



CHEESE BITS

W3CCX
CLUB MEMORIAL CALL

ARRL
Affiliated
Club



Volume LVII

July 2016

Number 7

PREZ SEZ:

Greetings from the mid point of the year. We had a fun time in the June contest and the wrap up meeting that followed.

Thank you for placing your confidence in me for another term as President, but there will come a time when another qualified person will take the reigns and continue to move the club forward. Thanks go to Gary Hitchner for serving last year as Vice President and we are looking forward to George Altemus who has courageously volunteered to serve as Vice President this year. I now expect to see a new recording device as Michael Davis has agreed to serve as our new recording secretary; taking George's place where he has recorded for several years.

If you missed Camelback this year, you missed a great time. We seemed to have the usual 20 folks that make their way to the mountain, but next year could be different. We were fortunate to have hardly a single drop of rain; some was threatened, but failed to show up. Instead we had some strong winds, but that is kind of normal for Big Pocono. This year also coincided with the "Friends of Big Pocono" annual festival with it's customary musical entertainment on Saturday afternoon.

Chow was efficiently served out of the livestock kitchen trailer outfitted with it's own full sized refrigerator. Meals were served from Saturday morning until Monday morning. What a life!

The six meter band cooperated to provide a weekend of super activity and the rest of the bands followed

suit with great scores this year, **beating out last year by nearly 100,000 points.** The Packrat trailer was outfitted with a new position dedicated to handling spots and chat page communications. When microwave activity seemed to wane, with a little keyboard work, we got more stations to work. **This year we didn't leave many grids out of the log.**

A few more modifications are planned for the trailer that will give us more operating space. The trailer is really working out well; we operate from 222 all the way up the microwaves from there. The best addition has been that both trailers are air conditioned.

Very soon after the contest was over I had to board a plane for Haiti to finish the tower erection project in Menelas, Haiti. Along the way two of us Packrats (K3TUF and W3CMP) hoped to make many Es 6m contacts and if we were lucky, the first 4m contact with EU or even crossband to US. We packed tools, materials, antennas and two Icom 7300's in our checked baggage and took off from the Harrisburg airport early one morning. Bottom-line is the tower was completed with no casualties. The best part of the story is the knowledge transfer allowing them to use a capstan winch instead of the old way consisting of 12 Haitians in a row pulling the rope. Note one picture of the crew sitting on a tower section to be sure the nearly 400lb section didn't blow away. This was a commercial tower that we had shipped to Haiti via container ship. The entire project was ham funded and managed.

We are hoping for future trips that will yield numerous contacts on many bands; including 160 meters from the insulated tower that we erected. Any

Pack Rats **CHEESE BITS** is a monthly publication of the
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PACKRAT BEACONS - W3CCX/B

FM29jw Philadelphia, PA
50.080 ~~144.284~~ 222.062 432.290 903.072 1296.264 ~~2304.043~~
3456.200 ~~5760.195~~ 10,368.034 MHz (as of 1/16)

MONDAY / TUESDAY NIGHT NETS

VHF/UHF Monday:

TIME	FREQUENCY	NET CONTROL
7:30 PM	50.145 MHz	N3RG FM29ki Ray
8:00 PM	144.150 MHz	K3GNC FN20ja Jerome
8:30 PM	222.125 MHz	KB1JEY FN20je Michael
8:30 PM	224.58R MHz	W3GXB FN20jm Bob
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



Note: More Haiti Pix on p.3

contacts will be more than we were able to make on this trip as we had no contacts above 14MHz. Propagation was just not going to cooperate with us this trip.

On the roof with us you will see our Haiti Radio Club host, HH2JR in one of the pictures.

On to July and August. Remember the Auction / White Elephant Sale will happen at our regular meeting night in July and on August 13 Michael Davis, KB1JEY will host our annual Packrat Picnic.

We need your log in the upcoming August UHF contest and the September contest. Even if your log is small, please submit a log.

I am progressing on getting my station back on the air; 6m is ready and 2m is nearing completion. I am hopeful that the rest will fall into line after. My goal is to be full strength by the August UHF contest.

After that, lets talk on lots of bands.

Phil, K3TUF



Additional Haiti Pictures



June 2016 Camelback Operations in Pictures



Set To Go



Mounting 6m beam on military tower



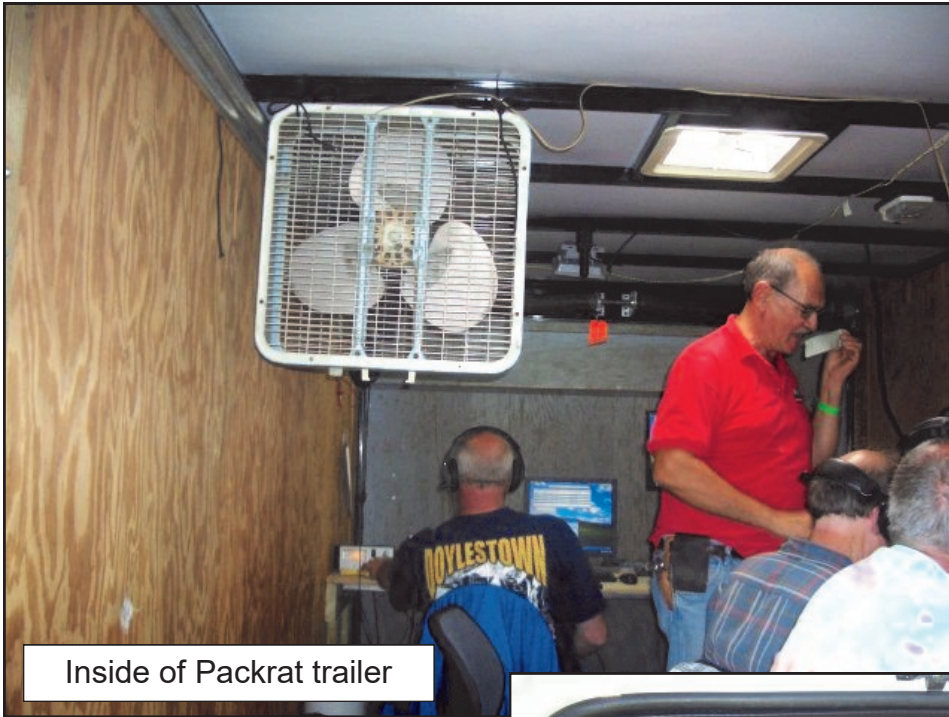
Microwave tower #2 under assembly



N3NGE Chef at work



Nap time



Inside of Packrat trailer



NN3Q/r paid us a visit and made some contacts



Both micro towers up and ready



Sink with hot and cold water waiting to be installed



KB3BBR Sarah operating 432

Tnx K3JJZ Pix
& Captions +
KB3MTW +
NE3I

KOBAK/R rove June 2016

Pete, KOBAK, was a 4-band Limited Rover in the June contest, concentrating on contacts with W3CCX whenever possible. His last Limited Rover effort was June last year, having had a rain out and work commitment in September, and visited club members as a low power full Rover in January.

His minivan station was basically unchanged since last June, with a Moxon on 6m, and ~10' beams for the other three bands. He carried a 5 element 6m beam, but did not deploy it due to very high winds on Saturday. Pete uses transverters above 6m, a manual IF switch, and full allowed power except on 222.

Starting at Blue Knob State Park near Altoona (FN00), Pete thought its height at ~3100' would allow him to hear W3CCX. He was disappointed at never hearing the club station, even though he easily contacted a multiop in FM08jm up through 432 (albeit at 208km versus 284km for W3CCX). The promised big thunderstorms never materialized, but it was very windy: not only was the ladder tipped over, the **wind pushed it across the gravel parking lot**. This kept Pete from attempting to deploy his 5 element 6m beam.

The plan for the rest of Saturday was to keep the beams up (12' high from the road) and drive to roadside pullovers in three other grids (FN01, FN11, FN10) on the way to the hotel in Hazleton (FN21). Driving on I-99 on the way from Blue Knob to the next stop in FN01, Pete looked in his rear view mirror and noticed **antennas hanging**. Yikes! Pete pulled over on the shoulder which luckily was next to a grass strip (instead of guard rails), giving him more room to work. Pete removed the entire setup, with 75mph trucks whipping by a few feet away, and stowed everything inside the van. He noted that except for some bent directors, there wasn't any noticeable damage. Probably this near-disaster was a combination of high cross winds and driving somewhat faster than usual with the antennas up.

At that point, Pete was tempted to turn around to home and save money on the hotel room, but he pressed on directly to Hazleton. Arriving at the hotel around sunset, Pete set up in the hotel parking lot (FN21) to make his first contacts with W3CCX on all his bands, as well as a few other stations. After being spooked about the antennas coming down on I-99, Pete decided he was going to drive with the antennas stowed. Sunday was originally planned to operate from the highest drivable point in Hazelton at a Little League field (FN20) he had operated from in several other contests. However, Pete never received permission from the League officers as he had in the past. Since he was going to travel west on I-80, and the antennas catching low tree branches were no longer an issue, Pete drove up to Camelback for a very quick visit to the W3CCX site. It was the first time he had seen the station in operation, and it was nice to see all the Packrats there.

Next stop was Allamuchy scenic view on I-80 (FN20). It was even windier there than at Blue Knob. Of course, having to assemble and disassemble the station antennas at each stop took away a significant amount of operating time. The good news was that Pete experienced a 6m opening during a contest for the first time. He had often heard about making long distance 6m contest contacts, but never did it before. With a humble Moxon 12 feet off the ground, Pete contacted several stations in Florida, even though south was straight into a fifty foot hill. Although he spent most of his time on 6m, Pete took time

out to contact W3CCX on all his bands.

Next up was Bear Mountain NY. Although both FN31 and FN21 are available from small pullovers on the summit road, Pete planned to operate only from FN31 since he already contacted W3CCX from FN21 on Saturday night. Arriving at the summit, Pete was worried because the parking lot around the observation tower was overfilled, so he thought his FN31 pullover would also be filled. Fortunately there were only a couple cars there, so Pete was able to park and assemble his antennas overlooking the Hudson with a wide view to the southeast. Pete got several visitors, including from Europe and Asia, asking what he was doing; as well as a longish conversation with a Vietnam-era signal corps vet. He only got CCX on 144 and 222, but got Florida and Maine on 6m, as well as two rovers. Pete continues to be surprised that he doesn't hear many New England stations from this supposedly good location.

Coming down from the mountain and south on the Palisades Parkway, Pete aimed at State Line Lookout just over the NJ state line and inside of FN30, a grid with only a moderate amount of dry land, although containing most of Long Island. Only a few hundred feet high, it is still one of the highest available locations in that grid. For the first time though, the parking lot was almost full, and there was no room to set up antennas. Pete scrambled on Google maps to notice a Boy Scout facility across the Parkway. Fortunately Pete ran into a reasonable security guard and got permission to operate from the Scouts' parking lot. Even though there was deep woods to the west, Pete made contact with CCX on all his bands. He was also happy to hear K1TEO, usually a very loud station in the Hudson area; Jeff said he had just recently started in the contest.

In summary, **the antenna fail on Saturday afternoon defined the outing**—although the 6m opening on Sunday morning, visiting W3CCX, and getting progressively quicker at setup and teardown were **some consolation**. Pete needs to re-think his rover antenna setup ... just use loops all the time, bunch the beams on a low mast and extend them (one at a time) at each stop? Due to a shortage of vacation days this year due to his daughter's wedding and son's college transport, he couldn't help with W3CCX setup and teardown. Altogether a disappointing outing, but Pete was still glad he went out.



	QSOs	grids
50	40	24
144	25	11
222	10	4
432	10	5
total	85	44
grids activated		5
score	5145	
miles driven	720	

--73, Pete K0BAK/R

Bear Mountain State Park
NY, looking southeast over
the Hudson, at FN31

NN3Q/r June 2016 Contest Report

With one operator short for the yearly summer gathering on very high frequencies some slight modifications had to be made to the Rover van.

The station setup inside the rover van establishes two separate operator positions, very similar to W1RZ/r, and the K8GP/r rover vans. So when you operate with one operator and two of everything else some modifications are needed. While we could not feed the two K3's into one computer, or combine the two PTT foot pedals, we could create an audio connection where both radios receive audio from and transmit audio to one headset. The only problem now was the need to reset two separate toggle switches for receive and transmit audio.

One design of the rover van could not be modified. Our system uses the rear mast for all the microwave antennas, and is rather heavy and requires a two person push up. So throughout the contest **I operated with the rear mast nested**, rotatable, but two of the antennas were only 8' off the ground.

Operation was started at FN20 Mt. Penn, near Reading. While I took up an operating position between the two stations I felt comfortable **until the action started**. Running the bands was a new challenge when switches were not in the correct position, short time frames of panic set in.

Using Twitter I called out our location on aprs.fi, and did have a few takers on our call out frequency.

The Mt. Penn site is very productive and a lot of good contacts were made, but it was time to move to FM19/29 in Gap, Lancaster County. These two grids proved to be moderately successful. The end of the first day found us in FN10xi, very close to the home QTH and a great spot to work W3SZ on all the bands.

Sunday found the rover van on the way to FN10, Pismire Ridge, just West of Hazleton. To my surprise the gate that leads to our operating location (which is very flat, and clear of obstructions to the East and North) was locked. The first time in 8 years I had to operate on the outside of the this reclaimed strip mine in a not too optimum location. I did manage to work W3CCX on all but one band (3456), but **compared to past years my new location was not the best performer**.

After an hour and a half it was time to move on and make a short trip to I-80 and then a 60+ minute drive to arrive at the top of the Poconos at FN21 Mt. Pocono: the summer home of W3CCX.

It was great to see the Packrats in full operating mode and we quickly ran the bands. I also had the opportunity to meet another rover who was parked on the hill. **Meeting fellow club members was also highlight** putting faces to the calls. Mt. Pocono is a very productive site and I managed to work a few stations adding to the total score of just under 19,000 points.

NN3Q/r will be active for the August UHF contest; look for us from Mt Pocono, Mt Penn, and Pismire ridge, Hazleton!

Very 73 AI K3WGR

Mt Airy VHF Radio Club W3CCX Camelback June 2016 Contest Summary

Band	Mode	QSOs	Pts	Grd
50	CW	92	92	17
50	USB	559	559	132
144	CW	1	1	0
144	USB	250	250	37
222	CW	20	40	5
222	USB	69	138	22
420	USB	127	254	31
902	CW	6	18	3
902	USB	26	78	11
1240	CW	10	30	4
1240	USB	34	102	12
2300	CW	10	40	7
2300	USB	9	36	4
3300	CW	11	44	9
3300	USB	6	24	2
5650	CW	6	24	5
5650	USB	6	24	3
10000	CW	7	28	6
10000	USB	6	24	3
24000	CW	20	80	1

Total Both 1275 1886 314
Score : 592,204

George Holubec NE2U June 2016 Contest Summary from FN20QG

Tranceiver: FT-736R & TS-680s 100W on 6m,
80W on 2m, 50W on 70cm

Antennas: All Indoors, 6Meter Moxon, YU7EF
7Element 2meter Beam, 13Element 70cm Beam

Band	QSOs	Points	Grids
6M	97	97	55
2M	22	22	12
432	11	22	6

QSO Points: 141

Grid Points: 73

Claimed Score: 10293

Furthest West: W0OGH DM52 in Arizona, USA

Furthest East: EA8DBM IL18 Canary Islands

Number Of Unique Grids Across All Bands: 60

Lenny Wintfeld W2BVH June 2016 Contest Summary from FN20up

Elecraft K2 I.F., Elecraft Xvtrs on 6M & 432,
Homebrew Xvtrs on 2M & 222. Converted
transistor amps on 6M & 222. HB 2 x 4cx250
amp on 2M.

SINGLE-OP ALL HIGH NNJ Section

Band	QSOs	Points	Grids	=	Points
50	102	102	57		5814
144	25	25	12		300
222	11	22	6		132
432	13	26	6		156

TOTALS 151 175 81 14175

Claimed score = 14175

Operating time limited by family & social
obligations but I did much better than last year
and had a blast. Great Es on 6M for a good part
of the test.

THANKS!

Just a word of thanks to everyone involved in the operation
"On the Mountain" this weekend. I enjoyed operating Sunday
afternoon on 6 Meters. The contact with the EA8 with the
beam pointed North was a "Cosmic" thrill. Tnx for Len's
gourmet dinning facility and vittles! Everything was well
organized and designed. Breakdown seemed to me to be
much easier (and perhaps safer) than years ago.
Congratulations on another outstanding Packrat field
operating event. --**Griff NE3I**

Thanks Griff, It is always a highlight to us to have someone
so helpful as you show up and assist as you did to the very
end. Thanks to you. --**Phil K3TUF**

Enjoyed operating and setting up. Still recovering. Special
thanks to N3NGE, K3TUF, K2WB, W2SJ, KA3WUL. 6 and 2
were smoking! Also op'd 432. 73, **John K3MD**

Good to see all the Packrats atop Mount Pocono during my
short visit during the past weekends contest. Great
organization and hopefully a great big score. 73, **Al
K3WGR (1/2 NN3Q/r team)**

A HOMEBREW 40M MOBILE ANTENNA

--By Marten K3HUW

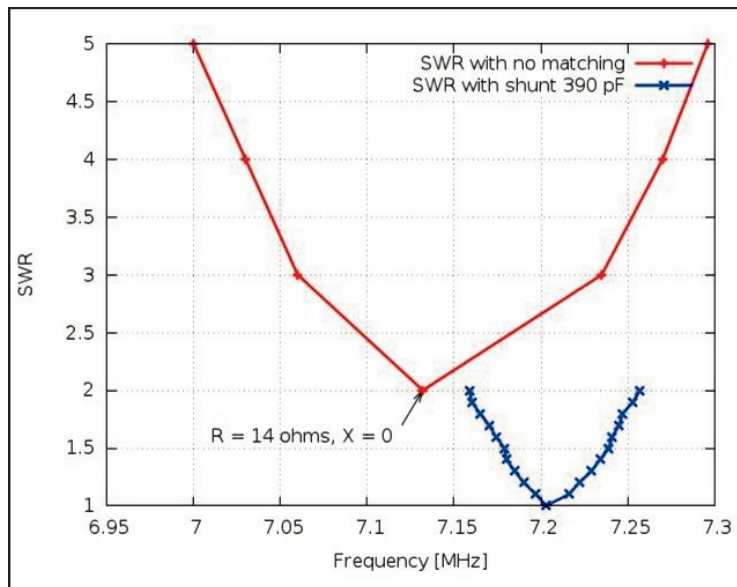
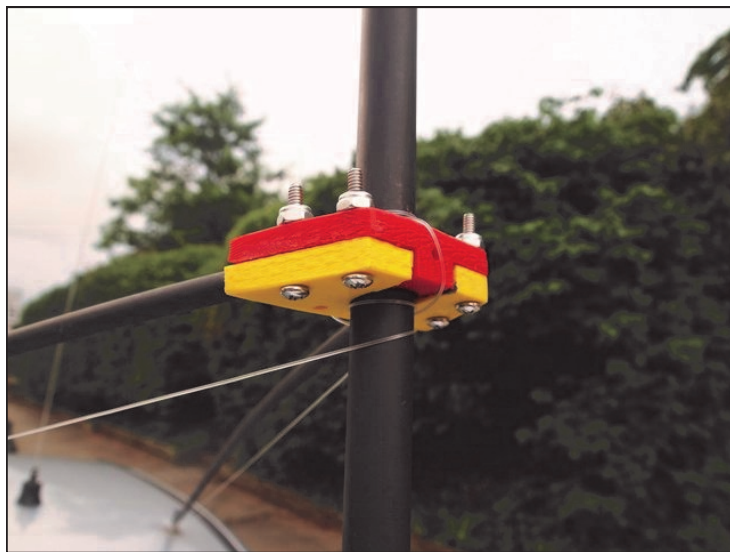
The best thing about amateur radio is finding something different to tinker with. I have been enjoying 10m mobile HF for a while, but after acquiring a Yeasu FT-857D I got the urge to try something longer in wavelength. Screwdriver antennas get expensive and I always have more fun doing things on the cheap, so I decided to homebrew a 40m mobile antenna.

Following an article in QST some years ago, I made a copper pipe mast with 3/8-24 threaded nuts and bolts soldered into the end caps. I wound a coil on some PVC and used plumbing fittings to mate it all together and painted the whole thing flat black. I added a cut down 102" whip on top, and voila, a 40 m antenna.

The bottom mast is 1/2" copper pipe, 34" long, the coil is 4" PVC about 4" long with a short 2" mast on top, and the whip is cut down to about 78" and screws in to the top of the coil. My trunk is about 40" off the ground, so the total antenna height is 118". The top of the antenna is about 13' 2" above the road. I bump a few leaves and tree branches but nothing else. I figured that 13' 6" was the absolute highest I was willing to go and maintain safe clearance.

For structural support, I had a clamp 3D printed from red and yellow material. I used fiberglass driveway markers threaded, screwed, and epoxied onto clevises which attach to hardpoints I added to my roof. It is quite solid.

I spent quite a bit of time tweaking the coil windings, adjusting the number of turns as well as the coil spacing to get the tuning to work out where I wanted it. Without any matching, the feedpoint impedance is between 12 and 17 ohms at around 7.04 MHz. I made a simple box from double sided copper circuit board and mounted several different capacitors from a few 10s of pF to a few 100s of pF selected by a rotary switch. **With a 390 pF shunt capacitor at the feedpoint, I get a 2:1 bandwidth of about 100 kHz, and a perfect match at 7.203 MHz.**



On my first mobile outing, I called CQ on 7.225 MHz and got a quick return from John, KK4FZI in North Carolina, he gave me a 58 signal report and we had a comfortable QSO. He has a Cushcraft 40m beam, so that certainly helped out with the signals!

W2SJ Tower Improvements

(With a Little Help From Mother Nature)

By now you all know my story of the evolution of my antenna system since moving to Mullica Hill, NJ about 4 years ago. “And now for the rest of the story”... Living in a “somewhat restricted” area with a dysfunctional HOA association requires one to be careful about antenna installations. So, I decided to try something that other hams have used to literally “grow” their antenna systems. It has proven successful for me 2 times now.

Just after the January contest I realized my special 144, 222, & 432 Log Periodic was better than the halos, squalos & discone antennas but not as good as separate beams for all bands. SWR became a problem on all three bands causing the TS-2000X to cut back power on 144 & 432 and my 222 amp did not like it either. For some reason the antenna analyzer showed it was resonant at 141.3 MHz!

Since we were going into the **Spring Season** I decided it would be best to “grow” the extra antennas a little at a time so the neighbors would not notice. After many hours research on the subject, the following ingredients were mixed in preparation for the March growing season:

- | | | |
|---|-----------|---|
| 1 | 20 lb bag | “Super Elite Potting Soil” (Local garden center) |
| 1 | 5 lb box | “Miracle Grow” fertilizer (Local garden center) |
| 5 | 10 lb bag | Iron & Aluminum Powder w/Shavings (Available free from Fazzio's cutoff saw) |
| 3 | #3 | Heavy Duty Burlap bags for covering mixture (From your local nut shop) |

The mixture was placed around the double 4” steel U-Channel base of my US Tower MA-40 tubular crank up, tilt over tower. Carefully cover the mixture with # 3 heavy duty burlap. Wet it down with water thoroughly until you can see the iron powder form a 1/2” wide circle just outside of the burlap covering. For the next 3 months just add enough water each day as necessary to keep the burlap moist.

Please resist the temptation to look skyward for the first 2 months as it is rumored that the powers at work are very bashful and you also don't want to draw any neighbor attention to what is really going on! After 2 months you will notice small sprouts from the main mast which of course are the antenna booms starting to form. The iron powder allows the U-bolts to form where necessary. After that, smaller sprouts will form at right angles to the boom which will eventually grow into the antenna elements. At this point it will be necessary to mix up a new batch for the tower base. Use only aluminum powder and shavings, no iron powder this time. Once again do not look skyward, while maintaining the mixture until 1 week before the June contest.

I went to bed the night before in my Packrat cap and had just settled in for my nap. When out on the roof there arose such a clatter, I sprang from my bed to see what was the matter. Away to the window I flew like a flash, tore open the shutters and threw up the sash. When what to my wondering eyes appeared 3 new separate antennas all bright and shiny in the moonlight' : A K2RIW 19 element for 432, a N3RG 11 element for 144 and a N3RG 10 element for 222!

Absolutely Amazing! Dare I try doubling the mixture ingredients for the next growing season??

Please see Picture...



The Ankle-Biter Guide to EME

(Part One - This-n-That)

By Jerome Byrd – K3GNC

EME is a “Big Dog” undertaking and some are able to confront the brute head on. I, alas, have to take a different approach and be content with nipping at the “Big Dog’s” ankles. I will talk about the conventional EME considerations, but only from “in-the-trenches” real-world experiences.

What Band?

Well I am not qualified to offer a suggestion as I haven’t decided on one .. yet. I am QRV EME on 144, 432, and 1296 mhz. Given my “extremely limited space” antenna situation, you would think I would settle on one band, but I am “weak signal tropo born and raised” and I am not willing to sacrifice contesting (need as many bands as possible) and tropo work (horizontal antennas) for eme yet. I have the following antennas lumped together in a space 12 x 10 x 4 ft. No antenna is more than a foot or so away from another and most are only inches apart. There are 2 x 12.5ft 8 el 144 yagis whose tips are only inches away from 2 x 10.5ft 18 el 432 yagis on a 10ft horizontal cross-boom. Above one 432 yagi is a 23 el M2 1296 yagi, and a 4 el 222 yagi rests above the other 432 yagi. Above the rotor are a 45 el 3456 loop yagi and a 45 el 2304 loop yagi. By all rights the interaction of the antennas should give me high swr, high pattern distortion and maximum loss of gain. In actuality, swr’s are not flat, but usually no worse than 1.5 to 1. As far as the other stuff is concerned .. tough toe-nail! I have to work with what I have.

****432 MHz:** There are more super stations there than are on 144 MHz, BUT the activity is almost totally relegated to the weekends where there are good conditions (moon close to earth and milky way or Sun not in the background). Ninety-five percent of the stations are not in the USA (Europe, Asia, etc.) This means not only do you have to wait for active weekends, you are limited to the European window, and the short Asia, Oceania windows at moonset. The good news is I worked super station HB9Q with a *single 18 el yagi and 100 watts in the shack!* There are quite a few stations on 432 with dishes 18-45 feet, or 16 or more yagi antennas. The bad news is to work medium stations you need to make a significant upgrade in power and antennas.

****144 MHz:** There is activity 365 days/year even during the worse possible conditions, and there are many more USA stations, which allows one to stay busy even after the European window has closed. You don’t have as many super stations (I2FAK, KB8RQ, RU1AA, UA3PTW, HB9Q, etc.), but the four yagi stations frequently have switchable/rotatable polarity, which maximize a smaller station’s chances of success. Most serious weak signal/contest stations are 144 MHz eme ready.

****1296 MHz:** This is the “second” most active eme band, however, there are even fewer USA stations than 432. Fortunately, there are numerous European stations, most with good to great setups. I have worked 4 different stations with a 5 ½ ft M2 yagi and 180 watts in the shack, and a LNA at the antenna.

2304, 3456 are not eme frequencies world-wide, soooooo, a lot of work, scheduling, pleading is required. **5ghz – 10 GHz** – higher .. don’t have a clue.

Future installments: WSJT/CW, antennas-power, EME contests and using eme in tropo contesting

**** (Note all of the above experiences/observations are for stations running WSJT)**

Some Comments on Field Day 6 Meter Operation from the Elecraft Email Reflector

From Gary, KA1J

I've never worked any 6M contacts until Field Day. Never had a 6M radio till my K3 but with my 360' of RG-8 and no 6M antenna, I never tried it.

A friend recently gave me 360' of 7/8 50 ohm hardline and I found my 160 sloper with my K3s could hear 6M signals and had a reasonably decent SWR. None of my other wire antennas could do well at all.

I noticed a few things in this little foray: 6M from SE Connecticut was only open to the 4th call area. I did make one contact to Rhode Island, not far away.

What I found difficult was the intelligibility of many of the 6M stations; many sounded almost like they were on LSB but they were on USB. It was hard to understand and it seemed like their signal was maybe compressed. Others were clear as a bell but I only worked a few as my amp is 160-10. I'm guessing some of the radios must have had a problem. I thought it might be indicative of 6M contacts till I heard the clear stations. But well more than half were impossible to tune in easily.

Now I have RI, FL, GA and SC on 6M! Nice to have some new challenges, seeing as ATNO in DXCC have become more rare.

Reply from Dave K1WHS

FB on the six meter QSOs. You really need a dedicated antenna for six to really enjoy the band. Long wires work, but you need something better if you start to get serious. I was operating with a loosely knit group in Kennebunk, Maine, using the call K1N. We set up at a school and had my K3 on 80 thru 15 meters with two wire antennas strung from trees. One was a 3 element 20 meter array with a set of reflectors. The reflector was not set correctly due to a lack of suitable trees. It still seemed to work OK. The second wire antenna was a simple doublet. Both were fed with open wire line. We ran 5 watts on solar power. I had a second K3 on six meters and dragged a 7 element 31 ft boom yagi along with 30 ft of Rohn 25. We used 1/2" hardline for the feedline. With the yagi, we heard a lot more than we could work, hearing other Field Day stations near New York City in NLI, NNJ, and ENY, but could not attract their attention with our puny 5 watts QRP signal. The band did open on Sunday morning and we worked a fair amount of Es stations in a few Florida sections, GA, AL, SC, and NC. **The beam helped out a bunch** and we were almost competitive with the local 100 watt FD stations. Locally, we worked ME, NH, VT, EMA, WMA, ENY, and heard RI, CT, NLI, EPA, and NNJ, **Our QRP status and poor VHF location gave me the idea to bring a good beam antenna to help us out. I am glad I brought it.**

Yes I heard some raunchy sounding signals too. 100 watt bricks running on low batteries with mic gain fully clockwise can take your breath away!

Dave K1WHS

Packrats Support National Amateur Radio "Field Day" Communications Exercise!

By Griff NE3I

At the center of any serious emergency communications exercise, you find some of those wizards of the cosmic radio spectrum regions, (Mt. Airy VHF Radio Club Packrats) intensely engaged in highly sophisticated communications practice. The Warminster Club's VHF/UHF Field Day CP (that's Command Post for you civilian types), and its associated high gain antennas can be seen in the center of one of the below photos (under the water tower). Packrat Operators embracing this stressful duty were Mike, KB1JEY, Guy, WA3JZN and George, KA3WXV, (not shown). Despite the high level of security screening, your roving reporter was able to obtain a clandestine photo of the normally restricted area operating position.



Unauthorized Clandestine Shot

"What I did on my June Vacation (instead of Camelback)"

-- by Michael KB1JEY

In case anyone was wondering, "Where was KB1JEY during the June contests?", I have two answers. First, I flew to Dayton OH to attend my 40th Year class reunion at Miami University, Oxford OH. Nothing like sleeping in a college dorm room and eating in the college cafeteria <laugh>. It brought back some fun memories.

On the way from the Dayton Airport to Oxford, I made a return visit to the National Museum of the US Air Force, located at Wright Paterson AFB. I went for the first time last year but the museum just opened the 4th building that week on June 8th. The big plane in the picture was something I had been waiting to see for some time, the remaining XB-70 Valkyrie Strategic Bomber prototype, one of two built by North American Aviation. It first flew in 1964. One prototype crashed during testing. Thus, the one in the picture is the only remaining XB-70 in the existence. Capable of exceeding Mach 3 at over 70,000 feet with its 6 GE afterburning turbojets, it never went into production because surface to air missiles made it obsolete. The remaining prototype was given to NASA to use for testing before it was retired.

There were many other items I had only seen on TV, such as the McDonnell XF-85 Goblin fighter and the Avrocar "Flying Saucer". In the picture, you will also note the X-15A, the Gemini 15 Apollo capsule, and Gemini Manned Orbiting Laboratory Spacecraft. So next time you visit the Dayton Hamvention, leave a little time to go over to Wright Paterson AFB.



2016 UHF Contest

The August UHF Contest is in full swing as far as preparations. We now have a contest robot to submit scores to.

Please check the website: <http://www.augustuhf.com/> for updates periodically.

We look forward to a very active Contest on the first weekend in August.

Get your station ready
73, Phil K3TUF

Hi Lenny,

Just wanted to let you know that on Wednesday, June 22 nd, I successfully had knee replacement surgery on both knees. Just a bit tired. Doing plenty of rehab at home. Had Nova Care visit the house today. She said I was ahead of schedule for my therapy. Staples come out on July 7 th. Hope to make it to the club picnic.

73' s to all. Joe WA3SRU

A brick on the Diamond Terrace at ARRL Headquarters in memory of K2SMN was sponsored by several Packrats (among many others). Expenses covered by his long-time friend Al K2UYH, though others offered.



ARRL
Diamond Terrace

This is to acknowledge that a brick has been placed in the Diamond Terrace at the ARRL Headquarters in Newington, Connecticut with the following inscription:

**WITH LOVE & HONOR
ROGER W AMIDON JR
K2SMN**

June 2016

ARRL The national association for
AMATEUR RADIO®

Rick Roderick KSUR
Rick Roderick, KSUR — ARRL President

Wind Conditions at Camelback

Ken K2WB sent along this picture to illustrate the high wind conditions at Camelback during the June Contest.



As nominated by K2UYH... Let me be one of the first to offer congrats to Michelle for accepting the position of Director for the Packrats.

--Mark WA3QVU

47 GHz Record

I am pleased to announce what is believed to be a new US/Canadian DX record on 47 GHz.

Contact was made Thursday June 30, 2016 between Henry, KT1J and Mike N1JEZ on Whiteface Mountain in NY FN34bi to Rene, VE2UG and Ray, VE3FN on Mont Tremblant QC FN26rf. The path is 215 km.

Henry and Mike were using 0.25 meter Procom dishes and about 35 mW. Rene was using a 1 foot dish with a DB6NT transverter and 1W amplifier running at 0.5W. Ray was also using a 1 foot dish and 150 mW.

Conditions were not the best with a dew point in the mid 40's. Signals peaked on 47 GHz about 15-20 dB out of the noise at best, but there was significant QSB causing the signals to fade in to the noise regularly. It took a while to complete.

Mike and Ray also completed easily on 24 GHz SSB with signals peaking S5-S9 with the QSB.

--
73,
Mike, N1JEZ

Mimosa Threat to 10 GHz Band

Comments by Brennan N4QX forwarded to the Microwave email reflector by Tom WA1MBA:

Tom,
Both Tom Frenaye and Dave Sumner passed the message from the microwave reflector about Mimosa's giveaway efforts on 10 GHz.

Mimosa's efforts to advance its fatally flawed petition have hit a stone wall. They have made zero effort to pay any more than lip service to amateur compatibility, and there are real problems with compatibility with incumbent services as well.

While expanded mobile broadband is politically favored, 10 GHz has not proved fertile ground for it, either domestically or on the international stage at the next WRC. Rather than making a good faith effort to rework their NPRM into something we could consider, they are grasping at straws to demonstrate compatibility with incumbent services with no risk to them (our licenses would be the ones on the line if there's an interference situation) and real risk to our long term ability to use the band.

Your and Brian's suggestions of caution are warranted and welcome, and you may pass this along with attribution to me if you wish.

73 de Brennan N4QX

Brennan T. Price, N4QX
Chief Technology Officer
American Radio Relay League



Here is a certificate I got recently from ARRL. It is for 1st place 6M thru 902 MHz in the 2015 June Contest for NNJ. If you have some recent "wallpaper" you'd like to show off, please forward a scan to me and I'd be pleased to share it in Cheese Bits. 73, --Lenny W2BVH Editor

6M KW Amp For Sale

I have a M2 6M-1000 solid state six meter amp for sale. Eighty watts in gives a KW out. Has LDMOS devices. Requires a 48 v dc supply. Plug and Play. Would be great for shack or portable use. Originally sold for well over \$2000. Asking \$1000.

73, Chris W3CMP

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

Nibbles from June 1966. Vol. IX Nr. 4
de Bert, K3IUUV
(author's comments in italics)

- **"Our Prez Sez"**. Prez K3GAS, Doc notes: 1. Congratulations to the new Officers (*Jo Kilgore, W2EIF was new Prez*). 2. Summer meetings will be at member's homes. Bring chairs (*nothing changes*).
- **ARPSC**. Amateur Radio Public Service Committee. The SEC, W3ELI penned a lengthy article on dwindling activity by the local chapter, and asked for more support from the members. He also reported receipt of a notice from The Chapel of the Four Chaplains (*on Broad St. in Phila.*), congratulating the group for their work and noting that a number of the members had been placed in their Legion of Honor records.
- **ARRL Bulletin Nr. 65**. 6/16/1966. Israel was added to the list of countries that currently have Reciprocal operating agreements in effect.
- **The Year's Summary**. Retiring Prez Doc, K3GAS gave a month by month summary of the club's highlights for the past year. A good reminder of the club's accomplishments. The June summary included the announcement that EI, K3JJZ won the Cheese Bits Best Article contest (*I'll bet you guessed it*).
- **June Contest Report**. W3SAO, Frankie, detailed the highlights of the club effort, held at the Buxmont Riding

Club in Hilltown. These included watching the Bell Telephone (*remember them?*) man install a phone for the weekend use, in the 6-meter shack (*normally the refreshments stand*). Two 40-ft towers were erected (*6 and 2-meters*). W2EIF had a 40-ft "fishing pole" that was put up for 220, using a ladder as a gin-pole. W3UJD brought another mast for 432 but had to trim a section before it collapsed! Of course flags were atop all the antenna structures. All rigs were on the air at the start of the contest, and remained on until the close at 11:00pm Sunday. Housing was provided by several tents. The end result: 839 contacts (401 on 6) and 68 section multipliers, including 1 contact on 1296 (ARRL sections, not grid squares). The 6-meter contacts included a mobile operator on Mt Equinox. (*Another good Packrat operation*).

- **K.U.I. Keeping You Informed** by W3HKZ, Ed. He discussed solar storms, their effect on propagation, and plans for measurements to be taken by the Pioneer VI interplanetary spacecraft.
- **SJRA Anniversary**. To celebrate **50-years**, a banquet (choice of Roast Beef or Lobster Tail) was to be held on 9/10/1966. (*This year they are celebrating their 100th anniversary, a real accomplishment.*).
- **Transmitter Hunt Report**. The June 19th results. Team of K3UJD, Mario and W3CJU found the 2-meter xmtr at 3:00pm. K3IPM, Stan and WA3CAG, Dave tracked down the 6-meter "fox" at 2:15pm. (*Nice work – the hunt started*

at 1:00pm.) The rigs were hidden on Cedar Hill Farm near Chalfont).
(**Officers take note** – good idea to resurrect?).

- **Technical Article.** W2AXU, Jack submitted a collection of small projects, gleaned from other club newsletters. These included a “Battery Saver” which would alert you if you left the car lights on (*now standard in all cars, but Hams started it!*). Another was a small signal source for 432 testing (*used the base – collector junction of an MADT transistor as a Varactor*). And, a 6-meter TVI trap made from TV twinlead.
- **Picnic Announcement.** The 11th annual Family day and picnic will be held at the Fort Washington State Park, on August 14. Price \$2.00 per family. Gifts, games, Soda and fun will be available.
- **Swap & Shoppe.** The monthly column by W3ZRR. Available from WA3CND were an HE-57 all-band receiver and a DX-35 80 through 10, 65W CW/AM transmitter. The pair of Heathkit rigs for \$55

As in previous editions, many “folksy” comments about members, their families, and activities were included in this edition of Cheese Bits. If interested, or for more detail on the above items, visit www.W3CCX.COM and read the full issue posted there by our Webmaster, Ron, W3RJW).



thirty, de K3IUV

July White Elephant Sale

It's July and time to get the word out !

--de WA3YUE

This years July Auction and White Elephant Sale (WE) is being held at the **QTH of WA3YUE** in Collegeville, PA. This will be similar to those held at WA2OMY's and for those that can remember W3ZD's, Zimmerman's Gulch.

There will be power available 120 & 240 if needed.

Bring a WE (White Elephant) and/or additional things to sell that are not needed around the shack. Sales help the club \$\$ and we have some fun. Mark items you want to sell for yourself with your call. Proceeds from unmarked items go to the club treasury. Wrap WE's completely and mark them 'White Elephant' with a **MAXIMUM** sale price.

Also, bring \$\$ to buy stuff! Prices are often much lower than online swaps and even hamfests.

We have some seating, but since it is limited it is being requested you bring a chair. There will be refreshments and snacks. Being held **shine or rain, have provisions to keep dry in case of rain.**

There is no dumpster here, If you bring something that does not sell please take it back with you.

If you buy something, please remember to take it ALL home.

Location: WA3YUE
17 Acoma Lane
Collegeville, PA 19426

I am about 8 minutes from the Royersford / Trappe exit of 422. Google and BING maps are correct as are most GPS units.

Parking is on the street, just stay off neighbors grass and do not block any driveways.

Events

For inclusion, please direct event notices to the editor.

Valley Forge Hamfest - Hamfest - July 9, 2016. Kimberton Fire Company Fairgrounds, Kimberton, PA. See <http://www.marc-radio.org/> for details.

White Elephant Sale - Auction - July 21, 2016. The July Packrat meeting and '**White Elephant**' sale/auction will be held the QTH of WA3YUE, at 7:30 PM ... **Not at senior center!** See WA3YUE's info and instructions on p.21 in this issue.

CSVHFS Conference -Conference- July 28-31, 2016. Rochester MN. See <http://2016.csvhfs.org/> for details.

UHF Contest - August 6-7, 2016. See <http://uhfcontest.org> for additional info (Note, topics on the main page are all hyperlinks).

Fall Sprints 50MHz - Contest - 2300Z August 13 to 0300Z August 14, 2016 Details to follow.

EME 2016 - Conference - August 19 - 21, 2016, Venice Italy. See additional info shown at the right and at <http://www.eme2016.org/>

10 GHz and Up (Round 1)- Contest - August 20-21, 2016. Details to follow.

September VHF - Contest - September 10-12, 2016. Details to follow.

10 GHz and Up (Round 2)- Contest - September 17-19, 2016. Details to follow.

Fall Sprints 2M - Contest - 7 to 11 pm local Monday September 19, 2016. Details to follow.

Fall Sprints 222MHz - Contest - 7 to 11 pm local Tuesday September 27, 2016. Details to follow.

EME - 2.3 GHz & Up - Contest - September (TBA), 2016. Details to follow.

XVII International EME Conference

The conference will be held August 19-21, 2016 in Venice Italy.

The venue is BEST WESTERN PREMIER BHR Treviso Hotel, a contemporary building, conveniently located a few minutes from the old town and just 2 km away from Canova Treviso Airport

Presentations planned:

Introduction: A brief presentation on the conference. Welcome from the staff
IW3HVB / CEO EME 2016

Techniques used in construction of a home brew 10 mt parabolic antenna
VK5MC / Chris Skeer

Chapter II – Signal polarity in V/UHF bands
IK1UWL & IK3XTV / Giorgio Marchi & Flavio Egano

Failure levels in LNAs
G4DDK / Sam Jewell

On the Theoretical and Practical Limits of Digital QSOs
DJ5HG / Klaus von der Heide

Stress Offset Dish for 1296 MHz
K2UYH / Allen Katz

Portable EME MW Setups
OK1DFC / Zdenek Samek

High Power Switching Class E and F amplifiers
AD6IW / Goran Popovich

PB8 13mt Cassegrain Dish Adventure with ORPB society
F2CT / Guy Gervais

Experiences with Circular Polarization on 10 GHz
G3WDG / Charlie Suckling

...continued next page

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XVII International EME Conference cont'd ...

Azimuth Drive for Small Dishes
G4HUP / Dave Powis

Let's Bounce
PA3FXB / Jan van Muijlwijk

New Codes, Modes, and Tools for EME
K1JT / Joe Taylor

**Optimized EME reception with Linrad and
WSJT under multi-polarization configuration**
ZS6EME / Alex Artieda

The Stealth Dish
I0NAA / Mario Armando Natali

**Please Don't Throw Tomatoes – ARRL EME
Rules**
K1DS / Rick Rosen

As you can see, several Packrats are among the
presenters.

Should be a fun and informative conference, and
it's in Venice! Would the family be interested in
attending? Piazza San Marco with the
Campanile, Grand Canal, Rialto, Bridge of
Sighs, Doge's Palace, gondolas, genuine Italian
food. I bet they would.

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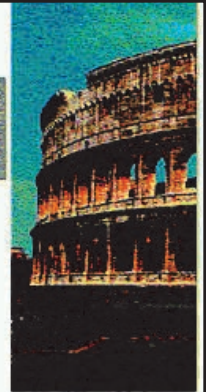
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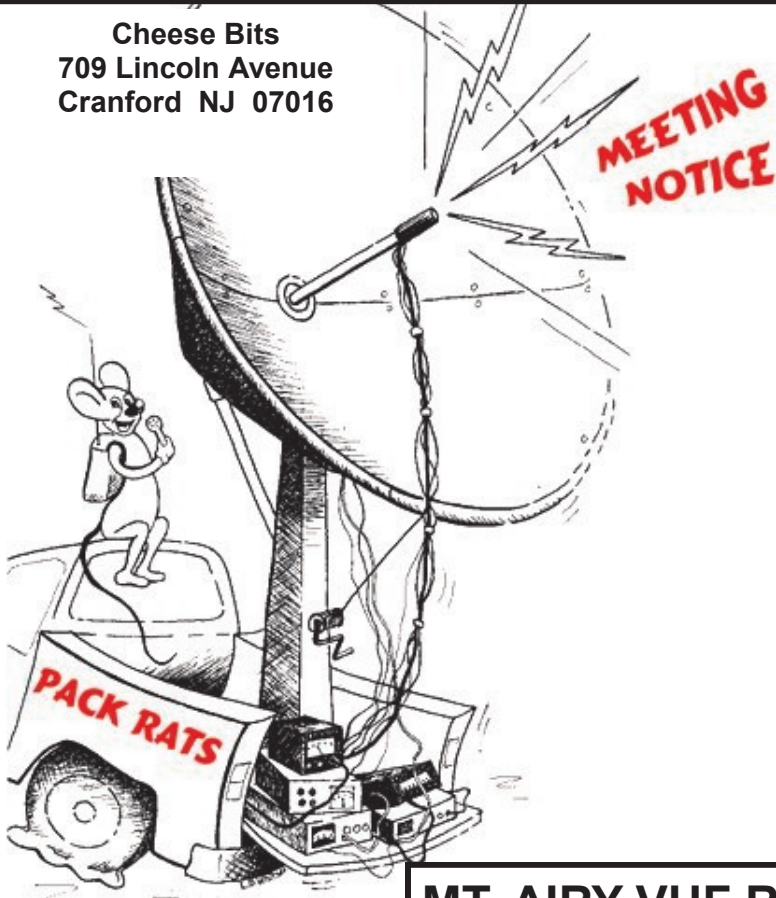
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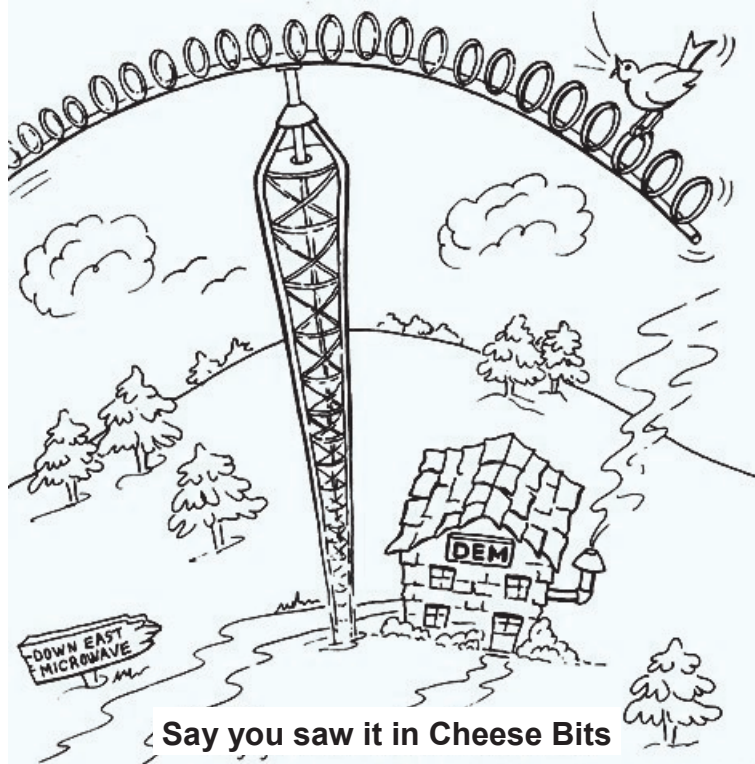
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