



CHEESE BITS

W3CCX
CLUB MEMORIAL CALL

ARRL
Affiliated
Club



Volume LXIII

October 2020

Number **10**

PREZ

SEZ:

All good farmers know that the Harvest Season will be coming to an end soon with all the fruits of their labor having been picked. The Pack Rats all know that the contest chairman will soon be sending out the famous "Frost is on the Pumpkin Letter", where we kick off preparations for the January Contest! This year the November meeting will be dedicated to the contest and how we can have our own successful season of harvesting contacts, grids, and points on the VHF, UHF and Microwave frequencies we love so much!

Remember to get your outside antenna projects done in the next few weeks before it gets too cold. If you need or have any equipment or specific parts for the contest let Mike, N2DEQ our contest chairman know, and he will try to coordinate your needs with other members who might just have what you are looking for or need what you have to offer. A short note to our club reflector is one of the most valuable resources we have when looking for something. It's very rare that a request goes unanswered and more than likely you will get multiple replies.

I hear from members that they have been hesitant to try some of the assistance methods that are now available for us to maximize our contacts and grids counts thus increasing our

scores for the club: The Pack Rat Slack chat page, ON4KST chat page, The Pack Rat Finder , The K1RZ /W3SZ database and mapping tool, Ping Jockey Client for Meteor Scatter, and various others. Obviously you can't use them all as computer screen space seems to run out very quickly. Take a look at all these assistance methods. Make a pledge to yourself to try one method this January you have never used before to see if it helps increase your score. And in addition, everyone should enter your contest plans in the K1RZ/W3SZ database as it contains all the info of what bands you will be on, the times you plan to operate, phone number, and other optional contact info. While not an assistance method, try the WSJT-X digital modes if you have not done so before.

On another note, I would like to welcome our newest member Jeff, K1TEO to the club. If you don't know Jeff, you probably have not operated any VHF+ contests for the last 30 years! He has been a supporter of the club for years and we are happy to now have him as a Packrat.

Don't miss our General Club Meeting this month on October 15th at 7:30 PM on WebEx Video Conferencing. The program presentations will be RF Knife Edge Technology, by Pete Putnam, KT2B a local friend of the club and "An Introduction to the Pack Rats Resource Program - Pack Rats helping Pack Rats", by Mike,

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

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PACKRAT 222 MHz REPEATER - W3CCX/R

222.98/224.58 MHz (PL 136.5) Hilltown, PA

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KB3MTW Michelle London
KC3BVL Jim Huebotter
K3GNC Jerome Byrd
Honorary Director George Altemus KA3WXV

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Quartermaster:	Bert K3IUV bsoltoff-at-comcast.net
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PACKRAT BEACONS - W3CCX/B

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

MONDAY / TUESDAY NIGHT NETS

VHF/UHF Monday:

TIME	FREQUENCY	NET CONTROL
7:00 PM	224.58R MHz	WR3P FN20kb Ralph
7:30 PM	50.150 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

N2DEQ. Our business meeting will follow their presentations.



Remember that our editor Lenny, W2BVH is **always looking for articles** for Cheese Bits.

Share your thoughts, ideas, and projects with your fellow Pack Rats!

Meanwhile, finish a project on the bench, keep one ear "listening for the weak ones", and the other on the "Magic Band"!

**Vy 73,
Bob W2SJ**

Editor's Note

I recently did a short "tour" of the Cheese Bits archive on the Packrat web site (<http://packratvhf.com/index.php/newsletter>) and discovered that this past April **marked 10 years** that Bert K3IUV has been contributing his monthly "Wayback Machine" column. So I'd like to acknowledge this and say "thanks" to Bert for this long-time contribution to the club newsletter!

I look forward to reading the column each month as I edit Cheese Bits. It's also interesting to note that the Wayback column usually goes in to Cheese Bits verbatim, without any editing at all (other than formatting it to the newsletter pages).

I bet you have been enjoying Bert's monthly summary (and commentary) on old Cheese Bits issues too.

Let's hope Bert grants us the pleasure of continuing to see his monthly columns here for years to come.

THANKS BERT!

—Lenny **W2BVH**

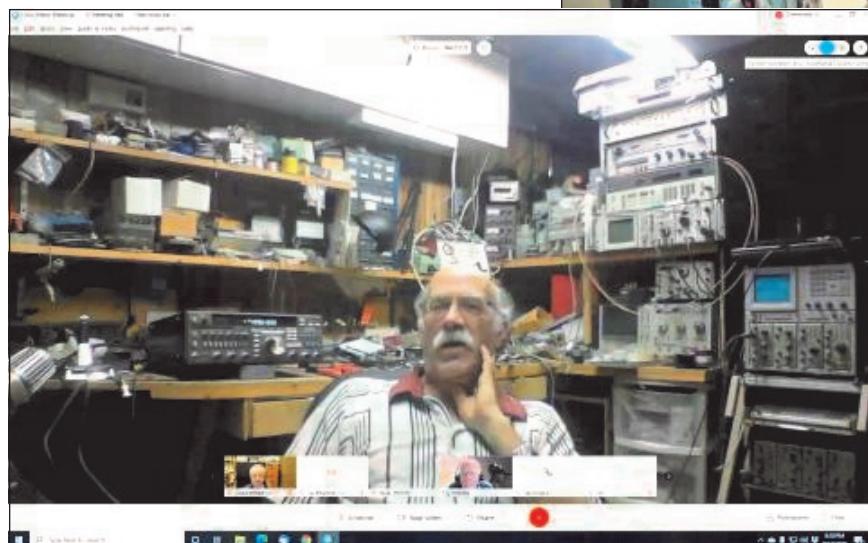
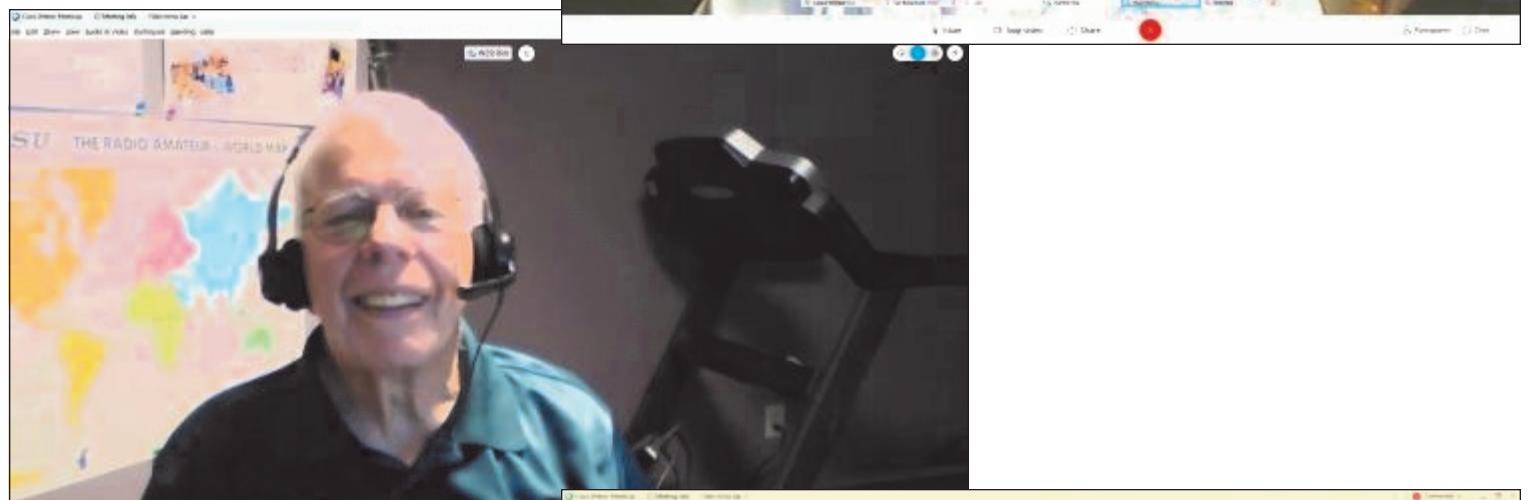
September (WebEx) Meeting Pics

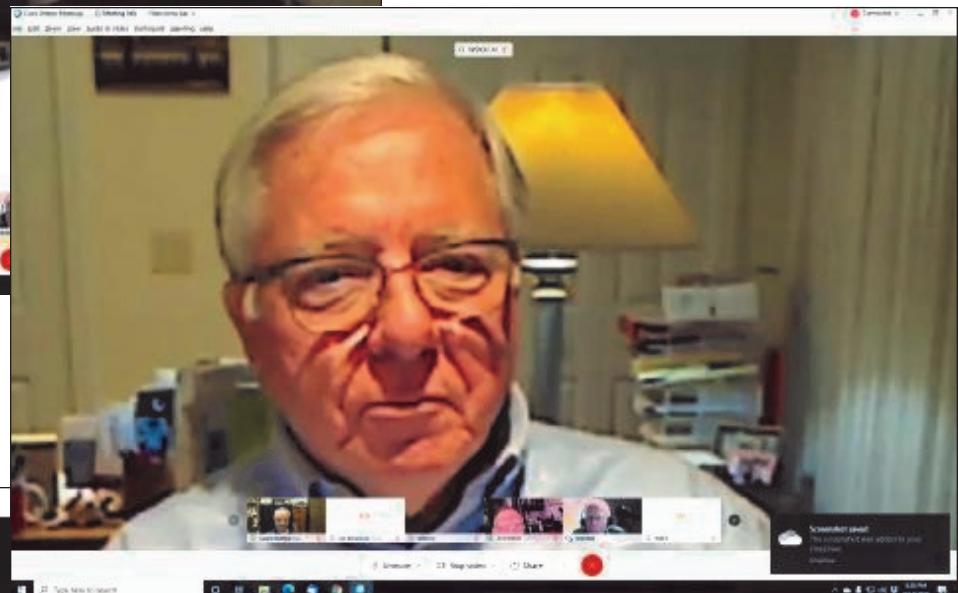
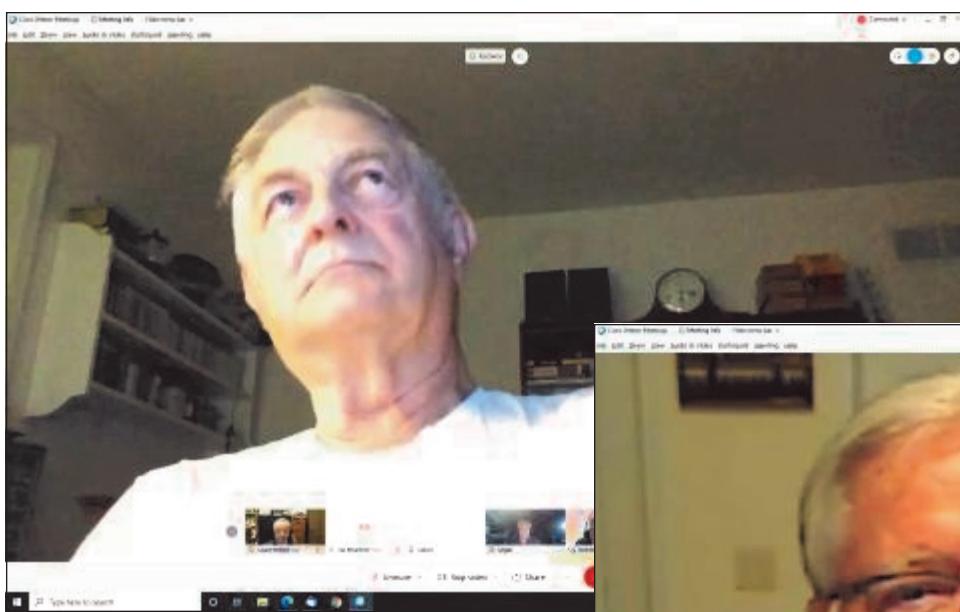


2019 N2DEO Antennas Project

Lessons learned:
These kind of projects are not a two day project. This one took approx. 8 months.
Planning & designing, purchasing, building/assembling/installing and scheduling. You may be able to do better than 8 months but do not underestimate the amount of work involved.

Acknowledgements:
To all the ground crew, Ray, Joe, Bob, Warren's son Steve and my Bro Ken (multiple visits for some).
Special thanks to Warren for driving from North Jersey, his time, knowledge & climbing multiple times.
Special thanks to Ray for building me 222 & 432 beams, donating some coax, designing, building and testing the band switch and modifying Joe's donated station switchbox for my application.
Special thanks to Bob for all his technical support, his design for the tower switch box, his help with installing connectors and helping me to check out all the coax cables.
Special thanks to Joe for donating his old switch box, hard line connectors and taking some of the pictures of the project.





Awards Night 2020



The Mount Airy VHF Radio Club, Inc.

ARRL VHF SS Contest
January 2020

FIRST PLACE

Dave Petke
K1RZ

SINGLE OPERATOR
HIGH POWER CATEGORY
Score 85,767 points



The Mount Airy VHF Radio Club, Inc.

ARRL VHF SS Contest
January 2020

FIRST PLACE

Phil Miguelez
WA3NUF

SINGLE OPERATOR
LOW POWER CATEGORY
Score 59,428 points



The Mount Airy VHF Radio Club, Inc.

ARRL VHF SS Contest
January 2020

SECOND PLACE

Ed Finn
WA3DRC

SINGLE OPERATOR
HIGH POWER CATEGORY
Score 46,425 points



The Mount Airy VHF Radio Club, Inc.

ARRL VHF SS Contest
January 2020

FIRST PLACE

Len Martin
N3NGE
with
K9PW, WA3WUL, K3EGE,
K1WHS & N3EXA

MULTI OPERATOR CATEGORY
Score 285,196 points



The Mount Airy VHF Radio Club, Inc.

ARRL VHF SS Contest
January 2020

FIRST PLACE

Andrea Slack
K2EZ/R

ROVER CATEGORY
Score 111,199 points



The Mount Airy VHF Radio Club, Inc.

ARRL VHF SS Contest
January 2020

SECOND PLACE

Paul Sokoloff
WA3GFZ

SINGLE OPERATOR
LOW POWER CATEGORY
Score 29,150 points



The Mount Airy VHF Radio Club, Inc.

**ARRL VHF SS Contest
January 2020**

**Alex Krist
KR1ST**

Increased score from 5,985 to 27,612 with station improvements adding two new bands and antennas.

**MOST IMPROVED
STATION & SCORE**



The Mount Airy VHF Radio Club, Inc.

Presented To

**Thomas E. Whitted N7GP/R
Former WA8WZG/R**

You are hereby acknowledged as an outstanding rover station, operating during the ARRL VHF, UHF and Microwave competitions.

Your use of multiple bands from several grids, supplying hundreds of contacts to other operators, demonstrated the rover spirit exemplified by Bill Seabreeze, W3IY.

**The 2019 Bill Seabreeze
Rover Recognition Award**



The Mount Airy VHF Radio Club, Inc.

Presented To

**Nick Fedirko
N3YMS**

In recognition and appreciation of the many years of energy and effort invested in the planning and installation of the infrastructure and towers at the Camelback stations. Your MacGyver like efforts enabled the club to improve overall scores which made us extremely competitive in this core group effort.

**MARIO AWARD
2020**



The Mount Airy VHF Radio Club, Inc.

Presented To

**Mike Andrayo
N2DEQ**

In recognition and appreciation of your planning and commitment while serving as our January Contest Chairman. Your enthusiasm and suggestions encouraged many members to improve their contributions substantially increasing the overall club score.

**PACKRAT OF THE YEAR
2020**

Mt. Airy VHF Radio Club, Inc.
'The Packrats'
September 2020 VHF Contest

Total Logs: 28

Club Claimed Score: 905,637

Here's the results of the September Contest as compiled by W3KM. How did you do? Check it out below. Each frequency cell shows Q's and Grids for that frequency. What can you do to improve for next year? Start planning soon!

Nr	Call	QSO's	Total-Grids	Score	6M	2M	222	432	902/3	1.3 GHz	2.4 GHz	3.4 GHz	5.7 GHz	10 GHz
1	K1RZ	645	247	265772	126 46	239 54	68 33	102 43	27 19	42 21	17 11	9 8	7 6	8 6
2	N3RG	302	135	68850	103 39	73 24	36 16	35 17	12 10	16 10	10 6	5 4	5 4	7 5
3	K3TUF	191	93	36642	20 9	44 16	33 15	39 15	11 8	23 12	11 8	5 5	5 5	
4	W2KV	337	87	35496	80 22	186 40		71 25						
5	W3ICC/R	282	66	32406	51 10	83 15	48 10	57 14		25 7	18 5			
6	K3MD	261	87	28248	78 28	129 29	24 13	24 13		6 4				
7	KA2LIM	214	91	27755	53 20	83 29	29 15	36 17	5 5	8 5				
8	KR1ST	224	69	21804	74 17	69 19	31 14	39 13		11 6				
9	K2TXB	209	75	15675	111 28	98 47								
10	KA3FQS	152	56	13552	32 9	49 16	29 12	25 8	6 4	9 5	1 1	1 1		
11	W3KM	210	53	11342	163 33	43 17	4 3							
12	K3JJZ	130	48	8496	39 13	46 17	20 9	23 8	2 1					
13	KC2TN	136	51	8262	51 17	59 21	10 7	16 6						
14	W9KXI	99	58	7076	36 18	42 22	8 7	11 9		2 2				
15	N2DEQ	140	37	5920	77 16	45 13	6 3	10 3	2 2					
16	W3GAD	79	36	4500	16 5	28 11	12 7	12 6	4 2	7 5				
17	N2CG	113	38	4294	77 20	36 18								
18	N3EXA	116	34	3944	42 15	74 19								
19	K1JT	122	32	3094	122 32									
20	W3HMS	80	29	2320	80 29									
21	WF3W	75	20	1520	58 11	16 8		1 1						
22	K0BAK/R	72	18	1296	72 15									
23	KC3ACQ	53	23	1219		53 23								
24	KC3BVL	41	21	903	2 2	37 17	1 1	1 1						
25	KB3MTW	42	13	793	11 3	16 4	6 2	5 2	2 1	2 1				

Multi-OPS

Nr	Call	QSO's	Total-Grids	Score	6M	2M	222	432	902/3	1.3 GHz	2.4 GHz	3.4 GHz	5.7 GHz	10 GHz	24G Hz	47 GHz	La-ser
1	N2NT	726	168	150864	268 52	286 59	72 27	100 30									
OPS	N2NT N2NC WW2Y																
2	W2EA	637	155	143530	228 36	211 39	56 22	79 29	10 8	25 15	6 1	6 1	6 1	2 2			8 1
OPS	AA2AW K2WB KB1JEY KB3SIG KD2JPV KD2MPC N3AVT N8MP W2SJ																
3	W3SZ	4	4	64											4 4		
OPS	W3SZ NN3Q																

September Contest Reports

From K3MD

Very much activity, tropo opening over East coast, short E skip to FL. Personal best score ever in September VHF Contest. Nothing blew up, but did hit incorrect footswitch many times, as well as looking at the incorrect Bird/ plate ammeter. Finally figured out. Not too much FT4 activity on designated frequencies here. ON4KST and Packrat Slack were helpful. FT8. 261 Q's, 88 Grids, 28,248 Pts.

From KC3ACQ

53 Q's, 23 Grids, 1219 Pts

From WA3QPX

Only operated casual in between yard work. After coming back from holiday a lot needed to be done with all the rain we have had. Worked 20 stations FT8 6m. I did not see a lot of 'Rats but did work 6. Highlight was working KM3T in FN42 for a new state for him. Russ, did a great job. CU all in January, I hope to be on 8 lower bands.

From K3RLW

I did ok for a small growing station. I did have a radio problem during the contest: a freq stability issue on my 746PRO. I need to stuff cotton balls in there or buy high stability crystal. Never a dull moment! It limited me to no digital on 2m for the contest. But I did do 6m digital and had a lot of fun. Worked Joe K1JT on FT4 (yep, I was listening), and worked pretty hard with my minimal station. I gave my little 6m Moxon a good workout. Hope one of these days to put up a better antenna. I'm really sorry I could not make the 4-el LFA 6m Yagi that showed up recently :-(That would have been a good upgrade and also help with my noise floor. Maybe another will show up one day. I'll keep digging and improving (station, antennas and my person skills, especially for contesting). I still have a lot to learn, but not bad as I just had my 1 Year anniversary in this hobby. Look forward to adding my little total in for the club. Enjoyed the 'test and worked several Packrats. 116 Q's, 26 Grids, 3068 Pts

From KR1ST

Another fun contest in the books! I had set a goal of working at least 100 Q's on voice and CW before switching to digital. Since there was plenty of activity on these modes on Saturday, I abandoned that plan and decided to go **no-digital** for the rest of the contest as well. Another reason to go no-digital was that I was using the contest to test a modification I made to the IC-9700 for which I needed to be able to work stations that could run the bands. The digital modes do not lend themselves very well for that. I logged onto the ON4KST chat page once, but when I saw that mess I quickly logged out. I did not feel like begging for QSO's on a chat page only to get frustrated by no responses at all, or the "I'll be with you in a minute" response and then not hear from that station any more, or get a note 45 minutes later asking if I'm still interested. For me this was going to be a "just-having-fun-I-couldn't-give-a-rats-behind-about-points" contest. The only assistance I used was the club's Slack channel. And in line with the having fun rule, I did not get on the air on Sunday until maybe 1:30pm when I felt like playing radio again. One lesson I learned is that I need to synchronize my rotators. Having two separate controllers meant that sometimes I forgot to turn both antenna stacks at the same time. There are some good options available so that's an easy problem to solve. There was a good tropo opening along the coast and a bit to the West of me on Saturday, but I was hardly able to take advantage of that. The tropo-blobs on the APRS map never include my QTH. Maybe it's a hint?! ;-) I had several nice long conversations with some portable and fixed stations. That was very enjoyable. It kind of confirms that contests are really just activity generating events for which people venture out and have some fun. The competition is secondary. Some of these conversations were really inspiring me to try something different. For that I thank the stations that took the time to chat with me. Working rovers is also great fun. I worked K8GP/R in a few grids on several bands and I think I worked N2SLN/R on 4 bands in 4 grids with great signals. Thanks for being out there generating activity! Thanks for the Q's. I hope to see you in the next one. 224 Q's 69 Grids 21804 Pts

From K1DY

Well, Hepburn predicted there would be coastal enhancement Saturday night and Sunday AM and it was RIGHT!! With low power (barefoot FT991 and DEMI 222 xverter), I worked as far as FM06 (K1ISR) on 2M FT-8 (772 miles) and had several SSB qso's on 222/432 to FM19 (591 miles to W3IP who was armchair copy). Spent a lot of time chasing DX on 2M FT-8 and I suspect others were doing that too. Consequently there wasn't a lot of moving up the bands. My 222 and 432 DX qso's were scant and mostly a result of using ON4KST chat. Didn't spend much time on 6, though there was a tiny bit of Eskip Sunday night, but weak and my best DX on 6 was FM19 on cw (K1RZ 554 miles on tropo)! REGARDLESS, with 4 band QRP, and not a lot of hours spent, I had a ball! Thanks to everyone who got on and thanks to the rovers! Below are pics of the station as it sits right now. As many of you know, compared to the stations I've had on the air in the past, to say this is modest is an understatement. I have big plans for more bands and QRO, but this just shows you can still have fun and make some seriously long VHF contacts with "modest" gear!!

**From K1RZ**

Pretty Exciting Weekend. What a great time to be on the VHF-UHF-Microwaves. This weekend there were some very strong tropospheric openings on Saturday evening and on Sunday morning. From the Mid-Atlantic, working stations all over northern New England and on higher bands, and also into Nova Scotia is a real treat. Very fun. Really good to say hello to some old friends and to make some new friends. Thanks to all the Rovers who were on including K3XY, KD3PD, K8GP, W3ICC, N6MEJ, K0BAK, NF2RS, N2SLN, KA2YRA, N2DXT, VA3ELE, VE3SMA and VE3OIL. You make the contest for all of us, and you get an immediate pile-up when you get to the next grid. Fun to work Bill VA1WV in FN75 on 144 MHz as he had just moved to VA1 and his antenna was at 6 ft above ground, with his new house in between me and him. All the best Bill at the new QTH. Thanks to everyone for being on. 73 and all the best. What a way to end the season. 645 Q's, 247 Grids, 265772 Pts.

From K2TXB

Well, as usual, it was a fun contest. But things did not go as planned. I had an hour of moon time right at the start of the contest, so my first contact was with JH0BBE in Japan, PM97, right at 1800z. That was followed by EN50, DM03 (a new one for me), and DM42 on 2 meters. By then the moon was in the trees here so I went to 2 meter SSB. After working all the stations I could find, I went to six meter SSB. But I could not find anyone actually running the contest – 4 or 5 stations were chatting but that was all. So I sighed and proceeded to six meter FT8. Boy, the band was hopping with activity. In fact, six meter FT8 showed a lot of activity throughout the contest. I did hear some activity on 50.318 as I tuned by, but by the time I got set up for FT4 there was no one there. I didn't try FT4 for the rest of the contest. The FT8 activity on six kept me going until 0200z when I finally found things slowing down. So at 0200z I decided to go back to 2 meters for a while. My plan was to operate until about midnight and then get some sleep. Then get up early in the morning (0400 local) and work 2 meter EME through the European window, and then go back to terrestrial operation. Well when I switched to 2 there were no stations heard! Then I noticed the s-meter was at zero. Something was wrong on the tower. I never did figure out why my preamp

stopped working – later I will take it apart and see, but that was a big blow to my plans. Instead of 4 hours sleep, I took 8. Then worked six for a while until I finally decided to “bite the bullet” and see if I could fix the 2 meter rig. I have an injured foot and I’m supposed to stay sock-footed and be careful with it, but I decided to be careful and attempt the repair work anyway. After cranking the tower down, it became obvious that the preamp was blown. Fortunately, I had a new spare that I bought last month from WA2ODO. It tested good so I went back out to the tower, preamp in hand, but there was a problem. The new preamp box had a pair of nice ‘ears’ sticking out on each end, for purposes of bolting or screwing it down. Unfortunately, that meant that it would not fit in my weatherproof box. After taking a hacksaw to the preamp and fixing another small problem in the tower box, raising the tower, and all with trying to be careful of my injured big toe, I finally got done with the repair. At 1551z, I worked PA5Y in JO21 just as his moon dropped below the horizon. I had lost the whole European window! But I stayed with the EME, working US stations and others, until local moonset at around 2000z. In all I made 17 EME contacts, in 17 grids, including 4 in Japan, one in New Zealand, and one in Guadeloupe! For the rest of the contest I alternated between six and two meter FT8. With my small, and low six meter antenna, and no e-skip, I was not going to get a lot of dx, but the high activity level made up for that. For six meters I had 111 Q’s in 28 grids. On two meters my final count was 98 and 47 grids. A nice surprise on 2 meter terrestrial was being called by VE1SKY in FN74. I was also surprised on six by having AA4ZZ respond to my CQ. I usually have to work them on meteor scatter. I never heard them on 2 meters though. Total score for the 2 band contest entry ended up being 15,675. Not great but considering my difficulties and lack of any band openings, I guess it’s not so bad, either.

From K1JT

Thanks to Russ for an interesting summary of contest activity. In my 80th year I can no longer call on my past stamina for contesting. But as Russ wrote, it's always fun. I got on this time for about 6 hours, 6 meters only: 122 QSOs in 32 grids. All but about a dozen QSOs were with FT8; the remainder were FT4. I'd like to make two

points about mode choices in VHF contests.

1. I fail to understand why anyone who uses FT8 in a contest would fail to use FT4 for much of the time. FT4 is about 3 dB less sensitive than FT8, but it's twice as fast. A large fraction of stations you work with FT8 are much more than 3 dB above the FT4 decoding threshold. With FT4 you can still work anyone that can be worked with CW, and near the CW threshold you'll do it faster using FT4. And with FT4 you can work stations that are far weaker (by ~20 dB!) than what's necessary for SSB. When I did work other stations with FT4, I did it by transmitting the FT8 message "K1JT FT4 318". I then QSYed to 50.318 FT4, and generally found several people followed me there. Many more would have made it much more fruitful!
2. When I'm operating with FT8 I often check the PSK Reporter map to see where I'm being copied. During a contest, on 6 meters, my KW and 7 elements are typically copied in most locations within 1000 miles or so. This is with the band ***NOT*** open. It's the background ionospheric scatter signal that's being copied. Stations in these locations can definitely be worked, though it takes some dedication to do it. Often it's QSO times of 15 minutes or so, copying on the scatter QSB peaks. FT8 is not optimized for the sort of QSB that ionoscatter creates. We may come up with a digi-mode better suited to such propagation, and it could be very useful for working new grids during otherwise slow times in a VHF contest. Summary: for speed, flexibility, and ease of running the bands, yes, you should use SSB and CW when there are stations to work. When you run out of those, use FT8 and (especially) FT4. And when the going is slow with standard uses of those modes, consider working ionoscatter for new multipliers.

6M Fall Sprint Report

Activity was good even though the Mid-Atlantic band conditions were flat as compared to the Eskip we'd all gotten used to for these last few months. Some MSK144 brought in a few new grids towards the end. Many thanks to those who got on. Thanks to the contest sponsors. Q's 47, Grids 27, Pts 1,269. 73 , Dave **K1RZ** FM19JH

KOBAK BURNS UP THE SEPT CONTEST

Since I was in the middle of working on my van's mast system (see my other article), all I could do for the September contest was use my old walk-up mast and a 6m halo, in a token effort in a few local grids just to submit a log. Saturday's plan was to activate FN20, FM29, FM19, and FN10. The first two grids would be from POTA parks to get park activation credits, and the last two would be in the Gap PA area at a township park and school that has been used often by me and other rovers.

I installed the walk-up mast system pivot into the hitch receiver at the front of the van, so I wouldn't have to remove my screwdriver antenna that's installed on the back hitch. The walk-up mast sections barely fit in the back of the van on a diagonal from floor to ceiling, and I recalled that the smaller minivan I used to use as a rover had no problem with having those mast sections on the floor since there was a 10' space from the rear hatch to the front. It's ironic that the much larger TV van has less room for big objects. I tested the system at home, using two coax cables linked together with a couple adapters.

Arriving at a crowded Valley Forge Park a little late, I set up in the less-used and locally-high NPS parking lot at

Washington Chapel. Parking with the nose of the van against a grassy area gave me enough room to build and raise the mast and antenna. An 18-foot run of coax ran down the mast, and a 10-foot run with a strain-relief loop on my vehicle radio antenna continued to my fairly new 6m amplifier and 50v power system. I wrote about that in a previous Cheese Bits article.

Using the radio's SWR readout showed a disappointing reading of about 1.7, barely good enough to use especially since I didn't want to waste time at the beginning of the contest trying to make it better. My intention with the amp was to use it when necessary, but otherwise use barefoot power from the Flex 6500 radio. After checking for SSB and CW signals and finding {heavy sigh} nothing, I fired up WSJT. Even without an obvious opening, there was plenty of activity on FT8, and I was busy making or attempting to make contacts leaving little time for CQing. When I couldn't get a response from a weak signal, even after finding an (apparently) open spot near the other station to transmit, I turned on the amplifier to put out about 400-500w. I was happy that this succeeded in getting a response about half the time I tried it.

After about a half hour, when I made quite a number of attempts to get a new grid using power, I smelled something burning. Of course I turned off the amp, but then tried again a bit later. Again I smelled something when I exceeded 6-8 transmissions in a row. When I first parked, I saw what I assumed were wedding guests arriving based on how they were dressed. So I hoped that maybe there was outdoor cooking that I smelled, however unlikely. When I got out of the van and stretched my olfactory sensors as much as I could, I couldn't smell anything burning. The source was my new 6m higher power system {another heavy sigh}. For the rest of my rove, I still used the amplifier when necessary, but stopped after four unanswered attempts.



After seemingly exhausting the available FT8 stations, I checked down band and made 3 SSB contacts—ah, good old SSB with human voices. I then packed up the mast system and antenna, and proceeded to Ridley Creek State Park in FM29. I drove to my standard POTA operating location, somewhat out of the way and featuring low branches over the narrow park road that require me to drive a 3-dimensional route.

Despite being a nice day, I was glad to see that most of an entire tier of parking was open so I had plenty of space to raise my mast again. My initial SWR was the same as at Valley Forge. There was a little less activity on 6m FT8, but the drop-off from the initial 2 hours of the contest wasn't bad.

After failing to make several contacts that I thought ought to have been easy based on received signal strength, I noticed very low power out and high SWR on the Flex GUI. I figured I'd first try re-doing the connections, starting with the connection between my 10-foot and 18-foot coax that includes both N-to-UHF and female-to-female adapters. After reconnecting, the SWR was back to the meh level from before. Since there were only a couple new grids available with weak signals, I didn't have to run the amplifier much to make those weak contacts. After having a couple conversations with park visitors curious about what I was doing, I took advantage of a comfort station that's another advantage of this park location, and packed up again for FM19.

The drive to Salisbury Township Park was most of an hour. I arrived as sunset was starting, and again found a mostly-empty parking lot to set up. Activity was down, but I stayed busy chasing stations whether they were CQing or not. I did resort to CQing myself a bit more, but didn't have to call for long before getting or trying for another contact. During one of the attempts that required the amplifier, I noticed that the high temp / high SWR indicator light was on. After turning off the amp, again my radio showed high SWR, and I reconnected my adapters as before. This time reconnecting a couple times didn't solve the problem.

At this point, it was almost fully dark, so I gave up on fixing the problem. Considering the SWR problem and feeling quite tired and sore partly stemming from the morning's bicycle ride, I gave up on setting up at the FN10 location. The good news is that I spent more time than expected at the first three grids because I was well engaged with trying to make contacts.

The next day I found that one of the two tuning bars for the antenna was loose, which very well could have caused the SWR problems. I have to say, the mechanical design of the M² halo is pretty poor for a mobile install with lots of shaking and stress—expecting small set screws to hold a part of the antenna that's also used for mounting isn't realistic. In my defense, this was one of my first two VHF antennas, so I knew next to nothing about what to look for in a mobile horizontal antenna. With a rotator and gain antennas, I'd use my 6m Moxon as many rovers do.

The sudden SWR problems I experienced reinforced the need to monitor, alarm, and automatically react to high SWR in operation. I already have a digital SWR/power meter with remote probes that I will install on the 4 low bands. One feature of that meter I intend to implement is a high-SWR signal that could be used as a RF safety cut-off. (As far as I can determine, there is no real transmit inhibit input to the Flex that could cut off transmit once begun.) This SWR monitoring and hopefully safety is even more important for my 3 TE Systems amplifiers, which famously have no protection circuitry of their own.

The more serious problem of a burning smell after consecutive amplifier usage was not solved. Naturally I assumed my wiring was faulty, so I removed the rack shelf that contains the current monitoring, fuse, switches, and inrush limiting resistor box. I expected to find some melted insulation or a burn mark on the wood I used for the rack shelf; the wood of course makes burning smells scarier. I couldn't see anything and all connections were tight; I smelled everything closely and didn't detect anything. Either I couldn't find the problem on my rack shelf, or the burning was coming from somewhere else—the amplifier, the battery, the RF connections? The only way to reproduce the problem is to use the amplifier hard while I try to sniff

K0BAK cont'd...

around to identify the source before heat damage or a fire. Not looking forward to working on this.

Contest summary: My reason for going out on a mini rove was just to have a log to submit, even if I knew my score would be noncompetitive. I had to enter as a Classic Rover rather than a Limited Rover due to using more than 200 watts sometimes, so my score will look even worse within my category. I had 72 QSOs to 15 grids; including 3 bonus grids my claimed score was 1296. Pretty bad, but better than sitting out the contest.

2M FALL SPRINT REPORTS

From K1DY:

Well, THAT was fun. Looked like conditions were going to be bad but they were really quite good. I worked 19 Q's in 10 grids with my 50 watts. Best DX was N3NGE in FN20 on CW, 463 miles. Armchair copy both ways. Made 8 Q's on SSB, 4 on CW, 7 on FT-8.. Looked like things might open up at the end, the CT guys were working FL but nothing up here.. Thanks to all who got on and to the sponsors. Bill, K1DY in central Maine.

From AA2UK:

I saw some members calling stations in South Carolina and Florida. The club had a large number of members in the 2 meter SPRINT. I worked 2 stations in SC which for me involves working though a hill a couple of hundred yards due South. I was not running my amplifier because my switching power supply is the majority contributor to my noise on 2 meters. I will be changing the power supply. I already judiciously use #43 toroids on all leads in and out of the current 50vdc supply. Now that I have identified the primary 2 meter noise source and replaced it I will be installing a larger 2 meter Yagi. Joe (K1JT) thanks for the 2 meter Yagi!

From K3TUF:

I had four EM80 and 90's as well as a number in SC and GA. Steve (DEMI) emailed me saying that he was getting occasional hits from us up here. So I put out an FT8 message to 'TURN SOUTH'. I suppose most of you saw that because everyone seemed to

2M cont'd..

start working the guys down there. APRS didn't pick this one up.

From N3PLM:

I was on the sprint last night but only on SSB 12 QSO's 4 Grids 48 points. Guess I should have tried FT8.

From WB4OMG (via K1DS):

WB4OMG Buddy down here in EL98 Florida reported that he worked K3TUF in FN10 FT8 and also WZ1V in FN31 FT8.

From KA3WXV:

19 QSO, 5 grids, all SSB, 1.75 hours (everyone disappeared after that?) I had fun on SSB.

From W2SJ:

Had some fun in the 2M Sprint. About 3 hrs total time produced 44 Q's and 17 grids on SSB/CW for a score of 748. 7:30 to 9:00 PM I had 27 Q's and notable grids were KJ4ZYB FM07 & K2CKA FM06. SSB/CW seemed to die here by 9:00 PM so I switched to FT8 producing another 17 Q's. Notable grids on FT8 were AC2BL FN23, N3AAA EN90, N8LRG EN80 & VA3IKE EN82. Tried with VE3ZV in EN92 on CW, got a 429, but could not hear him. I always seem to work him on 144 thru 432. Not in the cards this time. Still a fun time for all who participated.

From K2TXB:

What a great, surprising evening. I ended up with 44 qso's in 29 grids. EM80, EM83, EM84, EM85, EM93, and EM96 !

10 GHz Reports

From N3RG:

This year I had a family commitment on the first weekend so I wasn't able to put much time in. I made an effort to work as many portable and Rover stations as possible and managed to work the gang on Block Island (K1RZ, K3WHC, AF1T, W1MKY) before leaving the house on Saturday morning. I also worked Paul, WA3GFZ who operated portable in FN21HB and a few other stations for a total of 9 contacts over the weekend. Conditions were pretty good as I recall the first

10GHz cont'd... weekend but on the second weekend conditions were the worst I've ever seen on 10GHz and that's the only band I'm on! I struggled to work K1RZ, K3TUF, and K3WHC in FN21BE and a few others on Saturday. Sunday started out with poor conditions but they improved later in the day and after several failed attempts I managed to work AF1T, W1MKY from both locations on Martha's Vineyard as well as W1GHZ on Block Island. Even with improving conditions on Sunday every contact was a real challenge. Thanks to all those guys who traveled mountain tops and put distant grids on the air. Like K2DH, K2UA in FN32KP and N1DPM, K1OR in FN42AD , Ken KA2LIM in FN12 and others. I'm looking forward to next year and better conditions!! I made a total of 26 contacts on 10GHz only for a score of 9,417 pts. and I had fun!!

From K3TUF:

Several of us made our way to the far distant beacon site in FN21be near Wilkes Barre, PA on Friday before the contest. We set up things and got ready before making our way to the local steakhouse where we ate outdoors. Future Packrat, Steve, K3WHC, Dave, K1RZ, and I, K3TUF were to spend the day on Saturday on the concrete block roof of the former WBRE transmitter site. Conditions were not good for RF and the wind challenged us for most of the day. I ended up with 20 fantastic contacts, double the contacts that I made the former weekend while on Camelback. It really pays to have vision over 360 degrees.



From K3WGR

After having a good run in the 222 and UP contest in August, I decided to enter the 10 GHz and up. With only 10 GHz in the rover van I could at least provide some points to others. The rover van sports a simple 2' 5/10 GHz feed and a Demi transverter - no preamp, no power amp. We maybe get 2 watts output. Using the W3SZ / K1RZ database and especially the "MAP", I looked at who was reported to be active and exactly where, and at what time they are operating. The "MAP" takes all the data from the database (the same database used for Packrat finder). **What an excellent tool** for VHF thru Microwave contesting, and general operating. My first QSO was with K3TUF on Camelback (FN21 hb), immediately followed by WA3GFZ. My second set of QSO's were with the K1RZ cluster on Block Island, (off Rhode Island FN44ee) AF1T, K3WHC, and W1MKY. This was followed by K1TEO FN31jh, and then the surprise of the day working two stations just off Lake Erie, K3DH, and K9PW FN02xu. WOW!!! QSO's with NN3Q, and W3SZ rounded out the day. (End of first weekend.) The second weekend was not as exciting. K1RZ, K3WHC, and K3TUF moved to FN21be and they were quickly worked from my FN10xi location. An attempt to work WA3FGZ in FM29ie, high atop the grandstand at Dover International Raceway, Dover DE did not happen. My FN20 at the Pagoda, Reading, PA did not have a fully clear path. While high, the path and propagation was not there. I was very disappointed. Attempts with W1GHZ Fn41ee, W2FU , K8ZR and group (Albany) (End second weekend.) While high is desirable, you can make contacts over 100's of KM's when you have a clear shot, meaning no trees, and any hills should be miles away in the direction of your intended path, and a little help from propagation .

432 Fall Sprint Reports

13 Q's, 8 Grids, 104 Pts. 73, Vitaly. **KC3ACQ**

I did surprisingly well (with my 50 watts) on what seemed to be a pretty much DEAD band. First 8 qso's were on CW, went to FT-8 for a couple and a couple on SSB. Best DX was K1TEO FN31 and NY2NY FN30, both just shy of 500KM from here, But I did decode W2SJ in FM29 around 9PM for a "partial". Did NOT work my own grid. All in all pretty much fun, thanks to all who got on and to the sponsors. 12 Q's, 9 Grids, 108 Pts Bill - **K1DY** in Maine.

WA3GFZ 10 GHZ REPORT

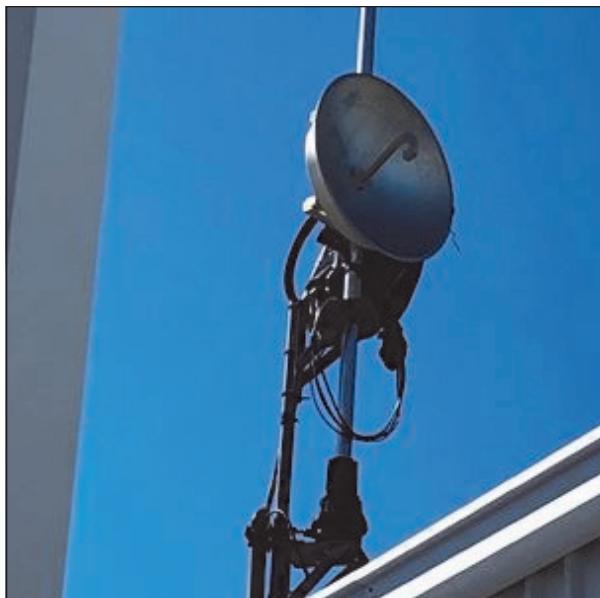
I went to Camelback on the first weekend of the contest and met up with Phil K3TUF. We both used my tower trailer to mount our dishes. Conditions were average and I managed to get 13 contacts.

Having operated from Camelback on weekend one and Atlantic City many times, I was looking for a new location for weekend two. I approached Nick about operating from the Dover Downs Race Track. I went down the Thursday before with my entire portable station. We, (mostly Nick) fabricated a mount for the dish and transverter. It uses a thrust collar on the top to relieve strain on the rotor. We leveled and bolted it to an existing pipe. I then set up the station inside a very nice room with TV and internet. Really roughing it! A test QSO was made with Ed, W3EKT.



A two meter liaison station was provided. Besides using cell phones, a new tool using DMR was incorporated. It provided wide area contacts such as New England and Block Island for coordination. It worked very well.

The band conditions on Saturday were not ideal, but I managed to work 18 stations. Sunday was a bit better and another 7 stations were added to the log. Being 100 miles south of my normal locations put the station farther away from the major activity in New England.



Three "locals" were worked, but there is not much 10 GHz activity down there. Packrats worked were K1RZ, K3TUF, K3WGR, NN3Q, W3SZ, N3RG, and KA2LIM. Thanks guys!! Farthest contact was AF1T and W1MKY at 489 Km on Martha's Vineyard. Total for both weekends was 38 contacts. A lot of work, but lots of contacts made. I hear there are some additional Packrats considering 10 GHz roving. Glad to have you join us.



KIRZ 10 GHZ CONTEST REPORT

Round 1. Arrived at Block Island RI FN41EE Monday August 10th with our team: Dale AF1T, Mickie W1MKY and Steve K3WHC . We four started a week of good eating, great laughter, and fine ham radio on 10 GHz, the rest of the week. On Wednesday August 12th I received a cell call from Gene WA4PGI at his beacon site in FM07BW. Gene was hoping we could make a quick test on 10 GHz from his fire tower thinking I was at home in Maryland at FM19JH. With me on Block Island though we laughed for a moment, and then sent dashes for a few minutes to find that the tropo path was not there for us. But I quickly checked Andy K0SM's new web-based Rainscatter.com program on my cell phone and the



app showed a “red dot” solution on a rain cell off the Delaware coast. I passed Gene the bearing and sure enough we tried and the path was productive, and we made the CW contact. This contact remains my new **best DX on 10 GHz** at 795 km.

The contest started at 0600 Saturday morning with Dale, Mickie, Steve and I ready to make some contacts. And that we did. Saturday was fun with a lot of stations in our logs from all over the east coast. This contest is unique in that operators are out portable all over the region at prominent points with plans to make contacts with others. They often planned operations to be “there” when other operators are at their prominent spots. So a map of the region <https://w3sz.com/map.php> looks like a chess board with all the players moving across the board to maximize the distance opportunities that could exist with as many of the other operators as possible. Best DX for me for this contest was 629 km's Saturday with John N9ZL in FM08US at the Hogback Overlook on Skyline Drive south of Front Royal Virginia.

Sunday was a different story. After starting again about 0600 and working operators across the region for a few hours, at 0930 the rain and wind came over the island. My set-up is open frame construction – so it was not ready for wetness, let alone a wind driven rain storm. I put a 50 gallon plastic bag over the gear, secured it with a bungee cord and headed inside for the rest of the day. Not the WX we four had experienced out there in past years. I found some interesting reading material. On the other hand, Dale's gear was enclosed and, with his **personal rain gear in place**, he continued onward making some more

K1RZ cont'd... contacts.

Round 2. Phil K3TUF, Steve K3WHC and I teamed up and arrived on Friday afternoon September 18 at Mountain Top PA in FN21BE to survey a new site. Great site. We returned Saturday morning and set up our rigs and got on in the 6 o'clock hour. As expected we worked Ray N3RG in FM29KI before 7am, giving us the needed bearing we needed to calibrate the compass rose. But what was not expected was that before sunrise the temperature was 35 degrees with the wind out of the NE at 20 mph, howling across the mountain top. Brrrrrr. Fingers were stiff and swelling up due to the wind-chill. But the contacts were coming, but not at the distances we expected. This reminded me of conditions that would be expected with a very cold, January day. The distant contacts with other operators were significantly weaker than we all expected. And some other attempts with stations across the region did not produce the contacts we all expected. Just Too Cold. We did work Dale AF1T and Mickie W1MKY in both their Martha's Vineyard Grids.

Sunday started much the same but the temperature was up at 39 degrees and the wind was much lower than Saturday. Almost balmy by comparison. HaHa. We did work the Dave K2DH, Rus K2UA, Tony K8ZR and Mike N2MG group on Mt Equinox and on Mt Greylock. And we also worked Peter VA3ELE and Hugh VA3TO in three grids on the north side of Lake Ontario. Comparing notes with other operators they had similar cold which inhibited propagation experiences. I hope it will be warmer next year since we intend to return to this site.



We left late afternoon Sunday and I returned home to Maryland FM19JH by about 2000 local and made seven more contacts with the stalwart operators who stayed to the bitter end. Best DX from home was Dale AF1T at FN41QL at 608 km's. (Thanks to some aircraft flying near the path that evening.) Thanks to everyone who got on this year. See you next year. **Dave K1RZ**

A box score listing of Packrats worked versus number of Q's each includes: N3RG (3), WA3GFZ (2), K3TUF (1), NN3Q (2), W3SZ (2), K3WGR (2), KA2LIM (1), W3HMS (1), WB2RVX (1) and KA2NYF (1). 16 of my 84 QSOs were Packrats. A nice showing for the Club I'd say. Many thanks to all.

What it means to be a Packrat

I was going to put this experience in an email, but then I figured it would be better to do it in Cheese Bits so that those who haven't been in the club that long might have an additional understanding of how much it means to be a Packrat.

The beginning of the story has to do with a June contest set up in Hilltown. I can't tell you what year but is one of the years where W2EIF (SK) was 220 band captain. I watched as he laid out guy lines and a telescoping pole. Having no assignment I asked "Joe can I give you a hand?". He said "No I can handle it myself". So I sat there and watched. I could give you more details of the story but suffice to say he did put the thing up unassisted. I asked Bert K3IUV how old Joe was, he told me he was 72. I mentioned to Bert, that I hoped I would be able to do antenna stuff at the age of 72.

Well as time progressed the xyl gave me a hard time whenever I went on the roof, starting about when I turned 65. (fyi I just turned 88). I held out for another 5 years and finally to shut her up I agreed no more roof work. Not a good decision but more than 3 or 4 times the team of Bob & Ray (W2SJ and N3RG) repaired things that had to be done on the roof.

My latest problem happened when my son Glen who I called over before Jan contest to help crank up the tower (another concession I foolishly made to the xyl). Glen said "Hey dad did you know that the fat cable going to the roof is disconnected ?" Sure enough the support for the hardline had pulled loose and thus all the microwave bands were useless for Jan. Now how to get it repaired? One of the things I learned is to try to diagnose the repair and do as much of the work on the ground to make sure that roof group only has to do what I can't. Additionally N3RG is now working full time and W2SJ doesn't climb. The weight of the hardline had pulled apart the N connector going to the jumper attached to the relay box mounted on the pole. I should mention that the single hardline goes to a relay box that switches to change to the appropriate antenna feedline.

There were a number of questions that I could answer from the shack.

1.- How do I know that the relays in the shack are working? Disconnect hardline in shack from relay box in shack and attach metered dummy load. All micros generate RF.

2.- How do I know that there isn't water in the hardline? Reconnect hardline in shack. Go outside and pull the disconnected hardline off of the roof. Remove the broken N connector and barrel from roof end of hardline. Hook up a twisted pair from key to RCA jack outside. Take dummy load wattmeter outside and hook to roof end of hard line. Set selector switch to 903 and driver to cw. Go outside and momentary key the RCA and read rf on meter. Go back inside and repeat above for all 4 micros EUREKA!! Hardline is ok.

Enter Gary WA2OMY and Bruce WA3YUE who I emailed about the problem and what I learned by experimenting. On Wed Sept 2 Bruce, Gary, and Bob W2SJ arrived and set about making repairs. All is well and micros apparently work. We will see next week.

Now for the rest of the story.

The worst thing you can do when asking for help is to throw up your hands and not show any initiative to solving the problem. In my younger days I would climb other members roofs and help repair stuff. I would get frustrated with a non defined problem and lack of effort on the part of the person asking for help.

As many have said almost all in the club are willing to help if they are able to physically. We belong to a great organization. Please do your part to keep it that way.

73 EI K3JJZ



Keep It Cool and Quiet

By Rick **K1DS**

The demands of cooling for today's semiconductor devices has historically kept the fan business strong. Almost every piece of electronic gear that has a central processing unit (CPU) or a power device requires some cooling. I am not a thermodynamic specialist, but my fingertips can let me know when devices are running hot. The hot air blowing out of the vents of my laptops signals me when the CPU is very busy. The other issue that gives me great concern is fan and blower noise. Many of us lose some hearing sensation as we age, others of us, including myself, have the mixed blessing of increased auditory sensitivity. I say mixed blessing because I find that people talk too loudly, shows and concerts require me to wear earplugs, and the slightest sounds of the usual household appliances can be very annoying or signal some problem (see addendum).

I used a TE 350W 2m SSPA in the rover van. During one intense period of activity, I noted that the amp was no longer drawing the usual 50 or-so amps from the batteries. Checking it, the "TEMP" LED was illuminated and it shut down the amp in order for it to cool down. It was the signal to me that external cooling was required. I bought a pair of 5" 12VDC muffin "smart" fans from Downeast microwave and mounted them directly over the heatsink. They have a built-in thermistor that turns the fans on when the ambient temperature is warm. I thought that they would only be on for times when the amp was almost in constant use, but I found out that they were running almost all the time. To many of you, their sound may be unnoticeable, but to me they were a constant reminder that they were working. I purchased a 180W TE 432MHz SSPA and wanted to keep it cool also. This time I ordered six 5" muffin fans from the web from China. The fan protection screens were sold separately and I ordered them also. I mounted a pair on the heatsink and found that the blade design was whisper quiet while delivering the same amount of cooling. A word of caution when ordering these fans from overseas—test them before installing. I found that 1 of the 6 ordered was DOA. They are inexpensive enough to replace.

I purchased a 1296MHz 270W SSPA from PE1RKI. The device is mounted on a copper block and this is then connected to a heatsink using three fans. There is a pusher and puller fan arrangement with a "dummy" fan between to prevent any resonant activity between the other two. It keeps the amplifier cool, but makes a racket. I also installed a 2" muffin fan under the chassis to allow air circulation there. It had a high-pitched annoying sound so I slowed it down with some series resistors in its 12V line. It appears from work by W1GHZ that the most efficient cooling of heat sinks is to blow directly downward onto the fins rather than laterally through them.

My next project was the W6PQL 500W 432MHz SSPA. My order was for the device mounted on the copper heat spreader with all the associated components installed. I also ordered the W6PQL control board and SWR protection modules. It was necessary to find a chassis into which to mount everything and to have a large heatsink for cooling. I used a pair of the Chinese muffin fans for this job and also added a 2" fan into the lower



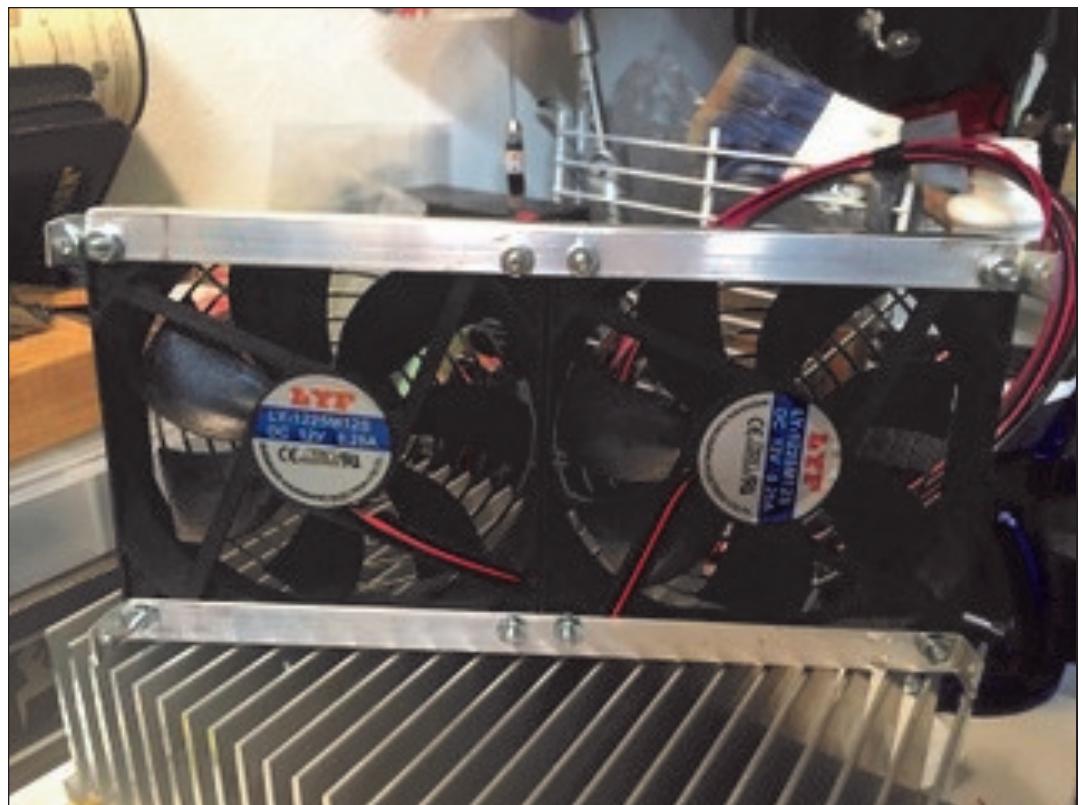
Cool cont'd...

chassis to circulate air to the components. That fan would be activated by the PTT circuit so that it was active only during transmit.

I found that the easiest way to mount muffin fans on heat sinks was to use some thin $\frac{1}{2}$ " aluminum angle. Measure off the distance where the fans will be mounted and add an inch or more for tabs to screw these rails onto the heatsink. Lay the fans on the rails and mark out the mounting holes and drill them for 6-32 hardware. I use 1- $\frac{1}{2}$ " 6-32 screws with a washer, lock-washer and nut

to mount the fans with their fan grill. You can probably get away with 1-1/4" screws also. Lock washers are essential to keep the screws and nuts in place as fan vibration can cause things to loosen. If the screw ends protrude into the heatsink fin preventing a close fit, you can use extended tabs on the end of the rails to have the fans rails $\frac{1}{2}$ " above the heatsink. Alternatively, you can put the fan mounting screws with their heads on the bottom of the rails and the ends with the nuts extending upward. Cut away $\frac{1}{2}$ " of the vertical part of the rail at each end and then bend the horizontal part 90° downward to be flush with the fins of the heatsink. I drilled small holes into this tab and the heatsink fin and use a small sheet metal screw to fasten them. The wires of the fan can be passed through any convenient opening in the chassis to a 12VDC source. You can also make a hole and insert a grommet to protect the fan wires from chafing.

Rick **K1DS** (see addendum below)



Keep It Cool and Quiet Addendum

I noticed that my hearing has always been good. I could pull stations out of the noise and separate CW signals that were close. I almost never wear headphones. It has been a mixed blessing. Since my XYL has lost some of her hearing and uses hearing aids, she is unaware of many of the sounds around us, both in and out of our home. On the other hand, I have a form of hyperacusis, hearing things louder than most would, which is often annoying. Here are a few of the issues that I have experienced due to sensitive hearing.

Cool cont'd...

I awoke one night to use the bathroom and heard a slight hissing sound. Water was running somewhere. It wasn't out of our small backyard pond. It wasn't a faulty toilet float mechanism. All the sinks were dry. I went downstairs to the water meter and it was still. No water movement in my house. I put my ear to the pipe and the sound of running water was louder. I called the water company the next morning and they sent a technician with a remote leak-detecting microphone. He confirmed that there was a leak somewhere between the main feeding our street and my external shut-off valve. They would send a crew to fix this within the week. They dug a large hole through the macadam and down 6 feet. They located the main, but no visible leak. They traced the pipes to each of the homes in our cul-de-sac and found that the leak was in a pipe under my neighbor's driveway. They had to dig up part of their driveway, making a hole big enough for a plumber to get down there and repair the leak. The neighbors were unhappy with the unsightly patch and the water company provided them with a completely new bricked driveway.

The second time this happened, they had to re-dig the hole in the middle of the street and make another repair.

The third occurrence was in the extension to my shut-off valve—again a large hole in my lawn, but I convinced them that they need to replace the entire line, not repair each leak from a probable faulty water line. They made the right fix, closed all the holes, re-sodded my lawn and added seed, filled the street excavation and repaved the street. Quite a price to pay for a faulty piece of pipe, but my sensitive ear detected each leak, even though it was outside of my home!

I'm sure you all have heard water dripping at one time or another. Perhaps a faulty faucet washer or someone not fully closing the valve. I heard a drip in my basement radio room. It was on return from Florida and we had just turned the main water feed on. I noted that there was a tiny drip of water from the ceiling that was under the kitchen refrigerator. I checked the overflow pan of the refrigerator and it was dry. I pulled the refrigerator away from the wall and noted a small puddle. The copper fitting to the water dispenser and ice cube maker was intact. A tiny break had developed in the plastic hose that fed the water dispenser and it only dripped when we tried to use the dispenser. Fortunately, we had a nice refrigerator repairman.

Another year when we returned from Florida and turned the water on again, I heard a drip in our master bath. My XYL had checked all of the toilets when we returned and noted that an upstairs toilet tank had no water. We seal the toilets with a cling wrap before heading south so that the water doesn't all evaporate and we turn the water main off when we leave. There was a tiny break in the hose that ran from the wall to the tank that leaked all the water out while we were gone, but started to drip again once the main water was turned on.

Here in Florida, we purchased new appliances for our home. The new refrigerator had an annoying sound when the cooling kicked on. It was a low-pitched growling sound that was not clearly identifiable. It seemed to resonate throughout our unit and I called for a repair. Techs came out no less than 7 times to check and repair. They replaced the entire compressor and fans. They replaced the defroster mechanisms and dehumidifier gear. They leveled and re-leveled the refrigerator. Foam padding was installed in multiple areas. A tech named Anthony from a company called "Dish" made three visits to the house. He patiently listened to and watched the videos of the annoying noise. He promised me that he would get to the root of it and make the right repair. Somehow, he succeeded and I'll never know exactly what it was that created the annoyance.

Restaurants, movies and shows are usually loud, and since almost 50% of seniors in Florida wear hearing aids, they never complain. Cooling fans, transformer hum and other electronic noises are constant annoyances to me. I keep several sets of ear plugs handy. 73, Rick **K1DS**

Stan K3IPM, SK

Got a phone call this morning from Len K4LFK reporting that long time Packrat Stan Smith K3IPM became SK yesterday. In recent years Stan would fly up from Florida in January just to participate in the January contest. He provided a significant score for the club. This year was the first time in around 50 years that he wasn't feeling well enough to participate. RIP Stan. --Lenny **W2BVH**

Condolences to those who were close to Stan. It's been one of those years. —Steve **W1SMS**

I'm really sorry to hear that Stan, K3IPM, is no longer with us. My many QSOs with Stan, mostly in VHF+ contests, go back over something like 57 of my 66 years in ham radio. He was a loyal and enthusiastic Packrat from close to the beginning. Rest in peace, Stan. --Joe, **K1JT**

K3IPM was a fierce contest competitor. He was technically innovative with well-equipped stations and was a tenacious operator. RIP Stan. --Rick **WC2K**



Have notice here of a memorial celebration for him at his home in FL on Oct 18 at 2PM. I will try to attend. —Rick **K1DS**

This is indeed another loss to the Packrats. I will miss Stan in FL and on the air in Jan. RIP —Phil **K3TUF**

We're sure going to miss Stan. He set the bar high by his example of how to operate during a contest. —Drex **W3ICC**

Very sorry to hear this, a true Packrat. Stan used to upgrade and trade equipment from time to time, always offered old gear to club members. Stan was easy to work on the microwaves. Always thinking of the club, will miss him. —Gary **WA2OMY**

Very sorry to hear about Stan becoming an SK. This year has been terrible for losing friends. We will miss him and the others. RIP dear Stan —Al **K2UYH**

Very sorry to hear of Stan's death. We lost another great guy! —Paul **W2PED**

My fondest memories of Stan was talking to him at the pre general meeting dinner in January as he and I always seemed to be the first two to arrive so we'd chat before others arrived . A great contester and Packrat . RIP Stan. —Bill **K3EGE**

Very sad to hear of Stan's passing. Another great loss for the club, and the VHF community. Our Best wishes, and condolences to his Family. —Al **N3ITT**

I only met Stan a few times, including visiting his January station with my rover a few times. I published these pics as an album on the club's Facebook page. <https://www.facebook.com/media/set/?vanity=276478189517380&set=a.972552776576581> -- Pete **K0BAK**

I haven't been in these parts for very long and didn't know Stan as many of you do, but I do have memories of him from a different route. In 1964 - 1969, I remember Stan had one of the only "W/K3" reliable signals on 2M AM in northeastern NJ. I often heard him chatting with WA2LTM. I was younger and they were the "cool kids". I did work him occasionally because I could, and working 3's was a novelty in the world of Gonsets and such. I met Stan a few years ago at a Packrat meeting, and he was quite impressed to find out that he had a legendary signal 50+ years ago and a 2M kid from back then remembered him. RIP Stan, we'll all be there eventually. —Al **KB3SIG**

I'm really sorry to hear the news about Stan. I know he was really upset when he had to leave before the contest due to medical issues a few years ago and could not mount an effort again later. RIP Stan. — Ed **WA3DRC**

Stan K3IPM, SK

Stan Smith, K3IPM, left us for Ham Heaven on Tuesday, Oct 6. He fought the good fight, but couldn't overcome a series of setbacks in the last year. Those of us that were in frequent contact with him were unaware of how ill he was, because he always displayed a positive attitude. Stan was a member of the Packrats since 4/19/61 (59 years), joining just 6 months after I became a Rat). He was a good friend of Harriet and I for over 60 years, going back to when his son, Matthew, was born.

Stan was an enthusiastic Ham operator and Packrat member during all that time. He enjoyed working contests, rag-chewing, and helping others maintain their stations. He was constantly on the alert for better equipment to improve his own station, upgrading whenever an improved device became available. He was the first one I knew that had a power-driven tower, so that he could easily lower it to work on his antennas. A new band becoming active? Stan was on top of it with gear added for the band. Trouble with QRM? Stan would find remote operating locations to operate at and solve the problem. His trips to the top of Bowman's tower in January are well known.

In the true Packrat tradition, if a member needed a piece of equipment (rig, test gear, cables, connectors, etc.), to use to replace a failure, Stan was usually the first one to offer it. A 4-band set of his preamps still has a place in my station.)

He was an enthusiastic contest operator, honing his skills to put him at the top and #1 for many years. His certificates and trophies could cover the walls of a room.

In recent years he traveled annually from his home in FL, to set up a compete station in Ambler for the January contest. He built this remote station to cover more bands than typical members have, adding the ability to operate all bands from 6M through 10-Ghz. New digital modes becoming active? Stan was quick to adapt



this technology to his station. Tower erection getting tougher? He came up with the innovative idea of using a bucket truck(s) in lieu of towers to quickly raise the antennas in position. His good friend and member, Bill, K1DY was quick to support Stan with all of the designs.

In the last two years Stan's health problems kept him from traveling north for the January contest. But even recently, he was making plans to come up and operate in the warmer weather of the June contest!

There will be a Ceremony of Life gathering at his home in Boca Raton, FL, on October 18 th. If anyone is, or will be, in the vicinity, please try to stop in and greet the family.

If you wish to send cards or letters to the family, you can direct them to his son Matthew and family, at 2564 NW 37th St, Boca Raton, FL 33434.

If you care to make a donation to your favorite charity in his memory, I am sure his family will be grateful for the remembrance.

Stan, may you rest in peace. 73 and goodbye my good friend. Bert, **K3IUV**

The Wayback Machine

In CHEESE BITS, 50 Years Ago

Nibbles from October 1970. Vol. XIII Nr. 10
de K3IUV Bert
(author's comments in *italics*)

"Our Prez Sez". Prez El, **K3JJZ** (*also editor at the time, and our current auctioneer*) thanked the Cheese Bits contributors for helping to make this issue the best in 3 years. His frequent requests for articles bore fruit, and this issue was 7 double-sided pages ("the most you can send with an 8-cent stamp"). In fact, the Cheese Bits typist (*W3CL's daughter*) asked him "can't you save something for next month?" (*Lenny, take note. Keep bugging the team and you too will get articles!*)!

ARRL Bulletin NR 286, 8/20/1970. ARRL announced the availability of a new net directory. All known nets are tabulated by Frequency, Net Name and State. A legal-size SASE with 12-cent postage will bring you a copy. They requested you include the call and frequency of the net from which you received this bulletin.

The Board of Directors. This very interesting (*full page*) article was gleaned from the newsletter of the GCARC. It described the reasoning, makeup and function of the board meeting. In addition to other business, it serves as a screening point for items which would be too controversial or time-consuming at the regular meetings. (*I recommend reading the full article for some useful tips.*)

From the Book Rack. Paul, **K3WEU**'s monthly column discussed the "Electronic Circuits Design Handbook." He described it as a "Giant of a book, which included over 600 circuits and 750 schematics." He listed the Table of Contents which included 19 sections, and indeed almost every type of circuit was included. Printed by TAB books, the hardback edition cost \$17.95.

New Products of Interest to Hams. This aperiodic column, written by Lynn, **W3NSI**, included a new 2-meter transmitter from the Clegg organization. Designated as "The Comet," it featured crystal control, and about 50 watts output on SSB / CW. With power supply included, it was priced at \$399. A companion high-powered linear amplifier is expected shortly. Also, a series of press clips and cable keepers from Weckesser. These have an adhesive backing, and would be useful to neaten your station wiring. Available in quantities for 4-cents each.

Calendar. Next meeting, October 6 will feature a program by Robert, **W3EFG**, and Allan, **W3YZC**. The topic will be Slow Scan TV.

Membership. No new activity.

Contest. (*Yes Virginia, we had contests.*) Preparations were announced for the January VHF contest. The co-chairmen were Walt, **K3BPP** and Stan, **K3IPM**. The club at that time organized into "teams," located in different physical areas. 10 teams and their members were listed. Each team had a

coordinator, tasked with ensuring all members of their team would be ready, and getting help for them when needed. (*Together with K3IPM, I was in the NE team, with Ron, WA3AXV serving as our coordinator.*) Walt and Stan included a pep-talk letter to the members.

2 Meter, 220 and 432 Activity. W2EIF, Joe, reported normal propagation on these bands in September, except for the September Contest. One of the “biggest and best” band openings of the year occurred , with some stations reported working 26 sections on 2 and 22 on 432. (*Recall that ARRL sections provided the multiplier, rather than today's grid squares.*) On 432 Joe worked stations in Ohio and Kentucky, **with his beam stuck toward to CT!**

Central Sates VHF Conference. Jack Power, W2AXU, and his xyl attended this event held in Wagoner OK on 8/21, 22 and 23. Jack provided a very detailed look at the conference. The first talk was by Dick **K0MQS**, who described the Rhombic antenna he constructed for moonbounce experiments. The antenna was 100 wavelengths long on 144. The impressive dimensions were 342 feet per leg, 680 feet in length, and 58-1/2 feet in width He has eight of these monsters, stacked 6-feet apart vertically. (*Not your typical backyard lot!*) He notes “The gain appears to be about 30 dB, but how does one measure it!” Jack discussed a number of the other presentations, and noted

that “next year it will be held in Sioux Falls. (Sadly, Jack’s wife *Lil* died suddenly, shortly after their return. This issue included a memorial notice with her background.)

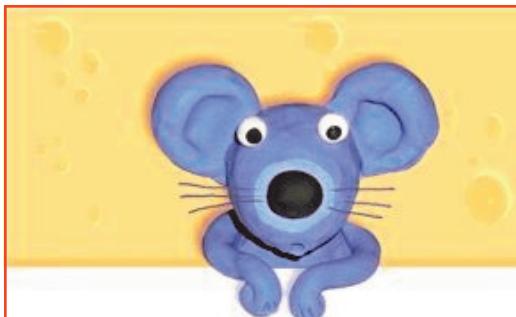
Swap Shoppe. By W3ZRR. (*Always nostalgia. Now we use the club reflector.*) From Chuck, **K0ZZM**, a collection of parts and tubes for high-power amplifiers. These included sockets for 4X150 and 4X250 tubes, with built-in bypass capacitors. Also, a 4CX125F Eimac tube, and other “goodies.” Trade for like items, or reasonable price. From Harvey, a Gonset G50, “like new.” Price \$125. From Steve, **WA3KNM**, a collection of classic test equipment, from companies like HP, Ferris and Ballantine. Priced individually from \$50 to \$550.

Miscellany. *Postage for this copy was still a single 6-cent Roosevelt stamp. 6 double sided, 8-½ x 11” sheets).* As usual, many “folksy” comments about members, their families, and activities were included in this edition of Cheese Bits. 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 **W3SO**, our webmaster. Remember, I have also posted the club Officers history, club Membership history, and Packrat Inventory (updated frequently) on the **W3CCX** website. These files are password protected, and only accessible to registered members. Have you registered? I hope you enjoyed reading these bits of nostalgia as much as I did in writing the article. If

.... Wayback cont'd

yes, you might let me know. Thanks to those that did.

Thirty, de K3IUV
(K3IUV@ARRL.net)



I attended an awesome online presentation by K0SM this past Saturday (8/29) organized by the Rochester group as part of their Saturday Sessions. Check out his new rainscatter.com [A fascinating and useful online APP Ed.] website. It's an interesting mode and it actually made me think of exploring 10GHz. The presentation was recorded and should be posted soon. 73, Alex **KR1ST**

Phil WF3W asks "Does Joel from 'The Rf Connection' have this in stock?" (It's a slab of undersea power cable).



Events

For inclusion, please direct event notices to the editor.

Microwave 902 and Up Fall Sprint - Contest - October 10, 2020, 8am-2pm local time. See <http://svhfs.org/2020FallSprintRules.pdf> for details

50 - 1296 MHz EME Contest - Contest - Weekend #1 October 10-11, 2020. Details at <http://www.arrl.org/eme-contest>

OktoberFest - Hamfest - October 17, 2020 Harrisburg PA. Sponsor HRAC. Details at <http://www.w3uu.org/hamfest/>.

CANCELED RF Hill ARC Hamfest - Hamfest - October 18, 2020. Sellersville PA.

50 - 1296 MHz EME Contest - Contest - Weekend #2 November 28-29, 2020. Details at <http://www.arrl.org/eme-contest>

Paul , W1GHZ has written an article on the uniqueness, and fun using rain scatter in the microwave bands.

The article appears on pages 54 and 55 of the October 2020 issue of QST.

I have experienced rain scatter one time while using the NN3Q/r rover van, as well as other microwave enhancements making 10 GHz (and up) a unique communications experience.

Very 73
Allen **K3WGR**

For those who don't know, a cross babe FM repeater was just activated on the ISS.
https://youtu.be/O4XG_zleA3A

Trevor R.H. Clarke, **K8TRC**

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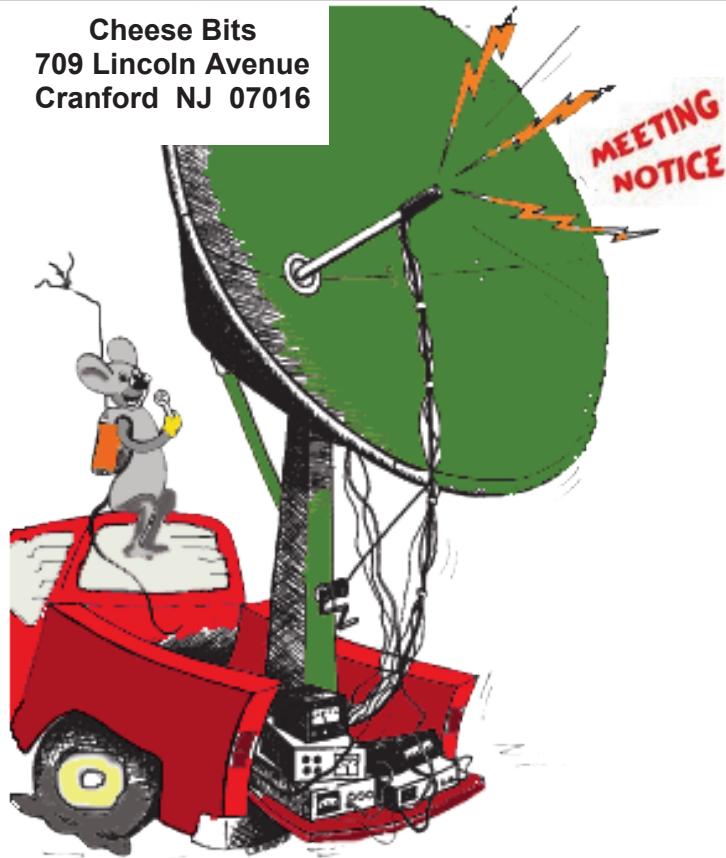
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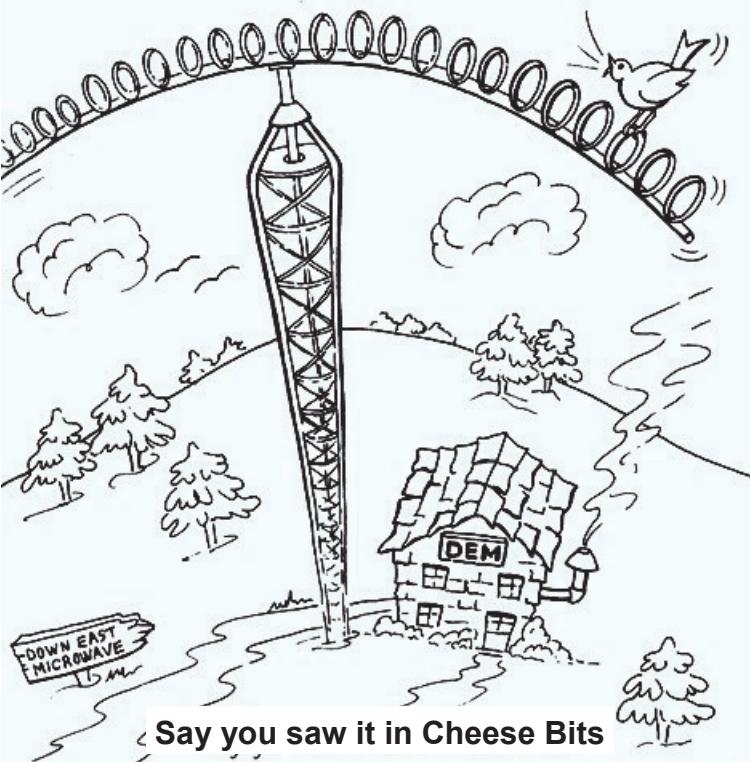
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