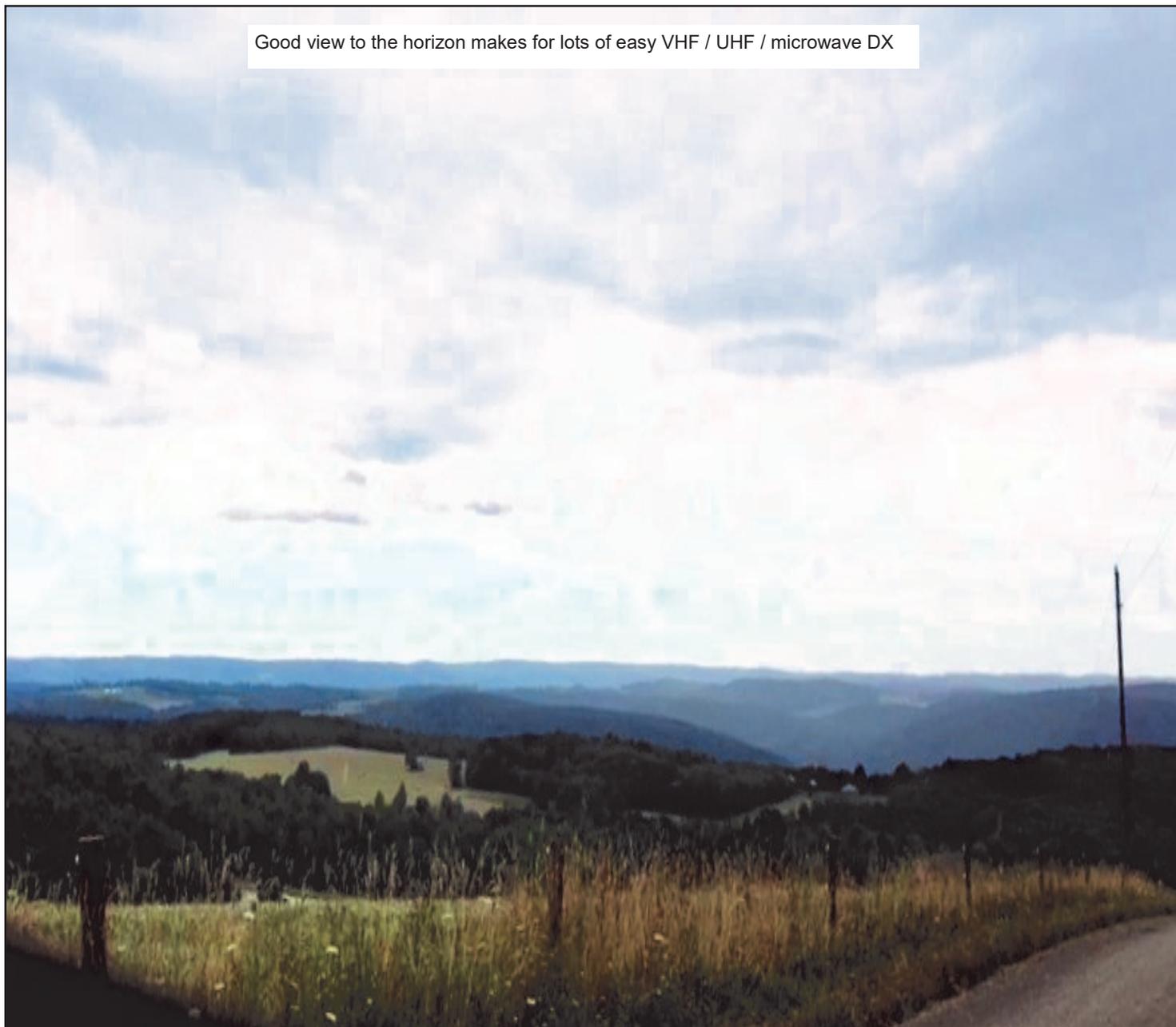


Approximately 13/14 towers with more than one antenna / array for many of the bands..



“The Gridsquare Limo” -- converted school bus -- serves as the shack. Holds the radios, operating positions and switch gear.

Good view to the horizon makes for lots of easy VHF / UHF / microwave DX



2018 International EME Conference: Papers and Photos Available on the Web

2018 International EME Conference pdf files are available here: <http://www.vhf.cz/dokumenty/kategorie/21/>

Photos are here: <http://www.vhf.cz/text-presentations-lectures-and-posters-from-eme-2018/>

There is now an amateur satellite orbiting the moon. There was a presentation on this at the conference. There is a brief blurb on this here: <http://www.vhf.cz/soubory/dokumenty/poster-dslwp-first-amateur-radio-satelite-orbiting-moon.pdf> The Chinese website about it is here: http://lilacsat.hit.edu.cn/wp/?page_id=844 The simplicity and small size of some of the stations successfully receiving the lunar-orbiting satellite, as shown on the Chinese web page, make this a tempting project

73, Roger W3SZ

The Wayback Machine In CHEESE BITS, 50 Years Ago

Nibbles from September 1968. Vol. XI Nr. 9
de Bert, K3IUUV
(author's comments in italics)

“Our Prez Sez”. The prez, Charlie, K3HSS repeated his theme of the previous month, exhorting the members to volunteer for club tasks. He highlighted the recent successful picnic, which was run by “the same old reliable team that did the work.” He listed opportunities to contribute, as; 1. The meeting refreshment committee; and 2. The January contest preparation. *(Current members note, still a problem. When was the last time YOU volunteered for a job?)*

ARRL Bulletin 179, 7/25/68. The ARRL announced availability of “Operating Aid #14.” It includes time conversion charts, ARRL & ICAO phonetic alphabets, steps to follow in an emergency, and more. A copy is available with an SASE to headquarters.

ARRL Bulletin 180, 8/1/68. The FCC denied the EIA (Electronic Industry Association) petition to reduce the Novice license code speed and grant some additional privileges to Novices.

ARRL Bulletin 181, 8/8/68. The ARRL announced the 1968 Frequency Measuring Test will be held on September 14. Individual’s results may help them qualify as Official Observers.

“The Case of Mary”. A poignant article, written by member Paul, K3WEU. Paul reported at length on the dire straits of a blind ham, living in Maine. She had

suffered one calamity after another, yet her spirits remained high. Paul disclosed many of the things that have befallen her (including the death of her seeing-eye dog). In addition, her Ham gear has gone bad, and she is currently unable to operate. A group of hams have joined together and established a fund which will be used to restore her Ham gear and companion tape recorder. Packrat W3CL, Harry Stein, is coordinating a local collection which will be forwarded to the fund. *(If you want to bring tears to your eyes, read the full article in the copy posted on W3CCX.com.)*

Letter Received. A nice letter was received by W3CL, and published here. The letter was from Grandpop Bill, K3HWZ (*His slogan, “up on the hill, in Feasterville”*). He recently moved to Florida and reported on his status. One of the items mentioned was “put up the antenna I got from Bert”. *(That’s me.)* Bill was an enthusiastic member of the club, always volunteering for whatever needed to be done. *(What have you done for the club recently?)*

SASSB. WA3BIV, Carl Barrish was a frequent contributor of “tongue-in-cheek” articles. He could always be depended on for a good April Fools one. This month he described a new method of modulation, in great detail. SASSB (Suppressed Audio, Single Sideband) was offered as a means to accommodate more signals within the same bandwidth. Carl described the development, dating back to the 19th century work of a man named Joseph Gibbs. Carl had a knack for providing so many details that you became

convinced it was correct! Check it out at W3CCX.com (*are you registered?*).

The Editor Speaks. The editor, EI, K3JJZ (*current club auctioneer*) commented that “I judge this issue of Cheese Bits to be the best yet. Why? Very simple. Every article was either written by a Packrat or is about Packrats (except for ARRL Bulletins).”

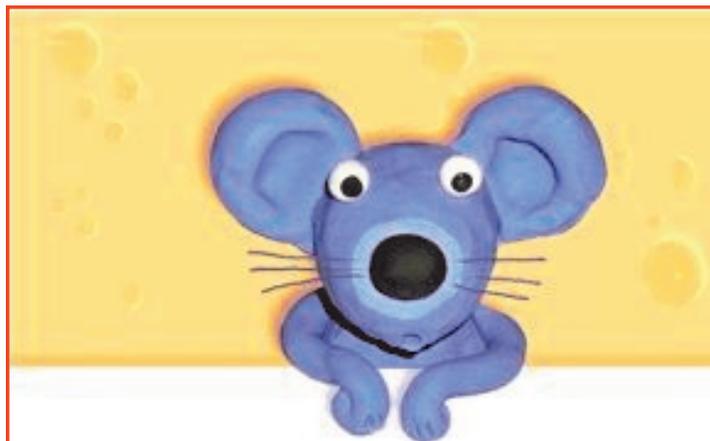
Family day and picnic. Detailed report by W3CL on the highlights of the recent 13th annual Packrat picnic. Attendance reported as about 450 (*compare that to this year's crowd at KB1JEY's shindig. What has happened?*) EI, K3JJZ organized games and activities for kids and teenagers. Top prize was a 2-meter Drake FET converter. The Atlantic Division Director, W3YA, was present and gave a speech (*like all politicians!*).

Did You Know? A few items extracted from this “newsy” section of the club paper. 1. K3IUV's son Michael just got over the mumps! 2. A proposal was made to increase the club dues. Attend the October meeting to express your opinion. 3. Doc, K3GAS pitched in to do the typing for this issue, while our regular typist was on vacation.

Swap Shoppe. By W3ZRR. (*Always nostalgia.*) For sale by WA3HVL, Don. A 6-meter halo (\$12), a Craftsman soldering gun (\$5 with extra tips), and an SX-85 receiver with a Heathkit Q-multiplier (\$65). Carl, WA3BIV wanted to “sell or swap” for a general coverage receiver (*He should have contacted WA3HVL*). He offered a modulator (pair of 807's), a set of Millen wavemeters, and a box of

“Junque” (High class junk).

Miscellany. *Postage for this copy (from W3KKN, Ernie,) was another nice 6-cent Roosevelt stamp. 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 our website (www.W3CCX.COM) and read the full issue scanned by K3IUV (me), and posted on the site. 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 member. **Have you registered?***



Thirty, de K3IUV

Arecibo Observatory to Get \$5.8 Million Upgrade to Expand View

Info on the project can be found at: <https://today.ucf.edu/arecibo-observatory-get-5-8-million-upgrade-expand-view/>

Tnx, Griff NE3I for the link!

Events

For inclusion, please direct event notices to the editor.

September VHF - Contest - September 8-10, 2018. See <http://www.arrl.org/september-vhf> for details.

10 GHz and Up (Round 2) - Contest - September 15-16, 2018. See <http://www.arrl.org/10-ghz-up> for details.

2M Fall Sprint - Contest - September 17, 2018, 7-11pm local. Details at http://svhfs.org/2018_SVHFS_FallSprints.pdf

222MHz Fall Sprint - Contest - September 25, 2018, 7-11pm local. Details at http://svhfs.org/2018_SVHFS_FallSprints.pdf

EME 2.3 GHz and Up - Contest - September 29-30, 2018. See <http://www.arrl.org/eme-contest> for details.

432M Fall Sprint - Contest - October 3, 2018, 7-11pm local. Details at http://svhfs.org/2018_SVHFS_FallSprints.pdf

902 and Up Fall Sprint - Contest - October 6, 2018, 8am-2pm local. Details at http://svhfs.org/2018_SVHFS_FallSprints.pdf

Red Rose Repeater Assoc. - Hamfest - October 6, 2018. Talmadge, PA. See <http://www.w3rrr.org/> for details

EME 50 to 1296 (Round 1) - Contest - October 27-28, 2018. See <http://www.arrl.org/eme-contest> for details.

EME 50 to 1296 (Round 2) - Contest - November 24-25, 2018. See <http://www.arrl.org/eme-contest> for details.

FT8Call Software

FT8Call software is a new program leveraging much the technology developed by Joe, K1JT. It is NOT compatible with WSJT's FT8 mode but is similar in many of its features. It's used to conduct more free-form digital QSO's than the structured QSO's of FT8 while still making use of the ability of digital communications to send and receive messages in or below the noise. How well does it work? Will it catch on? We'll see soon enough. To learn more take a look at <https://docs.google.com/document/d/159S4wqMUVdMA7qBgaSWmU-iDI4C9wd4CuWnetN68O9U/edit> and see what you think.

--Lenny W2BVH

Shortwave Radio Reports May Offer Best Evidence of Amelia Earhart's Fate, Group Believes

As described in the August 22 "ARRL Letter" The International Group for Historic Aircraft Recovery (TIGHAR) believes it has the key to unlock the decades-old mystery of what happened to famed aviator Amelia Earhart and her navigator Fred Noonan in their planned circumnavigation of the globe in 1937.

See <http://www.arrl.org/arrlletter?issue=2018-08-22> for the complete story

--Lenny W2BVH

Very Inexpensive Full Featured HF Rig Under Development At QRPLabs

Hans Summers, G0UPL, proprietor of QRPLabs is in the final stages of development of a very inexpensive CW / SSB transceiver. If it lives up to its promise it should be well worth a look. A single band version might be "around" \$75 plus case and power supply. The 10 band version might be "around" \$150. Will it work out? Wait and see. In the mean time look at <http://www.amateurradio.com/the-qsx-sdr-hf-from-qrp-labs/> for details

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The Sarnoff Collection at The College of New Jersey (Ewing)

Here's some info on the "Sarnoff Collection". The museum collection, which comprises more than 6,000 artifacts related to the major developments in communication during the 20th century, was donated to The College of New Jersey in 2010.

Info is available on the web and facebook. Here are some useful links with additional details.

<https://davidsarnoff.tcnj.edu/>
<http://embark.tcnj.edu/>
<https://www.facebook.com/TCNJSarnoff/>

The Sarnoff Collection is open Wednesdays from 1 to 5pm -- and Sundays from 1 to 3pm. Enjoy...

Mark WA3QVU

FT8 Adoption: The New Cool Thing

Bob K0NR explains what are the factors that cause a new thing to really take off versus languish on the shelf? How did these apply to the quick adoption of FT8? See: <http://www.amateurradio.com/ft8-adoption-the-new-cool-thing/>

Joel Knoblock W3RFC

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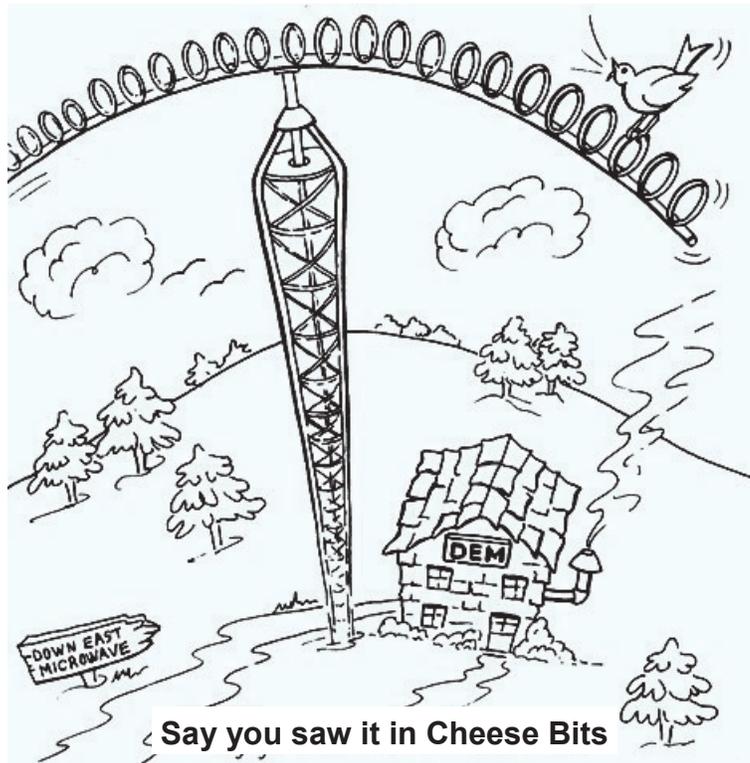
Heads UP: Look for a great multi-part article in Cheese Bits from Roger W3SZ on Phase Noise, starting some time this fall (after the VHF Conference)!

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