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

CHEESE BITS

ARRL Affiliated Club

W3CCX
CLUB MEMORIAL CALL

Volume LXIV **July 2021** **Number 7**

PREZ SEZ:

As you can see from the June Contest results in this issue, we did quite well this year. Dave, W3KM does the compiling of the club results. He started doing this each year for the January Contest and for the last couple of years Dave has extended it to the June Contest. Thanks Dave for the excellent job you do for the club!

This year at least 16 Pack Rats and 2 other invited guests participated on Camelback to make the operation a success. It takes a lot of advance planning to "pull this off" miles away from the comfort of our home shacks. The advance planning and execution by all the team members really paid off this year. The towers, antennas, and the majority of the equipment were set up and working by 9 PM on Friday evening. We did find some equipment problems that always seem to come up with an operation of this scope, but most problems were resolved before the contest start time. A list of any problem that could not be solved on site was made so we can further refine the operation next year.

I would like to thank all those who participated this year at the site and all of our members who supported the operation from their home stations. A special shout out to Tom Mills, AF4NC our EPA Assistant Section Manager and official site photographer! He was hands-on when anything needed to be done. Holding an antenna, guy rope, tower section, unpacking the trailer, etc. Thanks Tom! Be sure to check out the pictures Tom took of the site and team in this issue.

Everyone involved should be proud of our score this year and the improvements made over previous years. Please come next year and join the team for some fun.

News Flash: Announcing the Packrats annual White Elephant Sale to be held outdoors on August 12th 2021 at the QTH of Bruce, WA3YUE. This fun meeting will also be our first in-person meeting since the pandemic started. Since we could not have it last year, we have lots more items to auction off. Every Pack Rat should go home with some items they did not bring. The WES will feature our famous auctioneer extraordinaire El, K3JJZ. Remember, do not scratch your head or El will count that as a bid on the current item! More details to follow on the WES shortly.

The other good news is we will have our first indoor in-person meeting on September 16, 2021. It will be at the Ben Wilson Senior Activities Center, the same location as before the pandemic.

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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Membership Chairman:	Michael KB1JEY kb1jey-at-arrl.net

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

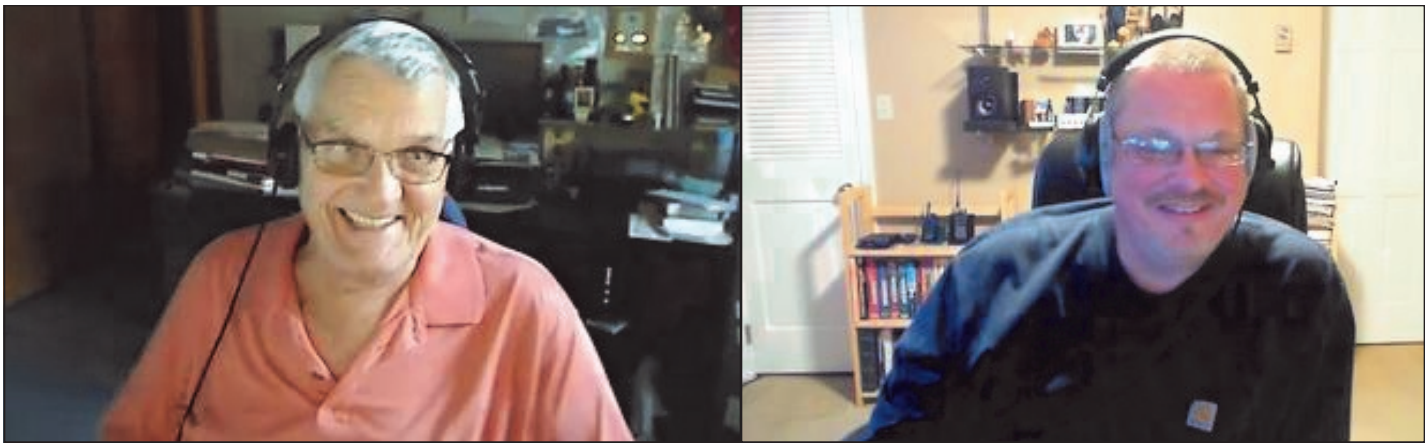
Operating News: Don't forget that Dave, K1WHS in FM43MJ is running a 222 MHz Activity night each Tuesday, 7:30 PM on 222.100. Dave is running high power and good antennas. He will also monitor the ON4KST Chat Page.

Upcoming contests include the CQ WW VHF Contest July17th-18th. The 222 and Up contest August 7-8th. The 10GHz and Up Contest August 14th – 15th. For more details please see the "events" section in this issue.

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

JUNE (WEBEX) MEETING PICTURES




KB1JEY

Mt. Airy VHF Radio Club, `The Packrats`
June 2020 VHF Contest

Total Logs: 38 **Club Claimed Score: 1,936,282**

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	24 GHz	Laser
1	K1TEO	1094	341	549351	502 137	260 55	84 34	116 39	29 19	50 20	25 13	12 9	8 8	8 7		
2	K1RZ	587	230	231150	157 60	160 42	70 32	93 31	31 18	35 18	21 13	3 3	5 4	12 9		
3	N3RG	380	175	104475	170 77	80 30	31 15	38 19	13 7	22 9	9 5	2 2	8 6	7 5		
4	WN3A	378	133	53200	221 91	135 32	5 3	17 7								
5	AA2UK	293	147	48951	177 95	88 31		16 11		12 10						
6	N2SCJ	359	107	43121	197 72	122 26	6 2	30 5		4 2						
7	N3NGE	262	126	40446	146 70	79 29	13 7	9 6	3 3	5 4	3 3		2 2	2 2		
8	K2TXB	264	148	39072	175 109	89 39										
9	KA2LIM	224	117	37674	102 49	57 24	23 14	21 13	4 3	5 3	3 3	2 2	1 1	5 4	1 1	
10	W2KV	334	97	37151	122 44	163 33		49 20								
11	W3ICC/R	271	70	33810	63 20	62 11	46 10	52 10		30 8	18 6					
12	KR1ST	250	96	30144	149 56	48 15	16 9	26 10		11 6						
13	WA3NUF	238	93	27249	129 52	71 22	13 4	12 5	4 3	5 3	3 3	1 1				
14	N3EXA	225	77	19250	126 44	74 18	11 7	14 8								
15	KA3FQS	165	62	16120	57 21	36 12	26 9	26 8	6 4	11 5	2 2	1 1				
16	W9KXI	168	87	15051	118 61	46 22	2 2	1 1		1 1						
17	W3KM	178	80	15040	151 65	20 9	4 3			3 3						
18	W2BVH	155	67	14405	41 21	70 18	11 8	19 9	5 4	7 5	2 2					
19	K0BAK/R	145	58	8816	83 35	55 16		7 3								
20	W3HMS	113	58	7772	70 34	27 14	9 6	2 1	2 1	3 2						
21	WB3IGR	101	53	7155	45 24	32 13	7 5	9 4	2 2	4 4						2 1
22	N2DEQ	129	42	6258	60 16	53 19	6 3	6 2	2 1	2 1						
23	WF1L	100	49	5831	53 22	31 13	6 5	7 6		3 3						
24	N3PLM	109	37	4033	87 29	22 8										
25	WB2RVX	63	32	3648	17 11	11 4	9 4	12 4	5 3	7 4			1 1	1 1		
26	KC2TN	58	28	2772	12 5	14 5	11 7	14 6	5 3		2 2					
27	K3JJZ	64	32	2496	40 23	10 3	7 3	7 3								
28	KB3MTW	60	21	1911	22 8	14 3	8 3	9 3	4 2	3 2						
29	K3GM	47	34	1734	38 27	5 3	2 2	2 2								
30	K3WHC	42	29	1595	2 2	29 17	2 2	7 6		2 2						
31	K1DS/R	33	18	1062	2 1	12 4	2 1	11 4		5 4						1 1
32	W3GAD	32	22	946	15 9	10 6	2 2	2 2	2 2		1 1					
33	N3ITT	49	16	784	42 11	7 5										
34	WS3O/R	40	15	705		36 9		1 1		3 1						
35	K3IUV	28	10	370	11 5	8 2	4 1	5 2								
36	NE3I	17	8	160	5 2	9 4	2 1	1 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	Laser	
1	**W3CCX**	984	223	293914	419 97	321 46	74 25	101 24	19 8	29 9	10 5	1 1	5 4	4 3	1 1	
OPS	**Ops: K3JJZ K3MD KA3WXV KB1JEY KB2AYU KB3SIG KC3BVL N3EXA N3PUR N3YMS W1SMS W2SJ WA2OMY WA3RLT WA3WUL WA3YUE WX3K**															
2	**N2NT**	910	222	228660	510 133	280 52	51 18	69 19								
OPS	**Ops: N2NT N2NC W2RQ WW2Y**															

Members Outside Club Circle

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	Laser	
1	K2EZ/R	424	118	110330	45 14	81 16	70 14	78 15	43 12	44 12	32 8	27 7	4 4			
2	**K2EZ/R roved in OK and TX. Score and log count not added to the club totals.**															

NOTE: Logs sent to the ARRL, but not to W3KM for inclusion in the grids: KC3ACQ, WA3DRC,W3RJW, NN3Q/R

Mt. Airy VHF Radio Club, Inc.
`The Packrats`
June VHF Contest: QSO's with Packrats + Nr. Of Packrats Worked

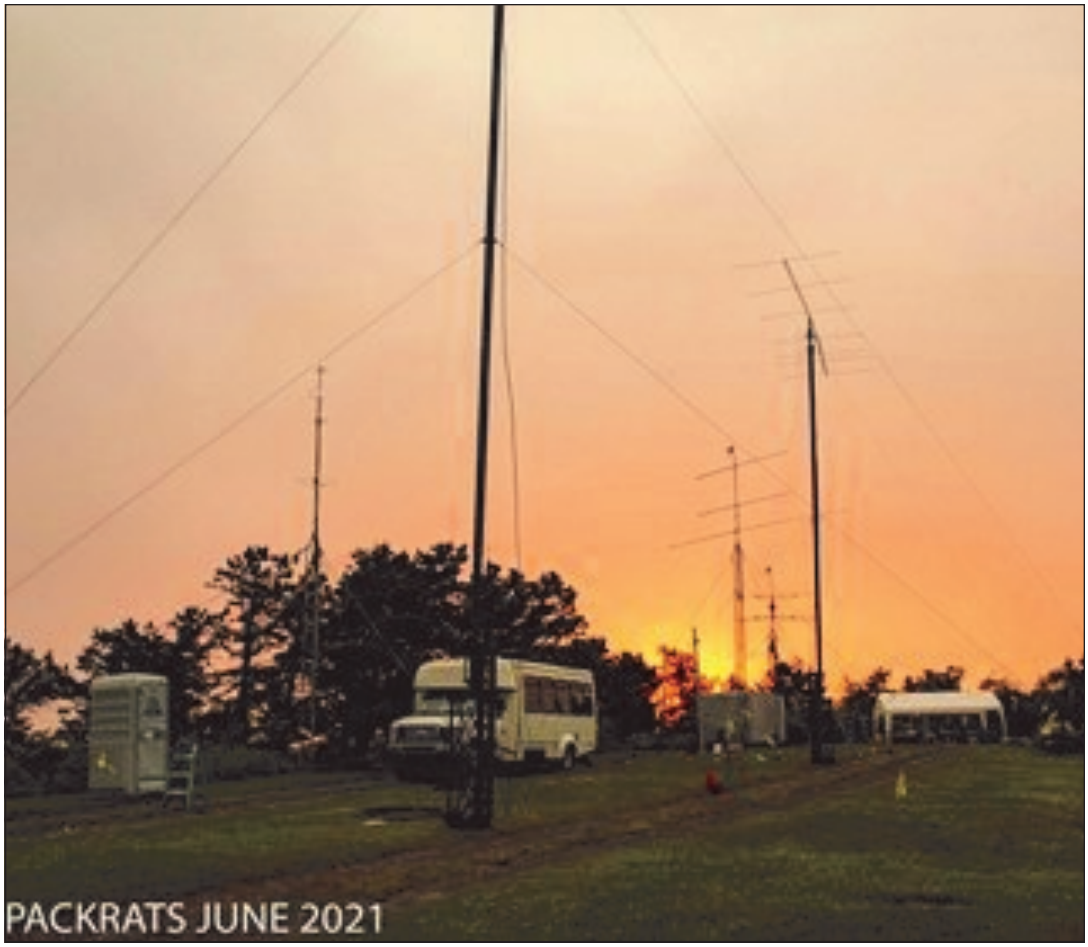
Total Logs: 59 **Total Packrats:38**

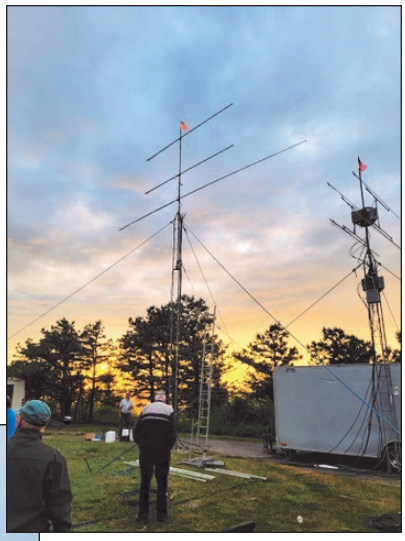
Nr	Call	Op	Pwr	QSO's	Total 'Rats
1	**W3CCX**	MO	HIGH	227	51
2	**W3ICC/R**	RO	HIGH	203	17
3	**N3RG**	SO	HIGH	137	27
4	**N2NT**	MO	HIGH	119	40
5	**K1RZ**	SO	HIGH	112	20
6	**KA3FQS**	SO	LOW	108	23
7	**N3NGE**	SO	HIGH	73	25
8	**WA3NUF**	SO	LOW	73	25
9	**W2KV**	SO	HIGH	72	33
10	**KR1ST**	SO	HIGH	66	18
11	**N2SCJ**	SO	LOW	65	30
12	**N3EXA**	SO	LOW	64	31
13	**W2BVH**	SO	HIGH	53	20
14	**WB2RVX**	SO	HIGH	52	11
15	**N2DEQ**	SO	LOW	51	23
16	**AA2UK**	SO	HIGH	50	25
17	**KB3MTW**	SO	LOW	50	14
18	**KC2TN**	SO	HIGH	43	11
19	**W3KM**	SO	LOW	41	25

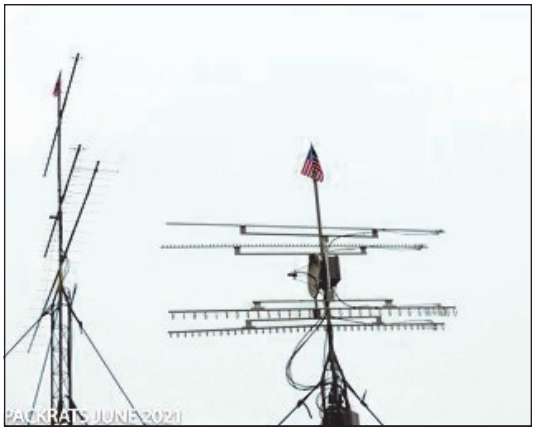
Nr	Call	Op	Pwr	QSO's	Total 'Rats
20	**K0BAK/R**	SO	LOW	41	18
21	**WB3IGR**	SO	LOW	36	16
22	**WN3A**	SO	LOW	32	19
23	**K1DS/R**	RO	LOW	32	10
24	**K3JJZ**	SO	HIGH	29	12
25	**KA2LIM**	SO	HIGH	26	9
26	**K2TXB**	SO	HIGH	25	19
27	**W9KXI**	SO	HIGH	21	13
28	**K3IUV**	SO	LOW	21	8
29	**N3PLM**	SO	LOW	21	15
30	**WS3O/R**	RO	LOW	21	8
31	**W3HMS**	SO	HIGH	20	12
32	**WF1L**	SO	HIGH	20	8
33	**W3GAD**	SO	HIGH	16	7
34	**K3GM**	SO	LOW	12	8
35	**K3WHC**	SO	HIGH	11	4
36	**N3ITT**	SO	HIGH	8	6
37	**NE3I**	SO	LOW	5	3
38					

Tnx **Dave W3KM** for processing log data used in the Contest Tables !

JUNE CAMELBACK PICTURES







TNX K3JJZ, AF4NC & KC3BVL for submitting pictures!

June VHF Contest Reports

From N2NT (Multiop)

Made a small improvement to the fixed 6m NE beam before this contest. This antenna is deep in the woods to get away from solar panel RFI that kills the main 6m rotatable antennas when beaming NE. We replaced 200' of the 350' coax run with ⅞" hardline. This reduces loss by 1 dB. Every dB counts. The repaired Harris 6m amp (failed during the January contest) made it through the weekend without a hitch. Nice. Had new interference on 2m that looked like a 100 kHz wide, +10dB noise "hump" that jumped around on the SDR spectrum. The first day it was centered around 144.3 and didn't cause too much grief. By Sunday morning, it moved closer to 144.2. Later in the afternoon, we realized antenna direction didn't matter much for this noise -- a sign that something local to the shack was leaking into the system. Spent an hour sniffing noise with an Airspy HF+ discovery while wiggling cables behind the Larcan 144/222 amp rack. . In an act of desperation, I disconnected all the cabling to the 144/222 amp rack and wheeled it out. I neatened up the mess of coax, control lines, dc power and CAT5 cables behind the amp. When we put everything together again, the interference was gone and stayed that way until the end of the contest. This troubleshooting probably kept us off the air on 144/22/432 for about 3 hours, but hey, it's not a VHF contest if you don't have to fix something in the middle of the contest. Nice coastal tropo Saturday night and Sunday AM. Worked K1MAP in FM14 on 2m SSB, about 450 miles. Also worked N1BUG on a random 222 contact. Cool! Didn't spend too much time on ON4KST lining up contacts. It's hard to keep up with everything. Information overload already fills up 2 monitors on each of our two operating positions. Hard to use 2M FT8 for actual weak signals, especially when local enhancement makes signals up to 150 miles out so strong. With SDRs more prevalent, maybe we should consider using the entire 5 kHz of bandwidth that WSJT-x can decode on FT8. Would be nice if people spread out more. Nice to have W2RQ join us for most of Sunday. Bill probably caught the best period of 6m E-skip. Hope to do it again in September. 228,660 Pts. 73 John N2NC, for the N2NT VHF team.

From Dave W2KV

I decided to do an old school effort this time and worked only SSB/CW. Activity was pretty good with fair conditions. A bit of coastal tropo on 2 both days but no lift inland to the west. Best DX on 2 was AA4ZZ EM95 at 474 miles and VE3MIS FN03 on 432 at 335 miles. 6 meter CW was quite productive. 37,151 Pts.

From Al W9KXI

Not great conditions here and my 432 was acting up. One 23cm contact, one on 70cm and two on 1.25. I could count the number of SSB/CW contacts I had on my two hands and have fingers left over. For me 6M FT8 was the name of this contest. See everyone in July, August and September. 15,573 pts.

From Bill WF1L

First Large participation as a Packrat. Got 1296 station on line just in time to use it for the first time. FT8 QSOs were a real chore. Much happier on SSB. 5978 pts

From Jeff K1TEO

Score was up slightly from last year though 6M condx and results were way down. The other bands, including full use of 222 after issues last year, made up for the lower 6M score. The openings this year were not widespread and as they say "sporadic". Also in the limited situations where the band picked up there was a lot less on SSB/CW than there was last year. My 6M QSO's on FT8 rose to slightly over 50% with some additional Q's on MSK144. Only about 8 or 10 FT4 QSO's though I tried there. It is a lot nicer to operate on FT4 without nearly as much QRM and the faster exchange but not enough guys try there. Band condx on 2M and up were decent the first few hours, fell off and then Sunday AM were pretty good down the coast. By mid-day they were back to normal and the noise on 2M got pretty bad making it tough sledding until the early evening hours. I was very busy for most of the contest except for Sunday afternoon when things were pretty slow. I did run into one major issue. In the January contest I had significant interference a few times on 2304. It was intermittent and fortunately wasn't a major factor. I had checked the rx several times since and used the band in the spring sprint without interference. I turned the rig on Saturday morning and it was there with a vengeance - s9 noise from about 200 degrees around to 280. And

this time it stayed on the whole contest. That made it really tough to hear stations in that key direction. I checked this morning and it is gone. Hopefully I will find the problem and its solvable. Sunday evening Peter VA3ELE texted me to say there were some big storms between us. We have been trying to work on 10G to give both of us a new grid for awhile now. Most of the time my tower is cranked down and below the treeline making 10G efforts difficult. This time the alignment of a contest (tower up) and the storms was the key. I heard Peter as soon as we started and he stayed in solid copy on rain scatter throughout the QSO. A little dxing in the middle of a contest, hi! And lastly one interesting SWL report. The Trans Atlantic station in Newfoundland decoded me on FT8 (2M) during the contest -with the antenna facing toward EU. That's a pretty good haul from here. Tnx for the Q's and to the rovers for heading out. 549,351 pts.

From Dave K1RZ
Some highlights. Great tropo opening to two good ops (N2JMH and W2FU) in northern NY after the afternoon thunderstorm passed through and I got back on the air. Some 10 GHz rainscatter contacts in VE3, WPA and WNY. Lots of Rovers out with N6MEJ, KD3PD, WA3RGQ, N9ZL, KJ1K, W3ICC, KM3G, KM4OZH, W4NF, N2DXT, KO4IJH, K2QO and KF2MR. Great that you all went out!! Worked K1TEO on 9 bands. 6m amplifier quit, so ended up a little light on the 6m QSOs and grids. Had a good time making CW contacts on 6m. I received a large number of WSJTX Q65-15B decodes on 10368.200 MHz with Peter VA3ELE at 512 km. Our Q65 contact attempt was well after midnight where **AircraftScatterSharp** showed no airplanes anywhere near the path. While we did not complete the contact on Q65, the experience showed me yet another new digital capability I did not previously have in the VHF Contest tool box. Fortunately Peter and I worked Sunday afternoon on CW using rainscatter as a mode of propagation. My QSO breakdown by transmission mode: CW - 90 (15.4%), FM - 18 (3 %), FT8 - 72 (12.3%), MSK144 - 3 (0.51%), and USB - 401 (68.6%). Total 584. [I did not keep track of any statistics for contacts where stations called me on CW while I transmitted in USB, as occasionally is the case]. I remain fully satisfied with the current ARRL VHF Contest format allowing both analog modes SSB and CW and digital modes FT8, MSK144 and other digital transmission modes in VHF contests, ensuring that all stations have a chance to be part of the fun and competition on the VHFs and up. Thanks to ARRL for their excellent sponsorship of these VHF contests and to everyone who got on and made contacts on any transmission modes in the contest. CU in the August 222 and Up Distance Contest. 226,404 pts

From Alex KR1ST
Early Saturday I decided not to do any digital modes this time. I also used no internet based assistance. I only honored unsolicited phone calls and texts. Is that a winning strategy? Absolutely, if it means I maximized the fun factor for myself, which it most certainly did. I enjoyed having (some long) conversations with people, did some fun experiments (thanks WS3O/R!), and joined some locals running the bands on FM. Even though I was not on FT8, it was really nice to welcome new callsigns in my log. Many thanks for the rovers that went out! I'm sure it must be frustrating if there's a big 6m opening and people can't be coaxed to work you on the higher bands for which you no doubt brought a lot of gear. There was a brief opening to FL, GA, AL and VO1 on Saturday in the early evening. Sunday morning I got in the shack way too late as there was already a hopping 6M opening going on when I turned on the radios. There were several openings throughout the day, but judging by the band scope, it seems that folks restricted themselves to the 3-6kHz confines of FT8. At times the beacons were roaring and a few strong distant stations could be continuously heard but that was about it. Judging by the signals popping in and out it seemed that I was constantly on the edge of an Es opening and wasn't able to take full advantage of it. To anyone still complaining about FT8, if you found yourself on FT8 during the contest, you are as much a part of the problem as whoever or whatever you are trying to blame. We don't need rule changes that are destined to fail to entice people to use the legacy modes. It's the attitude of the participants that will determine if the current contests turn into digital mode contests. The digital modes deserve their own contests. It's hardly a new and innovative concept

in 2021. All it requires is a bit of agility by the contest sponsors (or for perhaps a club initiative to pick it up and run with it). I had a lot of fun and I thank everyone for the Q's we had. We'll all learn in 6 months time, when we're back to shoveling snow and have long forgotten about this contest, how the things fared from the sponsor's perspective. 30,144 pts.

From Russ K2TXB

Well another June contest with six meters dominating! I'm sure I could have done better but started the contest lacking sleep. Crashed at 11:30 PM Saturday and slept 9 hours. Missed morning meteor scatter. Dang! Anyway, enjoyed the contest. I never made it down to the shack to operate SSB or CW. The contacts just kept coming on FT8, never saw a lull on both bands at the same time. Also, it takes a lot more energy to operate SSB in the contest, and I just did not have that energy this time. 39,072 pts

From Bert K3IUV

Great score Russ. But not much help for the few stragglers (like me) that continue to use only SSB and cw. I suspect that most of the digitizers (like you) just hung on the digit frequency and never did any tuning for analog signals. But my highlight was working two stations in Newfoundland (1,200 miles) on 6 SSB, with the indoor halo I borrowed from WC2K (thanks, Rick). The "Halo" was a vintage Saturn 6, normally used on the back bumper for mobile work in "the old days", sometimes used currently by some Beacons as an omni radiator. In my case, it is indoors (as are all my antennas), due to HOA restrictions. It is located at least 10' in from any outside wall, and not even near a window in my loft! 370 pts.

From Bill AA2UK

I watched the band scopes for SSB/CW activity. I had a bigger issue finding FN20 and FM29 on 1296. I worked a bunch of grids on 1296 once I got stations to sched with me. What I can't do anymore is hear well or do the seat time needed for big scores. Most importantly I really enjoyed the contest. And yes bring back 223.5 again it worked well although the new Roxboro 222 repeater might be a better alternative now that that is allowed. 48,951 pts

From Jeff WN3A

I operated from FN10 near Chambersburg again this year, using a mix of vertical omnis up high on the tower, combined with short-boom horizontal yagis only 20 to 25 feet above ground which is far from ideal but given the layout of the site it's about the best I can do for a one-man temporary setup. I operated single-op 3-band (low power) again; might do high-power in September. No Internet assistance, but did operate FT8, especially when SSB/CW activity was low. I listened to 8804 on a DMR radio most of the contest but didn't hear anyone. Lessons that were re-learned this weekend:

1. No matter how well you prepare, everything takes longer than it should the day of the contest. No surprise there, but it is still frustrating as hell. I didn't get on the air until 1849 UTC.
2. The radio you've had for a long time and worked fine the day before contest won't work the day of the contest. I powered up my 6m rig (IC-756 Pro II) about 20 minutes before the start of the contest. The LCD display was all-white with a "ghost" image of a corrupt version of the normal display overlayed, relays were clicking as if it was going in and out of transmit or tune mode, and none of the front-panel buttons were responsive. Argh. Disconnected power, removed the cover, re-applied power, and smoke came out from the area behind the LCD display. "OK, I guess that's the end of the on-site troubleshooting." I was able to eventually borrow another rig from a friend (Bryan N3ST), but missed out on what was reportedly a pretty hot 6m band Saturday afternoon -- my first 6m contact wasn't until 2306 UTC. Big thanks to Bryan, and John KA3LAO for driving to Bryan's house to pick up the radio and bringing it to me.
3. The rotor that I thought I had put in a "safe place that I won't forget" turned out to be anything but that when I went to find it on Thursday. I ended up borrowing a rotor from Nick - I met up with him in Plymouth Meeting Friday morning en route to Camelback. Big thanks to Nick.
4. Sleep is important. I slept on the plywood floor, which was uncomfortable enough to start with. But it was extremely disconcerting to awaken lying on a wet blanket, given that there is no running water at the site. It wasn't raining out, and I was mostly certain that I hadn't had an accident. Long story short, the condensate line in the overhead air conditioner had clogged, and water was dripping out of the pan. OK, I guess four hours of sleep is all I'm getting, may as well get back on the air. I paid the price for that

decision, as by late-afternoon, I was having a hard

time staying awake. Despite everything that went wrong, I had a good time. 52,662 pts. I also gave out some points on 222 FM but didn't count them.

From Lenny W2BVH

Every June I face a dilemma. My wife's birthday falls on (or very near) the date of the June VHF contest. And every year she says, "Don't worry about it, we'll go out for my birthday next week". This year was different. After being restricted by the pandemic, we decided to celebrate on her actual birthday. In fact we celebrated twice. On Saturday, we went out just the 3 of us as a family, and on Sunday (her actual birthday) we met two other couples at a nice restaurant, in NY (about 1 1/2 hours from home).. This cut some operating time in the June contest and it is reflected in this years score. I had 155 Q's and 14+ K points this year compared to 192 Q's and 23+ K points last year. 55 of my 155 Q's were FT8. I'd estimate 30% of the FT8 Q's were one's I would not have gotten because the signal strength was too weak for a less capable mode. As for the remainder of the FT8 Q's, like they say in fishing, "If you want to catch fish, go where the fish are". The birthday celebrations and the June contest were both great. Doing both is a perfect balance . Maybe I'll continue doing it this way in the future. (Knowing my wife, she'll probably say "No, no, no do your contest we'll go out next week"). What will happen? Stay tuned..... [Here's a reply to my report from Bill AA2UK] Lenny my wife's birthday is tomorrow so I lucked out! I had loads of fun working 1296 mostly using Q65 submode C. My best DX over 400 miles to EN80 the next best EN90. I think I worked 12 grids and missed 2 that I can usually work. My situation is similar to yours trees a plenty and too many close homes.

From Ray N3RG

This year I had more fun in the contest! I spent as much time in the chair as I could and operated as many modes as I could. Thanks to N2DEQ's contest tools I had the new contest clock and a plan. Then six meters opened up and my plan got pushed aside!! Just kidding! The new contest clock is a great tool that allows you to list the rovers and their information. I list the rovers in locations I know I can work them in and try to work them as a first priority. This year contrary to many reports, I found many stations on SSB and CW and was able to run the bands when ever possible. I did operate FT8 as well and enjoyed every minute. The six meter openings were the best in years and I'm already looking forward to the next year! One change I made this year was to follow AA2UK's advice and run higher power on six and two... "Too old for QRP. 104,475 pts.

From Bob K3RLW

Ok, from my meager station: ICOM 746Pro barefoot (85-100 watts), 2m 12-element LFA Yagi, but only at 8ft above ground, and armstrong rotor 6m Moxon at 22ft with a ground-based rotor. About 2/3 of the q's were FT8, and some wonderful SSB contacts also, like the 3 Long Island Stations on 2m SSB from here in FM18. Contested with NEMARC.org. Northeast Maryland Contest Club, finished 2nd. Had a lot of fun, and beat last years score. [Reply to Bob from N3RG] Congratulations for having fun and beating last years score. Your station is far from meager with an operator like you in the seat! Great Job!

From Griff NE3I

Sincere Congratulations Ray and glad to see that apparently, there may still be enough fun to justify the investment and effort of seriously equipped VHF through Microwave home stations. Hopefully, also enough fun for those dedicated souls to continue to undertake the arduous Camelback operation. For the deed restricted and casual (non-laptop) rover operator such as myself, it seemed to be a digital 6&2 Meter contest. While I managed SSB QSOs with W3CCX on 2 and 432 and a CW Q with W2SZ on 2, I worked more members of the Frankford Radio Club than Packrats on 6. 160 pts.

NE3I homebrew "Antenna Farm"

Another VHF Contest Mini-Rove

We flew back to Pennsylvania on Tuesday prior to the June VHF contest. The car was shipped and was available as soon as we got into our furnished rental apartment. By Thursday I had recovered all the stored radios and antennas that I left with my son Leon, N1XKT. I thought that I forgot to bring a cigarette lighter plug with PowerPole connectors to power the rigs from the car. Drex W3ICC managed to meet me on the road Friday and supplied what I needed. I was unable to operate on Saturday as we had visitors, but I planned to head to the mountain on Sunday. I loaded all the gear into the vehicle and got on the road to arrive on Camelback Mountain at 11AM.

I started out with a LASER QSO with W3CCX and then started to "run the bands" (6, 2, 222, 432 & 1296) using my TS2000X and IC375. It was nice to see the new arrangement of the dining area and the trailer, van and antennas. Everyone was busy making QSOs and having some fun, boasting about their long-haul contacts and the 6m DX opening. I discovered that I had packed a cigarette lighter plug in with the TS2000X, so my loaner from Drex was surplus! As the weather was a bit gray and predictions of thunderstorms were pending, I packed up and headed west on I-80 to get to FN11.

The truck stop just west of the I-80/81 intersection is the first reasonable VHF operating spot in FN11xa that I and others have used successfully through 10GHz in the past when I had the van and all the microwave gear. The parking lot closest to the exit had only 2 semi rigs parked there, so I pulled in and put up the tripod, attached the antennas, connected to coax cables to the rig and started to call the mountain. I discovered that the PTT line seemed shorted and was always in transmit when I plugged the mike into the rig's connector. No matter how I pushed the PTT momentary or lock switch, it was always in transmit. I quickly realized that I could use it by sliding the mike connector in and out from the rig. Problem #2 was a poor 2m reception that seemed intermittent. The root of the problem was a short between the center conductor and braid of the LMR240 cable as it attached to the driven element of the homebrew WA5VJB "Cheap Yagi." I separated the mating metals and all played well after. It started to drizzle and more semis were pulling in. We managed the 1296 QSO on CW and I quickly disassembled everything and headed back east to get on the Northeast Extension and get home to FN20.

Once back in FN20ie, I set up the tripod again, mounted the antennas, connected the coax cables and decided that I would use my 6m dipole first to see if the band was open. Nothing doing—everyone must have gone to FT8. I did manage a series of SSB and CW QSOs on 2, 432 and 1296 including the mountain again, K1TEO and even a great 2m SSB contact with a station in FN33. I had several Packrats in the log and ran the three bands with several of them, despite my compromised antenna situation facing in one direction: north. My final score was a bit over 1,000 points and proof of mission accomplished with a minimal station. Thanks to all who made the afternoon and evening a fun event. Rick **K1DS/R**

MY SECOND ROVER ATTEMPT, JUNE 2021
WS3O/R

My previous rover attempt in January wasn't much of a success. But it was a lot of fun. So, I made another attempt for the June contest. I planned to build a collapsible 6m hexbeam, take my 2m yagi, and use those with my IC-7100. Also, I would drag along my 1296 yagi and the Alinco DJ-G7T, and see if I could scare up anyone on FM.

This time, I did not attempt to reach Riansares Mountain, as it took too much time to get out there. For FN11, I decided to try Grandview Trail in Rickett's Glen State Park, on Red Rock Mountain. I figured to operate from the parking area on PA-487 initially, then hike up to the summit with the HT. Upon arrival to the parking area, I set to deploying the hexbeam, only to find that I had forgotten to bring along the feedpoint cable assembly. Yikes!. Not only that, but I forgot to bring my 2m yagi as well. Not off to a great start here. I did, however, have the 2m arrow antenna with me, so that went up the pole.

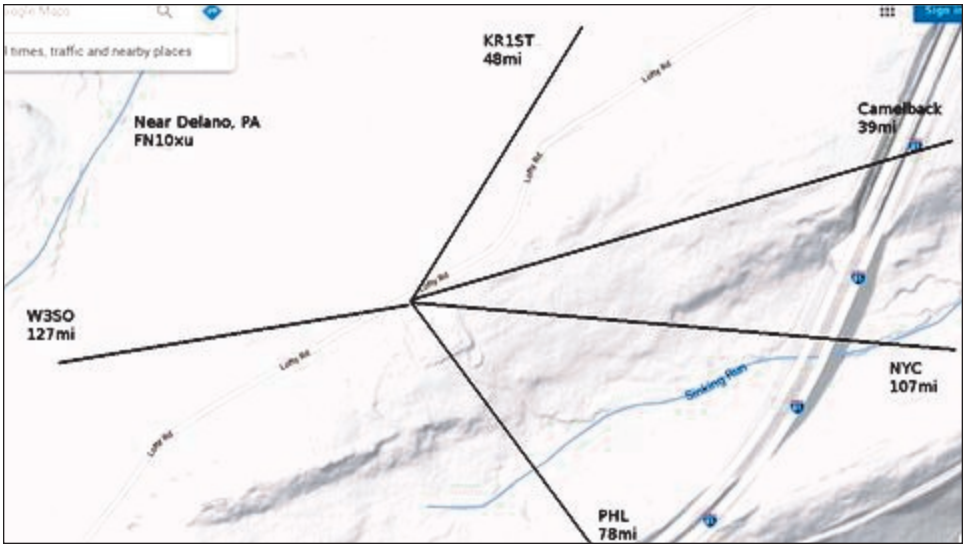
I managed to get W3CCX right away, as well as N3RN, who was quite local. After two hours of calling CQ, I only turned up one additional contact, W2KV. Having studied the terrain maps before the trip, the location should have had an ok view from PHL to NYC. I couldn't call anyone to arrange a contact, because there was **NO** cell service here. *(I am beginning to wonder about that "when all else fails" motto...).* But two hours was enough. Packed up the 2M yagi, grabbed the 1296 yagi and HT, and hiked to the top of the hill.

There wasn't much of a view, as the sky was hazy. Still, this would have been a much better spot to operate from, and I intend to try in the future. However, given the amount of services on the tower behind me, I chose to go light and examine the lay of the land first. Zero contacts were made from the top of the hill. But at least I got an FN11 activation into my log this time, from the parking lot. That counts as a success for me. On to FN10.

I went to near the same location in FN10 as I did in January, near Delano, PA. But instead of parking in the woods, I found that there was a clearing a little further up the road, next to an abandoned building. The site is really trashed, with junk and debris everywhere. However, I saw zero "No Trespassing" signs, so I setup.

This location looks to have a good view into the Philadelphia area, according to the path analysis. But, once again, very few contacts were made. In fact, only three: KR1ST, W3CCX, and N2NT. Back in January, I had made the mistake of knowing where North was, but not knowing the direction to major highlights, such as Camelback or PHL. I do not haul a computer with me. So I drew up a plot of each location, as seen in the diagram (next page).

Yet, this did not help fill the log, and I was missing something. As I was driving back to the house after this stop, I came to the realization that my timing was bad. This stop was right at dinner time! Back at the house in FN20gx, I operated a few more hours on 2M. This pulled in a bunch of contacts, including one on FM. At this point, I chatted for a while with KR1ST. He noted that there were a bunch of local ops participating in the contest on 2M FM that day. I took note of this.



For Sunday, I went back to Big Pine Hill in FN21ef. Since there were no other visitors, I set up on top of the observation platform. I made more contacts this time than I did in January, which was good. The HT worked just fine to get KR1ST and W3CCX on 1.2G. In fact, the contact with Alex was on the as-supplied HT antenna, and cross polarized with him. We were amused by this.

The mount for the Arrow antenna does not facilitate an easy swap from horizontal to vertical orientation, and requires a partial disassembly. After switching this, I called out for a while on FM. I did pick up a few more contacts here, including WN3A, who was 139 miles distant. While we were chatting, others jumped in, which was great. My last contact for the contest was made with W3CCX on 1.2G, while standing on the roof of the house in FN20gx.

Lessons learned:

- Don't plan RF stops at meal times.
- Make sure you bring everything.
- Build a simpler 6m antenna for portable work.
- Fabricate a new mount for the 2m Arrow to ease rotation from horizontal to vertical.
- Do not neglect 2m FM.

My point score was only 705: 47 pts and 15 Multipliers. But that was an improvement over January, I had fun with the road trips and hiking, and I learned a few more things to improve for next time. If my schedule permits, I will be back out there in September.

Get Active on 222MHz Tuesday Evenings

A long while back, it used to be another band each night of the week. Since mid-April of this year, there has been a resurgence of an activity night on 222MHz, with K1WHS at the helm. Dave runs at least a kilowatt with a stack of long Yagis and he posts reminders to the VHF reflectors. Much of the activity is in the New England states and nearby Canada. Since arriving back in Blue Bell at a furnished rental apartment for a few months, I have been able to stick my homebrew WA5VJB Yagis out the window—or actually a door to a Juliet balcony--and they are generally pointed northeast. Fortunately, I can turn them about 50° either way.

I kept my IC375 multimode 220MHz transceiver in storage with my harmonic Leon N1XKT so I was able to get on 222 for both the ARRL June VHF contest and now for these activity nights. I even found that I had an adapter that plugged in to the accessory socket of the rig and have a second adapter that connects the rig to the RigBlaster. So I can use FT8.

Last week, I surprised myself by working K1WHS just after 7PM with a brief SSB chat. I also worked WW2Y FN20 CW, K1PXE FN31 CW, WZ1V FN31 SSB and WA2VNV FN30 on FT8. I had a partial with K1WHS on FT8 also, and I copied N1SV on FT8. This week I again was able to work Bill K1WHS on SSB, CW and FT8, Mike N1JEZ in FN44 SSB at 578Km, Pete K1PXE in FN31 SSB, Ron WZ1V FN31 FT8. I decoded NZ3M from FN10 but he escaped before I could respond. All this with only 30 watts and a homebrew 3 element beam sticking out the window of my third floor apartment. I tried the 222 repeater and 223.5FM, but no takers. Most of the linear mode activity centers around 222.100-110, with FT8 on 222.174MHz. I know that there are some club members including KA2LIM and W9KXI who have participated from FN12. I hope more Packrats will be on for upcoming Tuesday nights at 7 or 7:30PM. 73, Rick **K1DS**

W2KV / WW2Y Field Day Report

We had a good effort with no major disasters. We put up an 80 meter dipole with open wire feed and tuned that on all the HF bands. For 6 we had Peter's three stacked dipoles pulled up in a tree. We even made a few 2 meter contacts with a loop mounted on a stepladder. 6 was open this morning. We made about 200 Qs. Not quite as ambitious as the last effort but we had a good time.

CUL, Dave **W2KV**

Two Monthly FT8 Contests

A 2 Meter and a 70 CM FT8 contest is held monthly, with 2M held the first Wednesday of the month and 70 CM the second Wednesday. This contest is organized in EU, but I don't see a reason that NA hams could not participate. (I don't see mention of it being EU only on the web site.)

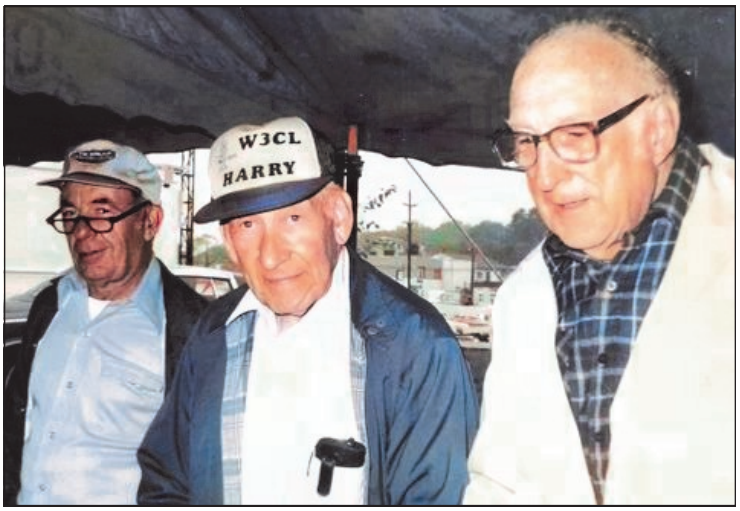
See http://www.ft8activity.eu/index.php/en/ if interested. —**W2BVH**

The Pack Rat Pep Boys "Ernie, Harry and Jack"

by Bert, ***K3IUV*** and Bill ***K1DY***

You've heard about some of the pillars of the club in "the early days." Among the most well known were Ernie, W3KKN, Harry, W3CL and Jack, W2AXU (frequent author in my recent "50-year" articles). I recently ran across an old Black / White photograph of these three stalwarts. I wanted to share it, but would have preferred a color version. Then a friend showed me the results of an APP that would take a B/W and colorize it. I was doubtful of the finished quality, but thought it worth a try.

The App is called "Photomyne," and is available at the Apple store. A free download, although like many current APPs there is a "deluxe" version available for an "upgrade fee. I used the free version. (I don't know if it is available at the Brand X store.) The finished result of scanning (taking a picture) and converting the B/W photo is shown below. Left to right, we have Ernie, Harry and Jack. I was very impressed with the finished quality, and thought you might enjoy seeing it. The process is something like what Ted Turner did by "colorizing" his inventory of early films, albeit done a lot cheaper. You may want to try out the App. https://app.adjust.com/xzk86fk?campaign=ShareMailLink —**K3IUV**



Look at this “lineup”! It's a great picture of 3 Packrat “founders”, Ernie Kenas,W3KKN (King King Nellie); Harry Stein, W3CL (Chicken Livers); Jack Power, W2AXU (Alpha X-ray United). Yeah I know, most of us are getting pretty grey these days, but these three were there back at the beginning. Harry was the only charter member, having joined 5/15/56. But Ernie joined the following month (6/26/56). Jack, came along on 5/18/60 (though some reports say he was involved with the club in 1957). They are all silent keys now, but the club would not be what it is today without these three. While they were all true VHF'ers, they had their individual strengths as well. Ernie was the “on the air guy”, leading the club in contests and maintaining a top notch HF and VHF station in Willow Grove. He and his wife Bert, W3TNP, would always welcome fellow ‘Rats at their place and were the liaison station stateside for the HK1TL EME expedition. Harry was the “people person” of the three. He was the editor of Cheese Bits for quite a while and when I started with the club always did the “health and welfare report” at meetings. He had a dry sense of humor which I loved, so did Ernie for that matter. Jack, from Trenton, NJ, was the “tech guy” with great interest in VHF propagation and sunspots in particular. Harry and Jack both worked at the Naval Air Development base in Willow Grove. Anyway these three guys are my Pack Rat heroes.. Nice to see those 3 faces again! Even though the present makeup of the club is pretty much all "old guys", many never knew these 3 and they should be remembered. - Bill ***K1DY***

Phield Hour

This photo is from Phield Hour: The day for hams who can't wait for Field Day operate portable. First meeting this year at Malcolm X Park. Digger AB3XU, Warren KC3OZD, Jim KC3BVL. Phield Hour was originally a weekly, portable radio meeting in Rittenhouse Square Park, Center City Philadelphia, after business hours. Now just a few times a year. —Jim ***KC3BVL***

K2EZ/R VHF Contest Rove in TX & OK

VHF roving has all the excitement and all the chaos one might expect if you were to combine ham radio with a scavenger hunt and a college road rally. Five hours into the contest I faced a potential rove ending event when at my first fuel stop I noticed a significant amount of coolant dripping from the Rover. I had checked coolant level before the rove and now it was half a gallon low.

Hours of idling in near 100 degree heat with air condition running is stressful on the vehicle. With this in mind, and Rover's 335K miles, I run the coolant system unpressurized during contests. This causes the engine to run a little bit off the normal operating temperature, and it means I need to watch coolant as some will evaporate out, but it significantly reduces the chance of blowing out a hose. Also any leak that does develop will simply leak rather than have coolant forced out and without the pressure the leak likely won't grow quickly.


Radiator crack after cleaning

This strategy was paying its reward now. Had the system been pressurized, steam would have been blowing out, the hole likely would have been much larger, and I wouldn't have been able to drive without resolving the issue. As it was, I could continue driving. The question was if, with a thousand more miles to go, could I could continue my rove? That was not an easy question and needed some more exploration of the problem. Before getting into that, I'll explain how the contest wasn't going exactly as planned anyway.

I started the contest joining the TX rovers KD5IKG/R, KA5D/R and W5TN/R in the oil fields near Falls City Texas which is a small town southeast of San Antonio. Found in the oil fields is the EL08/09/18/19 grid corner. We had plans to setup with one of us in each grid and focus on working other stations, then rotate periodically. This plan met with mixed results and ultimately several lessons learned. My start was slightly delayed as I discovered an elevated SWR with my 70cm yagi. 2.5 to 1 SWR, especially with the coax losses on that band, could mean anything. I decided to take some time to check out the coax connections, antenna switching relays, and clean the connections on the antenna matching section. All seemed okay, but the SWR didn't improve with the little I could do.

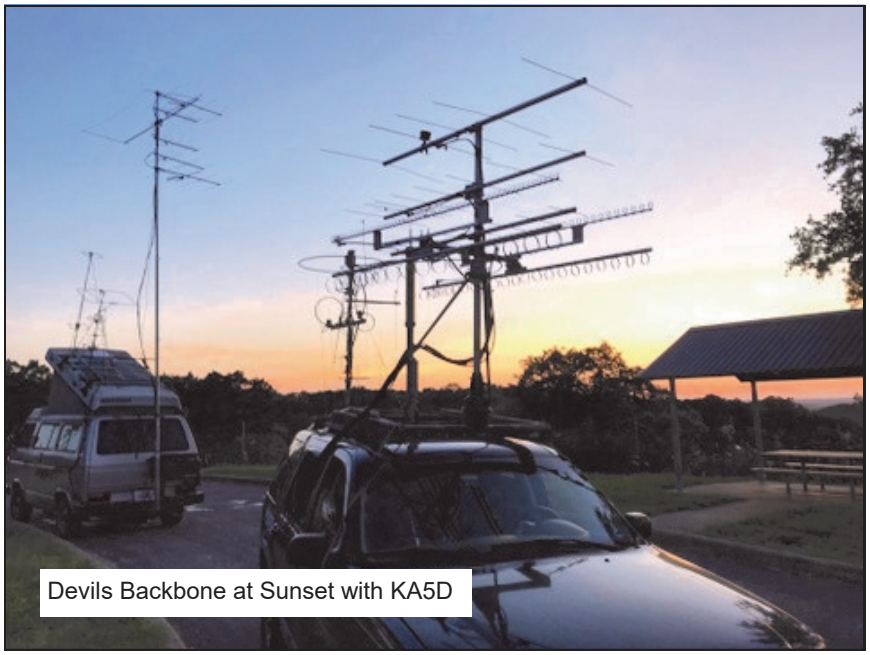
By the time I did get operating, I missed many of the initial contact opportunities. Stations had QSY'd to other bands with some of the rovers and I wasn't able to get into sync. When I did make contacts signals seemed to be unusually weak. A powerhouse station in the area that I expected to be strong was just okay on 2M. I lost them completely on 1.25M and 6M was a struggle requiring CW. Yet on 70cm I worked them easily despite the SWR problems so go figure.

We eventually worked between us rovers, but far from what we could have done had we chosen to exhaust every possible combination. It was getting late and the other rovers moved out. As seems to be the norm for me in these things, I was the one lagging behind. I decided to stay to pick up some more fixed stations and ones I only got from just one or two grids earlier. Many were no longer around but I got a couple and moved between the grids to fill in the contacts I could get with them. This was a bit easier without all the other local strong signals

Almost 5 hours after the start of the contest ,and about 220 Qs in the log, I moved off the grid corner to work my way to the Devil's backbone overlook which is in EL09 between Austin and San Antonio. This was the

dinner stop for the TX rovers and a good high spot to work stations who were getting on the air in the evening.

It was at my fuel stop on my way to Devil's Backbone where I discovered the leaking coolant. So the quest was to continue or not? Do I toss in the towel and head back to my local home base in Brenham Texas? Or do I continue? I decided to procrastinate (something I excel at doing) and make the decision later. I was still quite far south and close to a three hour drive from Brenham, but I was only an hour away from the Devil's Backbone lookout. The lookout wasn't much further away from Brenham than I was at the moment. So going there wouldn't move me further away from "home" but every mile would get me closer to where the other rovers could support me if needed. So I continued to proceed to Devil's backbone.



Devils Backbone at Sunset with KA5D

I arrived at the lookout and the other rovers without incident. As is my norm, I had continued to operate while working my way to the lookout occasionally working a station along the way. One contact with Korey WA5RR/R stands out as I was on the wrong side of the hill when I worked him and our contact was on 70cm of all bands. Once at the lookout I took some time to work a couple stations and it was from there I had my first distant microwave contacts of the contest.

Once I worked those immediately available, I shut off the engine and decided to investigate. I noted that the Rover had lost much of the coolant I had added when I found the leak, but wasn't any lower than that. I looked closer and found a crack in the plastic portion of the radiator on the top surface. That perhaps explained why more coolant wasn't lost. The level was low enough that there was air in main upper coolant hose.

Could I continue? Timing wise I wasn't lagging as far behind as I usually am. It looked like I would get a good overnight stop for once if I were to continue, but my plans had me running from there out to Little Rock Arkansas before turning and proceeding to Tulsa Oklahoma were I would meet up with the Oklahoma rovers. That was a long way to go with a coolant leak I could keep topping it up, but if it got worse that could leave me stranded a long way from "home". I decided to procrastinate again and while mulling over the decision socialized with the other ops who were taking a break. Also chatting with the many non-hams that kept walking up to us to ask us about our vehicles.

One sad footnote about the Devil's Backbone lookout. On the fencing around the lookout are many small memorials that have been left by people who lost loved ones at this location as it seems many go to this lookout to commit suicide.

I enjoyed the social time very much, but there was that decision hanging over me. One suggestion was made that some JB Weld could be used, but it was too late to get this material. I eventually decided it would be too risky to continue. The big concern was the shape of the crack. It split a couple different ways and looked like if one part of the crack continued to spread it would intersect another part and make a good sized hole.

On my drive back to Brenham, I started thinking about the JB Weld idea again. Just how early do auto parts stores open on Sunday? And yes my plans to get to Arkansas were out the window, but how far was it from Brenham to Tulsa? Would it still be possible to catch up with the Oklahoma rovers?

When I got "home" I looked it up. Auto parts were open at 8am. Drive time from Brenham TX to Tulsa OK looked like it could work too if I could get on the road before it got too late. The rover could cool off overnight and I had another vehicle which would let me get what I needed without getting Rover hot. Before going to bed I decided to take some time to clean the surface good and scuff it up so it would have time to dry and be all ready for whatever I found in the morning.

The JB Weld options (and similar products) didn't look encouraging. The suitable materials for the temperature and chemical resistance seemed to have cure times that were too long to work for my plans. The more generic 5 minute epoxy's had good cure times, but how it would do with the temperature or the coolant was unknown. Off to the side on the same shelf though I spotted a plastic radiator repair kit which had a fiberglass reinforcing sheet and a stated 20 minute cure time. That seemed to be exactly what I needed.

About 9am I had the leak patched. The instructions said the vehicle could be driven as soon as the material was no longer tacky. I proceeded to load up the car with the things I had unloaded the night before. That took me about 40 minutes, plenty of time for it to cure. It was still tacky. The patch felt hard though and I didn't have much time. So I decided to fill the coolant back up to normal and get on the road anyway. I was rolling by 10am.

Unfortunately I missed all the early morning activity, but I was moving again headed for Tulsa. K5LLL was the biggest and strongest station in the area as I headed out of Brenham. I worked him thru the bands four times as I went thru EM10, EM20, EM21 and EM11 helping me secure those activation multipliers. I also got activity out of K5IM and K5QE during this time.

Activity started to pick up more as I approached the DFW area and I worked a handful of stations multiple times as I proceeded thru EM12, EM 13, EM14 and EM24. This is the sort of operating I enjoy. 6M, 2M and 1.25M seemed to have poorer than average conditions while the APRS map suggested different for 2M. I don't know why. I did discover during this period that I had my RF gain down a bit on my FT-736 which was affecting 2M and 1.25M but even with that back to its normal position it didn't help much. On the other hand 70cm despite the funky SWR was working great as well as the microwaves.

I heard almost no 6M activity with most stations worked there being ones I already QSYed with. I only was doing SSB and CW so didn't see digital activity. I expect if 6M was really open there would have been some activity on SSB and CW like last June. I occasionally tuned to the FT8 frequency and heard stations there but couldn't tell if local or distant. I've heard many were getting some good DX on 6M using FT8 so clearly there were openings that worked for that mode. At one point I heard a FN20 and FN21 station very weak but couldn't get their attention.

One of the highlights of the contest for me was when I worked WQ0P who was in EM19 in Northern Kansas while I was still south of Tulsa about 240 miles away in EM25. At first we just worked on 2M, but then I heard WQ0P ask WD5AGO/R to QSY to 23cm. They didn't connect but I had very good copy on WQ0P so I worked WQ0P on 23cm. Before we could work other bands I crossed the line into EM15. In hindsight I should have halted till we worked the other bands. Anyway we worked on 2M and 23cm again with me in the new grid and then proceeded to work 70cm, 1.25M, 33cm and 6M in that order. Six bands and six new multipliers for me!

I caught up with the Oklahoma rovers N0LD/R and K5SRT/R along with Tommy WD5AGO/R at the grid corner just south of Tulsa for the last portion of the contest. I was able to make my first ever 5cm contacts with Tommy.

There was one event that marred the contest a little. As usual rovers draw attention and our position in one grid was residential and there were many locals about. Most were curious, friendly and had no objection but one individual approached me a bit more confrontationally. I answered the questions as usual, but I could tell by his words, even if not sounding overtly hostile, that he was not happy with our being there. He asked how much longer and I said less then 5 more minutes. In fact we would have been done were it not for his interruption. I saw where this was going, he would keep talking, likely get more negative, and just waste time. So I offered to go if he wanted me to. He said he thought that was a good idea. So while I headed out he proceeded over to the other rovers and told them to leave.

I see no good in these situations trying to stay. Yes it was a public road, but there is no telling what the guy would do. If he were to call the police, the police likely would ask us non-locals to leave the neighborhood for the sake of peace even if legally we have the right to be there. It would simply waste time and draw unnecessary attention. Worse it could create an incident that potentially make us unwelcome in other areas of the grid corner.

As usual it was a fun and exhausting time. I am glad I decided to find a way to continue even if I wasn't going to finish as well as hoped. I had planned a couple days off after the contest and my plans were to visit in Oklahoma. I was sort of using the contest as one leg of the travel and when I had decided to scrub the rove I was doubly disappointed as that affected my vacation plans. Continuing the rove allowed me my vacation time as originally planned.

Final tally for this rove is around 450 Qs and 110K points. One of my lowest Q totals since I went from Limited Rover to Classic Rover, but pretty reasonable for how long I was out of the chase.

As an aside, one of my vacation stops was indirectly related to roving. That stop was in Wakita Oklahoma, a small town that was featured in the movie Twister. With Rover often confused with being a storm chase vehicle, and much of the romanticism about storm chasing created by the movie Twister, I thought a photo of Rover in Wakita would be cool.

cont'd...

73, Andrea **K2EZ/R**

P.S "home" refers to my Breham Texas QTH while home (without quotes) refers to my Sparta NJ QTH.

[**ADDENDUM**. I reminded Andrea that she left us hanging, not knowing how well the radiator patch worked. Here is her reply. —W2BVH]

Hi Lenny,

I didn't realize the omission. But that means I can give you the exclusive answer for CB.

The patch was still tacky at the end of the contest so I am glad I did not wait. It didn't stop being tacky till the next day. The patch did not leak at all. I saw absolutely no coolant under the vehicle. I did have to add some coolant, at my first fuel stop but I believe that was air working its way out of the system. After that I saw no more drop in coolant.

I do not know if it will hold pressurized. I do not intend to try. I'll keep it unpressurized till I get the radiator replaced. I suspect if pressurized it won't last long. I only put the fiberglass along the top and down in the recess a little bit. The epoxy over the top of the fiberglass goes around the edges. If I had wrapped the fiberglass from one side over the top to the other I would be much more confident in it.

A side note about the kit. When mixing the two components it said do not mix more than 30 seconds. I may have mixed it too well as I had only about two minutes work time. Enough to apply epoxy and the fiberglass I had cut out. I was supposed to put epoxy over the top after the fiberglass. I was able to do that but just barely and didn't get it to the edges. The tube in which the parts got mixed was reacting so vigorously that it became nearly too hot to touch. I was burning my hands trying to get out what I did and had to stop. I ended up getting another kit just to complete the action over the top. How fast it reacted and became solid in the tube was one reason I decided it was probably good enough despite being tacky to the touch after 45 minutes.

—73, Andrea

K0BAK June 2021 Rove Report

Saturday: Success and Anxiety

My goal for the June contest was modest: to use my van's pneumatic mast in a contest. As reported in the June Cheese Bits, I was using my first VHF radio, an IC-7100 with 3 VHF bands; and my first VHF antenna, a 6-band log periodic. I drove with the antenna pointing sideways because the boom is 7 feet long whereas the back of the antenna is almost 10 feet wide. My rove plan was to hit my four local grids (FN20, FN10, FM19, FM29) Saturday, then travel to Hazleton Sunday morning to hit the four grids up there—and stay overnight on a ham trip for the first time in 18 months.

Because the popular rover parking lot at the Mt. Penn fire tower was locked (for reasons still unknown), I started by operating at another FN20 fire tower, Hopewell Tower in French Creek Park—a location I've activated in POTA many times. In the smaller lot with tree branches overhead, there were only two spots that looked clear to fully raise the mast; fortunately, there was only one other car despite being a nice day. Climbing up and attaching the support cable, coax, and rotator control is quick now after some practice at home, though a 3-bill guy climbing and balancing on a vehicle ladder must be an unusual sight to see.

The prospect of raising the mast **for the first time in a contest** was exciting, having imagined it many times since I bought the van, but as a natural pessimist I can't help being worried about the mast getting stuck while away from home. Another worry is the engine belt, which broke twice and required service two additional times, for thousands of dollars and months of downtime. Raising the mast requires running the van's AC compressor, and my only AC field power currently is the van's Auragen generator. In turn, the Auragen is powered by the van's engine belt, straining the belt much more than the standard van engine accessories like the alternator and air conditioning. So, when I started the Auragen, I was crestfallen hearing a chirping noise like when the belt started slipping in the past. Opening the hood, the sound didn't seem to be coming from engine components. After I closed the hood and walked around the van, I realized the rapid chirping sound was coming from the forest all around me … it was the cicadas giving me engine anxiety!

The mast raises slowly and unevenly, roughly an inch or less per second. When it hesitated to go further after about five segments (out of seven), I called it good enough given that my worry clock was running regarding the engine belt. Shutting down the compressor and Auragen lead to a brief noise abatement save for the cicadas, but the insects' noise was covered again by the fans of my computer as I fired up the station from my dedicated batteries. Starting on 2m, I was happy to contact fellow rover NN3Q/R first, followed by W3CCX on 144 and 432. W3SZ, literally line of sight 15km away, asked to "run the bands" if you can call it that with my pathetic 3 bands; he was able to ask because we were talking to each other on the radio (hint). My only other "run" of the contest was a few minutes later with always-strong always-patient N2NT. After a few more phone contacts on 6M, I switched to the Devil's Mode on 2M and 6M. I was surprised I didn't get more contacts on 6M but didn't discover why until the next grid.

Not surprised but still grateful the mast came back down (more quickly and smoothly than it goes up), I packed up for the next grid FN10 on Welsh "Mountain" at about the same 300 meter height. I operated from that hill off the side of the road a few years ago as a beginner rover, but there is now a good-sized gravel parking lot for trails not much lower than the peak. The route from hill to hill was through winding country roads with overhead hazards that required driving in 3 dimensions, aiming my 12-foot height through the highest part of low branches and more-scary telephone cables that looked too low when crossing the road at an angle. A hazard I hadn't thought about was deer who appear suddenly and run across the road as if playing a deadly game, with perfect timing to maximize the driver's heart rate even though the road is clear of vehicles for a hundred yards fore and aft. One crossed my path so closely that my short hood blocked seeing its body, and in that spilt-second I was sure I was going to hit the thing since there was no time at all to react. Luckily for both of us, especially the deer, its haunches cleared my left bumper. One last road hazard unique to our area are Amish buggies. My van requires longer clear

straight road than regular vehicles to pass those buggies safely, and more than once I had a line of cars behind me almost certainly cursing both me and the buggy driver. I also cursed myself for not scoping out the route better during my rushed contest preparation, and I vowed not to put myself through such a route again—but I know I'll probably break that vow soon enough.

Arriving at the newish parking lot, I found more cars and pickups than I expected, but still there was room at a reasonably flat spot with extra space around. Thick trees here are a downside, and they seem considerably taller than the trees at the previous location where my antenna got up near the height of the canopy. I waited longer to extend the mast as much as I could to partly overcome the tree blockage. Another disadvantage here is no cell service on AT&T, though that's not a big problem with my current operating style and low band count. After getting W3CCX on 144 and 432, I switched to FT8 on 2M then 6M. I noticed finally that I had low power out on 6M, and my radio's simple SWR sweep was pegged high. Still it was putting out a signal and making some contacts, but not as many as there should have been. I hoped but doubted I could find some connection or antenna problem when I got home later, but in the meantime I took what contacts I could get on 6M.

While thinking about lack of cell data, let me give a shout-out to TimeFudge, a utility to change the computer clock time slightly. My van's computer seems to lose time more quickly than other computers I've used on WSJT, and without Internet my automatic time updater program can't get a reliable time. TimeFudge allows me to nudge my time based on the DT values in WSJT decodes, which is a help when the other station's time is off center but is vital when I have no means of getting the actual correct time.

After lowering the pneumatic mast, and then sliding the big antenna down on the 2-foot mast so it rests on the top of the rotator's mast clamp to give me a little more margin to avoid tree branch damage, I proceeded back down the hill toward the rolling farmland around Gap PA. Before getting to more open ground, I continued to bob and weave on the road, and encountered a few more buggies. It was a relief to get to farmland, where even the buggies are less of a hazard since one can see farther on flat straight-aways.

My last two operating locations in FM19 and FM29 were the same easy-to-access spots I and some other rovers have used many times during contests and sprints. I had already decided these would be quicker stops since they were during a less-active part of the contest. At the FM19 spot in a township parking lot, I raised the pneumatic mast a modest amount, enough to clear local obstacles. Hearing no humans on 6M or 2M, I made a handful of contacts on FT8 including W3CCX. It was only a short drive to FM29 without vertical hazards, so I didn't lower the antenna on the rotator mast for the trip. Although it was later than planned at the last stop, I was glad to be less visible after sunset because I was parked along busy Route 30. With heavy fatigue, I didn't raise the mast and I just spent a little time on 2M FT8, then slid the antenna down the rotator mast for the hour ride home including food and fuel. After connecting the van to home power to recharge its batteries, I collapsed into bed thinking this roving stuff is harder on my body than it was 5 years ago—especially now that it includes climbing up that ladder and doing awkward work on the rooftop.

Sunday: Dejection and Elation

The next morning while getting ready to drive to Hazleton, I checked the area's weather forecast. Earlier forecasts of occasional afternoon showers were now a line of thunderstorms. Because I must climb on the roof of the van to operate at each stop, even when not raising the mast, it wouldn't be smart to attempt any operation, so I sadly canceled Sunday's rove up in W3CCX country. Those same storms were not predicted to arrive to my hometown until evening, so I hoped I could do at least a little more operating Sunday near home even though I had already activated FN20 the day before.

With typical Sunday morning contest doldrums (at least in my experience), I could take the time to try to track down the high SWR problem on 6M without missing much. I double-checked all connections but didn't find any obvious physical problem. I then suspected the antenna itself, especially since I had to improvise the replacement of a missing screw when I reassembled it a couple weeks before—though it had worked

fine until Saturday. Removing a 7x10-foot antenna from the roof of the van without help was not trivial, but I got it down onto sawhorses to discover that indeed my improvised screw solution was missing its screw. These screws are strange, with a wide thread pitch like a wood screw but with shallow depth; I had sent a picture to my gearhead friend and he didn't know what it was, nor did my neighborhood hardware store. They are used on this Create antenna to hold in each of the larger elements as well as provide the only electrical connection to their respective parallel booms, so with no screw there's no effective element—though I was grateful the element fit tight enough into its insulator to **not fly out** when I was driving.

Since I already knew that I didn't want to keep using this large log periodic in the future, but I still wanted to experiment with using a multiband antenna without 6M, I had ordered and recently received its smaller 100-1300 MHz version. Borrowing a screw from that not-yet-built antenna solved my problem, and I was happy that my improvised screw had apparently not widened the element hole such that the correct replacement screw seemed to fit correctly. After getting the antenna mounted again with considerable effort, I confirmed that the meh SWR of 1.5-1.7 on 6M was restored. I made four contacts from my driveway to verify operation, then decided to drive to my closest township park which happens to be near a neighborhood high spot at about 95 M.

The ball field lot was mostly empty, so for the first time in the contest I could aim the van toward north to match the readout on my rotator. This is no small thing since, even though I used to be an engineer, I have a terrible time with spatial thinking and can't visualize offsets well when I'm parked in a different orientation. It doesn't help that I couldn't get Windows to install the USB driver for my Green Heron controller as I had on two different computers before. So I couldn't take advantage of software rotator offset settings. Also, this lot is along the entrance to our township's police station, so I was curious if I would be challenged by officers. Despite seeing many police cars coming and going who couldn't help but notice the weird guy with the tall antenna, no one bothered me…which is not always the case, as many rover ops can attest.

With FN20 already activated and rumors of a 6M opening in Packrat messages, I decided to concentrate on 6M and use my amplifier. I did not use the amp Saturday because I was using a diplexer to connect the IC-7100's HF (6M) and VHF (144 & 432) antenna ports together to my single antenna to allow quick band switching. I suppose I could have routed the combined signal through the 6M amp but didn't know the consequences and wasn't confident I'd always remember to turn off the amp when not using 6M. Now I could route the radio's HF output directly to the 6M amp and connect the antenna directly to the amp's output.

With a decent antenna match and almost 200w on FT8, my success rate soared compared to Saturday as one would expect. I also didn't have the many amplifier problems I reported during the September contest; the M^2 amp just worked, eventually firing up its fans during transmit then winding them down shortly after. Maybe I was pushing it too hard in September: lesson learned. I got 7 grids in Florida, 5 contacts in the Canadian Maritimes, 2 in Texas, and my first two non-North American contacts in France and Canary Islands. I know these types of contacts are ho-hum for most Packrats, but it was a thrill for me since I don't have a 6M antenna at home. The two Texas contacts were special: one with famous VHFer K5QE, and the other with K5RK who noticed me in his decodes even though he wasn't contesting. K5RK "won" National Parks on the Air, and we developed a good virtual relationship with us helping each other, so I'm always happy when he surprises me with a contact.

After making only one 6M phone contact in 10 minutes of listening and calling CQ on SSB, I switched the antenna back over to bypass the amplifier to attempt 2M and 70cm contacts in my last hour. I found 3 relatively local ops on 70cm FT8, then gathered 3 more grids on 2M FT8. My considerable fatigue influenced my decision to leave the park and the contest at 4pm.

Contest Summary

Altogether, I made almost the same number of contacts Saturday versus Sunday, which makes me think I'd be better off visiting fewer grids and staying longer at each. Probably I used to push myself to visit more grids because lots of movement is a key to success in HF mobile contesting and POTA. With the ARRL's VHF contest rules giving just one mult for a single grid even when made from different grids, there's much less incentive for a rover to move compared to the CQ VHF contest or the VHF Sprints. (Rovers in the Midwest with open flat grids, and superhuman rovers like Andrea have other options compared to slow me.) One more confirmation that I've been doing it wrong is that I appear to have my best score in a June contest ever (in six attempts).

Shout-outs: I hope I acknowledge often enough that I could never attempt to build and improve my evolving rover station without the awesome support of Packrats. Special mentions for this contest include:

- The incredible W3SZ/K1RZ map that includes terrain profiles. I was able to confirm that my new operating locations had a good view to W3CCX. Thanks to Roger and Dave for your impressive work, and in this contest to Dave also for patiently getting me to understand the utility of that new feature.

- Bruce WA3YUE for letting me borrow coax for the short run around my rotator, even though he had a lot of other things on his mind. Thanks also to several other 'Rats who offered to help too.

- Jeff WN3A for offering me two 4x1 coax switches to borrow, then allowing me to buy them for a Packrat price when I mentioned I'd want them longer term.

- Gary WA2OMY for delivering a meter I bought from a Packrat sale a while ago but didn't need till now, along with two N/UHF adapters to borrow for the meter.

Claimed score: 8816

Number of contacts to W3CCX: 8 out of a possible 12

Heathkit Twoer DDS

As you may have noted from a recent short article in Cheese Bits, I revived an old Heathkit Twoer and got occasional airchecks from W2KV while working on it. It works good enough that I decided to implement a (possibly harebrained) 8MHz DDS to drive the Twoer, in place of hunting down a bunch of crystals on the internet. The email I sent to Dave (below) summarizes progress on this project.

Hi Dave,
Well the DDS for the Twoer is done (on the bench at least) including a cute 1" Oled text display. And it all works fine (14 freq selections with just up/down pushbuttons. More or fewer would be trivial to add). Packaging it into a usable unit is probably going to be as much work as designing, programming and testing it (not unexpected). I just sketched out a relay (3 relays + transistor) based sequencer that would allow the Twoer to continue to be operated using only the original front panel t/r switch. I'll have to be very careful moving the plate voltage from the front panel to the relay ckt. I even included an optional contact pair as a keyline for an amp. Talk about overdesign! As usual, I didn't realize what I was letting myself in for when I started on this. That's why my boss used to take my time estimates and triple them before presenting to management. So we'll see how it all goes… 73, --Lenny

If this project goes to completion and gets on the air, I may write it up for Cheese Bits. Stay tuned…

—Lenny W2BVH

The Wayback Machine
In CHEESE BITS, 50 Years Ago

Nibbles from July1971. Vol. XIV Nr 7
de K3IUV Bert
(*author's comments in italics*)

"**Our Prez Sez"**. Prez El, **K3JJZ** (*also Cheese Bits editor at the time, and our current auctioneer*) summarized his accomplishments as he prepared to turn over the gavel to the new Prez, Don, **W3CJU**. But he noted that his accomplishments were really from the club member contributions. He mentioned: 1) The 11th straight gavel for the January VHF contest and commented "that's all the trophy case holds." (*Our solution, have Ron, **W3RJW** build more cases*!); 2) Attempt a new 1296 distance record "we didn't make it, but we showed we had the ability to organize a safari" (*served us in good stead when we set up the moonbounce station in Colombia*); and 3) the biggest and best Ladies Night ever.

Elections. Elections for Officers, 1971-72, held at the June meeting resulted in two familiar and still active names. Walt, **K3BPP** for Vice-President, and Ron, **WA3AXV** (now **W3RJW**) for Director (*50 years ago*). El returned to his former responsibility as Cheese Bits Editor.

New Products of Interest to HAMS. From Lynn, **W3NSI.** A solid-state two-meter Transceiver announced by Concraft, in Goleta, CA. The unit covers the full band in both FM and AM modes, with an included VFO or provision for 4 crystals. Included an integral ac power supply, or can be operated from a 12-18 VDC source. 6-watts out on either mode (*an early "walkie-talkie*"). Price was $389.95. Next, a Digital Multimeter from Esterline. 3-digit readout. And last, a solid-state grid dipper from James Millen. A redesigned version of their tube unit, it is "self-powered" to be used at the top of the tower or out in the yard for antenna experiments." Goes to 300 Mc (MHz) and comes with 7 coils. Price $110.

Calendar. Next meeting will be the White Elephant sale on July 21 (another Packrat tradition) at the QTH of Mort, **WA3EPS**. August 8, the Packrat Picnic. To be held as usual at the Fort Washington State Park. Bigger and better each year. August 18, second outdoor meeting at the QTH of Bert, **K3IUV** (*I was there*!). Movies and slide night. And September 15, the annual Auction at the QTH of Dave, **W3ZD**. (*This was in addition to the White Elephant night which was intended to be an evening of fun.*)

From the Book Rack. Paul, **K3WEU**'s monthly column covered the book "How to Repair Solid-State Imports" written by Paul Lawrence, and published by TAB Books. $4.95 paper-bound, $7.95 in leatherette. 160 pages plus 36 foldout schematics. Paul described it as covering the most popular foreign-made (*think Japanese*) entertainment equipment, including TVs, radios, phonos, tape recorders, etc. The book included sources for some of the unique parts used, as well as a list of offices for the most common equipment suppliers.

Paul gave it a high recommendation.

Technical Topics. An article submitted by Jack Power, **W2AXU**, was titled "Discussion of Power Measurement." Jack pointed out that many members (and others) were confused about how to determine the peak envelope power (PEP) of an SSB transmitter. He discussed the meaning of PEP, and described several methods to make accurate measurements using equipment readily available to HAMs. He included a list of useful reference books. (*Still pertinent today. Read the full article on the W3CCX website, in the archived issue*.)

Useful Charts. El included a number of charts of design information useful for the members. These were cribbed from the AK-SAR-BEN radio club (*read it backwards*). They included Impedance matching, all combinations of OHM'S law, capacitive reactance calculations, antenna length calculations, tables of color codes for a variety of components, and a pinout diagram of many semiconductor devices.

Swap Shoppe. By W3ZRR. *(Always nostalgia. Now we use the club reflector.*): For sale by Harry Brown, **WA3NGK** (*later **W3IIT**, now SK*). An HW-32, 20-meter transceiver with mike and ac power supply. Excellent condition, $100. From Carl, **WA3BIV**, a Gonset 2-meter communicator for $60, and a Gonset 2-meter linear with 4 spare tubes, Price $75.

Miscellany. *Postage for this issue was a single 8-cent Eisenhower stamp. (7 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 **WS3O**, our webmaster. I have also posted the club Officers history, club Membership history, and Packrat Inventory (updated frequently) on the **W3CCX** website. These files are password protected, and only accessible to registered members. Have you registered? I hope you enjoyed reading these bits of nostalgia as much as I did in writing the article. If yes, you might let me know. Thanks to those that did.*

thirty, de **K3IUV**

(comments or corrections to: **K3IUV@ARRL.net**)

John K3MD CQ Article!

For those of you who might (or might not) have a printed or digital-only subscription to *CQ,* please note that one of the feature articles for the July issue, on how to restore a Heathkit DX-60, was written by one of you favorite authors: John **K3MD**

Events

For inclusion, please direct event notices to the editor.

Sussex County ARC - Hamfest - July 18, 2021. Augusta, NJ. See http://scarcnj.org for details.

CQ WW VHF Contest - Contest - July 17- 18, 2021. See https://www.cqww-vhf.com/ for details.

222 and Up Contest - Contest - August 7– 8, 2021. See http://www.arrl.org/222-mhz-and-up-distance-contest for details.

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6M Fall Sprint - Contest - August 14-15, 2021. Details to follow.

10 GHz and Up Contest (Round 1) - Contest - August 21 - 22 , 2021. See https://contests.arrl.org/10g/ for details.

September VHF Contest - Contest - September 11-13, 2021. See http://www.arrl.org/september-vhf for details.

10 GHz and Up Contest (Round 2) - Contest - September 18-19, 2021. See https://contests.arrl.org/10g/ for details.

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2M Fall Sprint - Contest - September 20, 2021. Details to follow.

222MHz Fall Sprint - Contest - September 28, 2021. Details to follow.

EME - 2.3 GHz & Up – Wknd 1 - Contest - October 23-24, 2021. Details to follow.

432MHz Fall Sprint - Contest - October 6, 2021. Details to follow

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

Full House At KA3FQS

It was a full house in the KA3FQS shack today (6/19/21). Michael installed the 10 MHz reference board in his K3S, George checked out his W1GHZ RF power detector, and Bill WS3O stopped by to return a piece of equipment to George. Four guys, I need a bigger shop or less stuff.

222 MHz Activity Night

There's been an informal 222 activity night in the Northeast (and beyond) every Tuesday night starting around 7 pm (or so) Eastern Time. ON4KST is being used by some to coordinates Q's when direct CQ's are weak.

AA2UK 1296 DX Reports

Stations and mode worked on 1296 this morning (6/18/21)
N8LRG Phil in **EN80vi** 400+ miles FT8 best signal rpt -13
NY2NY Jay in **FN30rw** 135 miles Q65C best signal rpt -15
KC8YJJ Gary in **EN90pl** 320 miles Q65 best signal rpt -23
Note: Gary only runs 10 watts and a 25 element loop Yagi

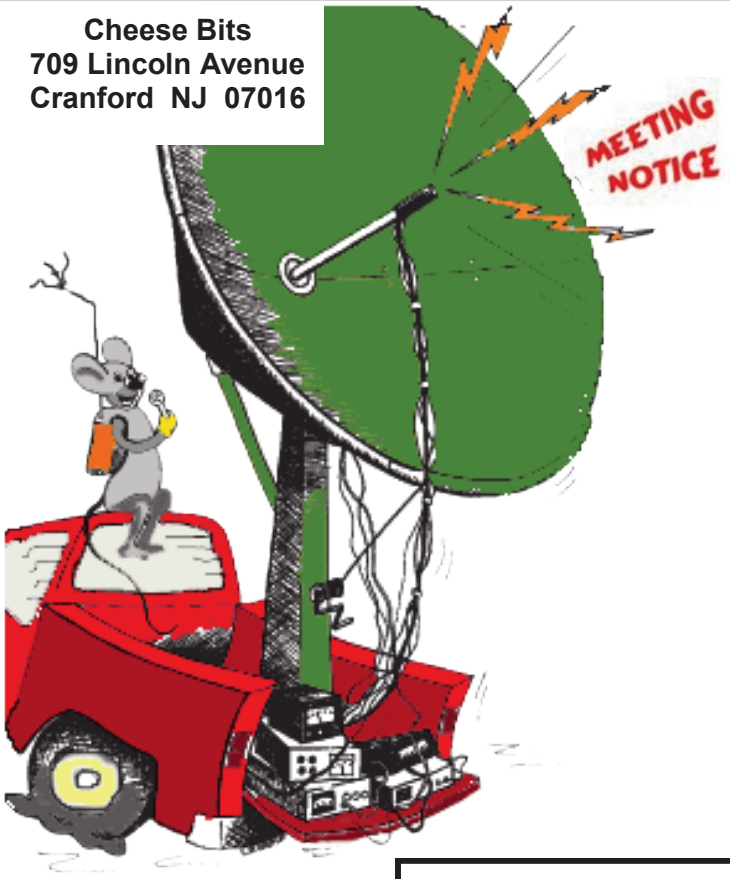
One dB: How important is it?

Not so important? After all it take 6 of them to make a single S-unit increase. At VHF and up, it may be more important than you realize. Here is an article discussing the issue: https://www.k0nr.com/wordpress/2021/06/a-decibel-is-still-a-decibel/

International Space Station Transits the Sun

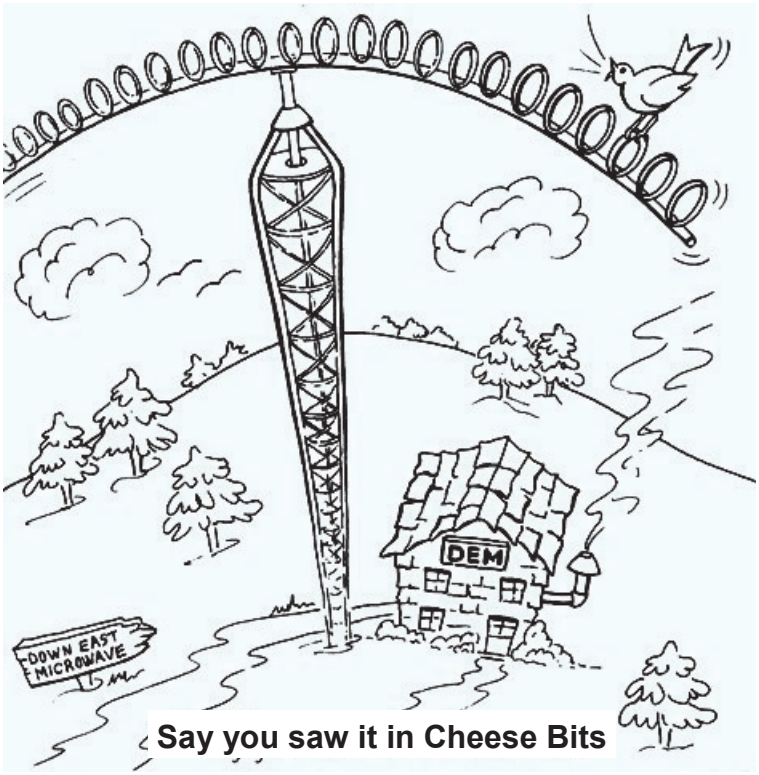
Look at this spectacular picture. 20 consecutive snaps of the ISS as it crosses the face of the sun: https://www.dailymail.co.uk/sciencetech/article-9724877/Astrophotographer-captures-20-rapid-fire-snaps-ISS.html

Cheese Bits
709 Lincoln Avenue
Cranford NJ 07016



TO:

MT. AIRY VHF RADIO CLUB, INC.



Say you saw it in Cheese Bits