



CHEESE BITS

W3CCX
CLUB MEMORIAL CALL

ARRL
Affiliated
Club



Volume LVII

August 2016

Number 8

PREZ
SEZ:

It's early August and the UHF contest is just over. I hope you were ready and had fun working the 'test.

I have been on one of my towers every day this week.

Eventually it became a workout challenge to myself; I wanted to have my daily workout and there is much to do: fix 2304 and the EME array as well as repairing some loose U clamps and "floating" antennas. I like the fact that I can reach all antennas and not have to lower a mast (rotating tower advantage #3). When we are not in a heat wave, this season has good tower climbing weather. You'll do yourself a favor if you can get your tower work done before the cold season when, it seems, most tower work is accomplished.

So I did get the station ready in time for the UHF contest and it was a great weekend of contesting. Besides the usual wish for more activity, the use of assistance means that there is always something that you can do to search for the next contact. It sure was nice to have NN3Q/R, WA3RGQ/R, K0BAK/R, W2RMA/R and K2EZ/R roaming in our area. It's nice to have some additional stations who just have 222 and 432; or even just 432, get on the air and exercise their station. So in spite of recent declines, if you make use of the chat pages you can keep reasonably busy in this contest.

Dave, K1RZ (our newest member) reported some enhancement late on Saturday evening; I sure wish I hadn't joined my wife to watch some Olympics or maybe I could have caught some of the enhancement.

It should teach me (or you could say that is what caused the enhancement!).

My plan is to move on to the next phase of station improvement that will allow four active stations during contesting.

The third weekend in July was host to the CQWWVHF contest. Did you operate? It was a good time to exercise six and two meters. These are the two bands in our repertoire that we don't get to use during the UHF contest.

I hear that the 2017 August contest will be held in the same time slot (first weekend of August) but will be a distance scoring event. Glad the league brought the UHF/Microwave contest back into their suite.

The major Packrat social event of August is the annual picnic. This year KB1JEY has graciously agreed to host it again on August 13. He has been diligent in soliciting a good variety of great food from all who will attend. Please get your name on the list and lets enjoy another fun filled social time together.

Just so we make it a fun filled weekend, that evening is also the beginning of the Fall Sprint rotation. The six meter Sprint starts early so that the possibility exists for some E Skip.

The following weekend (August 20) is the first leg of the 10 gig and up contest. If you don't have a station that is in the clear, this is the weekend to take some 10GHz and above gear out to a mountain top. Early Saturday morning you can catch some fantastic conditions and make some hard to believe contacts

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

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

Pack Rat Web Site: <http://www.packratvhf.com>

SUBSCRIPTION/ADVERTISING MANAGER:

Bob Fischer, W2SJ 23 Morning Glory Circle, Mullica Hill, NJ 08062
(609) 440-2916 bobw2sj@gmail.com

EDITOR:

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

CLUB TREASURER:

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

TRUSTEE OF CLUB CALL - W3CCX

Brian Taylor N3EXA
(215)-257-6303 n3exa@verizon.net

PACKRAT 222 MHz REPEATER - W3CCX/R

222.98/224.58 MHz (PL 136.5) Hilltown, PA

OFFICERS 2014-2015

PRESIDENT K3TUF, Phil Theis phil@k3tuf.com
VICE PRES: KA3WXV George Altemus ka3wxv@yahoo.com
CORR. SEC: WA3EHD Jim Antonacci jjantonacci@verizon.net
SEC: KB1JEY Michael Davis kb1jey@arrl.net
TREAS: W3KM Dave Mascaro w3km@verizon.net

DIRECTORS:

KB3MTW Michelle London mal61@comcast.net
W3SZ Roger Rehr w3sz73@gmail.com
W2SJ Bob Fisher bobw2sj@gmail.com
WA3DRC Ed Finn edfinn11@gmail.com
Honorary Director W3GAD Doc Whitticar w3gad@arrl.net

COMMITTEE CHAIRMEN

January Contest Bill K3EGE billk3ege@gmail.com
June Contest: Al N3ITT alitt@epix.net
Phil K3TUF phil@k3tuf.com
VHF Conference: Rick K1DS rick1ds@hotmail.com
CoChairs
George ka3wxv@yahoo.com
Michael kb1jey@arrl.net

Awards Chairman Joe WA3SRU wa3sru@verizon.net
Quartermaster: Bert K3IUV bsoltoff@comcast.net
Membership Chairmen: Rick K1DS rick1ds@hotmail.com
Griff NE3I signalnaut@aol.com
Jim WA3EHD jjantonacci@verizon.net

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:

<u>TIME</u>	<u>FREQUENCY</u>	<u>NET CONTROL</u>
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

on a really high band.

If you haven't already planned for the EME conference in Italy, then it's likely too late to get in on the fun; but we will be well represented by a good number of members who will be coming back to report.

One of the fixes on one of my towers last week was the EME array that had an antenna come loose, so now that its fixed, I can get back to bringing the 2m EME station on line.

Labor day will be upon us soon and then it's time for our preparation contest, the ARRL September VHF Contest (September 10, 11). This is the warm-up for our big event in January. Get on and make sure all of your bands are operational. Checking things out in September gives you plenty of time to get things fixed before January. We need to work on our assistance communications, and this event is a great platform to work it out. We can use the chat page or the repeater.

The second leg of the 10 Gig and up contest will take place the weekend after the September VHF Contest. We also continue with the Sprint schedule; see: <http://svhfs.org/wp/sprints/sprint-schedule/> for the complete schedule. In September we will have the attendees to the August EME Conference give us a full report.

One more planning item. February is a great time to visit a warm climate. Many Packrats are planning to be in FL for Hamcation. With all of the changes happening to Hamvention, this may be a great time to try out Hamcation. See if you can put it on your calendar. We are planning a Thursday event there, just for our friends.
Until then,

Lets work on lots of bands,

Phil, K3TUF

WHO'LL START THE BIDDING AT \$5?

The White Elephant Auction

By Rick, K1DS

Our own Elliott, K3JJZ went the distance as auctioneer as he sold almost every item that was brought to the White Elephant Sale. This year's event was hosted by Bruce WA3YUE in his driveway and garage area. We started with a brief business meeting and voted in Dave K1RZ as a new member. **Congrats!!** Another Dave, W2KV was also in attendance and had his Packrat membership application read at the meeting for the first time. This year's auction brought about 50 club members and guests, including some faces that we've rarely seen. It was nice to greet Joe K3VEQ, John KB3XG, Dan WA3NFV, Griff NE3I and Joe AA3GN.

The auction started with a few computer related items that didn't seem to interest the crowd, so we moved quickly to the first of five White Elephants that were up for grabs. Actually, there was only one White Elephant, as the other four were in brown boxes, brown bags or foil wrapped cartons. To my knowledge, none of the contents were revealed to the attendees by their purchasers. There **was something for everyone**, as usual, and the stuff went **real cheap!** The highest winning bid was for a 222MHz 175W amp that went for \$100. The rest of the items ranged from \$1 to \$40 and included some great bargains: CDR rotor and control box \$30; 100'+ of 7/8" hardline with a connector for \$35; 2.3GHz looper for \$21; an MMT 222 transverter for \$25; a pair of 175W linear solid state 432MHz amps with heat sinks for \$40 each. For the microwaver, there were plenty of low power amplifiers, SMA relays and switches and 903MHz filters. The final item of the night was a box of high end patch cables that were sold in lots of 3 or 4 each, most going for \$4-5 a bundle. Several items that were unsold were still taken home by interested parties, including a big roll of 1-5/8" hardline, and 3-4' offset dishes.



At the close of the auction the benches and gear were gone. The hardline and dish with some other goodies awaited packing by K2TXB

Everyone enjoyed the relatively cool evening, coolers of suds, soft drinks and H₂O along with a few of the hoagies and chips refreshments. Thanks to all who brought items to sell, and to those who paid the price to take stuff home with them. Aside from some folks who gave a 10% commission of sales to the club, **most items were club donations**, and this event was another successful fundraiser for the club.

THANKS BRUCE!!!

On behalf of the BOD, I'd like to thank Bruce for his kind hospitality in hosting the WES/ Auction this past week. The venue worked great, even the neighbors cooperated.

73, Phil K3TUF

THE GREAT WHITE ROVES AGAIN

“Well this could be the last time, This could be the last time, Maybe the last time, I don't know. Oh no. Oh no”**

The batteries were charged, the antennas were mounted, the coax cables connected and waterproof tape applied. I filled the tank with gas and up the NE Extension I drove and headed west on Rte 80. I turned south on 81 and went through Hazelton on my way to Delano in FN10. It's still a sleepy little hamlet, but with a spot to pull off the road and aim directly at Camelback. As the contest started I quickly ran a few bands with NN3Q/R who was up on Mt Penn. I connect with the Packrats and worked them on 2m and 6m, only to find that 222 was not up and running at their end. Well, move on to 432 and then the microwaves for a 9 band sweep. I thought that if they had FM or even a walkie that we could make the 222MHz QSO, but it was no-go.

I then moved back up to Conyngham near the intersection of 80 & 81 in FN11. I repositioned myself to do a run again with the mountain. We connect again on 9 bands. So I am ahead of schedule and about to get ready to leave this spot when the local police come by to check on me. It seems that they received some calls about my van with all the antennas and the dish and they were worried that I was trying to **steal credit card numbers** from the truck stop! Really? I reassured them of my FCC license, the amateur radio activities of the VHF weekend, and gave them one of my trifold handouts.

Onward to Camelback in FN21 for a fifty minute drive. I make it up the hill in good time and get settled in the parking lot. By now the group has added the FT736R spare 222 rig to the setup and we complete easily on 11 bands including LASER. It was nice to drop in and see the neat set-up for this year with 6 & 2 in Ken's trailer and the rest on the club trailer. The chow trailer was a gas with **Len having everything at his disposal**. As I drive out, a tree branch jumps out to touch one of my loopers, bending the reflectors. Luckily, these are easily reshaped.

Last stop of the day is Alamuchy in FN20 off Rte 80 in NJ, a spot that is line of-sight to the mountain. Did the 10 band run with the club station, added a few more random QSOs, and started home just as the sun was setting. Made it into the driveway and 6m was still open, so I worked a few new grids.



Looper “leaves” from Camelback

Sunday AM and I'm up early to get started to Seabright, NJ in FN30. My GPS takes me there from the northern approach and I drive south about a mile after crossing the bridge of the inland waterway.

...Great White cont'd

When I pull down to the inland waterway, facing west, I see that the cottage that was once standing next to my operating spot is now demolished. Makes communication easier, but I'm sure in the future that some McMansion will be built on the property. I am able to run another sweep with the club station and work a few others from this nice spot.

I head south in NJ for the long ride to FM28 in Cape May. On the way I make a stop in FM29 to make sure I have that grid as a multiplier in my log. When I arrive at Cape May, the beach area lot that I like to operate from near the Ferry is full, so I pull up on the road a short ways to aim northwest to the mountain. We make the full band run again and now it's a rush to head home and beat all the weekend traffic.

Yea! I'm home, it's daylight and I can easily disassemble the van. Mission accomplished for the nth time. **Now I'm thinking it through—was it a fun rove, or is it getting to be a chore?** On the plus side, I made a lot of contacts with W3CCX using the planned route. All the equipment worked well. I gave out a lot of QSO points to several other stations and a few other rovers too. The weather was good, 6m provided some excitement. On the down side, it was a long driving weekend, a bit lonely, and somewhat repetitive of roves I have made in the past. Perhaps it's time to try something new. EME (moonbounce) on the mountain for the club; we could try 144MHz and 1296MHz. As we look forward to next year's contest, **we'll see what works best.** **73, Rick, K1DS/R**

****The Last Time** by the Rolling Stones



FN30 in Seabright where the cottage once stood

CQ WW VHF Reports

From K2LNS:

Lenny I got on at 10 am this morning and gave out points. I will say this - 2 meters was pathetic - Perhaps I missed the rush Sat eve or earlier Sunday morning
Herb K2LNS

From NE2U:

Hi Lenny, Good working you. BTW I was still calling CQ in the contest just 5 minutes ago. No one came back to me. Went to one of the chat rooms, which was when I found out the contest was over since 5pm!

OOOOPS! Oh well... Wasn't great, but wasn't all bad either. Nice 6 meter opening this morning and early afternoon.
George NE2U

	Q's	Grids
50 MHz	48	26
144 MHz	15	8

Points 2652

Soapbox: Farthest West Was EM19 WQ0P in Kansas on Saturday. Openings to the South East Sunday Morning saved the contest.

From Ken KA2LIM:

The K2LIM contest group had a fun weekend, but want to let you all know we are most pleased with the testing of the microwave part of the station. Warren-WB2ONA and I tested all the equipment in preparation for the UHF contest coming up in August and I am happy to say that everything is working. So we are now good up thru 10GHz. And, due to some change in plans here at home, it looks like I can be on for the 1st part of the 10GHz contest from the contest station, grid square FN12mg. Having fun.

...CQ WW cont'd

KA2LIM (K2LIM) cont'd:

2M – 151Q's/46Grids
6M – 302Q's/112Grids
453 total Q's
Points - 95432

Soapbox: Had a guest operator N4VC – Al Pierce from Nashville TN for entire contest, another guy who said "he had fun".

From Phil K3TUF:

This was the first contest since I rebuilt the station from the flood damage. First six meters was running a week ago and got 2m working just in time for the contest. KW on each band. Spent a lot of time fine tuning things in the setup including the logging program and fixing an intermittent in the amp on 6m. Great to have a real contest to firm things up. The skip was in and out here and wasn't ever really strong except for one or two stations who were there for a long period of time.

The log tells me that I spent 3 and one half hours on the contest and 23 and a half off. So not a real serious contest entry. Ended up with 58 q's in 31 grids with the furthest being EN17 and EL96.

It was extremely good to get CW working smoothly, and I made many 6m contacts on CW. A fun way to get the station back going again with stations to work.

73, Phil K3TUF

Band	Mode	QSOs	Pts	Grd
50	CW	15	15	6
50	USB	33	33	19
144	USB	10	20	6
Total	Both	58	68	31

Score: 2,108

1 Mult = 1.9 Q's

From Marten K3HUW:

2m only (no 6m), operated in between changing diapers and home projects.

7 QSOs
5 grids (best was FN42)

2m sure was quiet during the 6m openings. Used a mix of ssb and cw, got a new grid (for me) FN42, I'm sure my 50 watts was "light" to say the least! Now motivated to add some power to 2m and add

an SDR type display using the 1st IF of my radio and an RTL-SDR "dongle".

Marten K3HUW

From George WB3IGR:

Hi Lenny. Just getting back into the hobby now that I have moved into my new QTH, FN-10vi Newmanstown, PA. Just fooling around and not really into it yet, here are my results.

6M 6 Q's 6 Grids
2M 5 Q's 5 Grids
Total time spent, about 2 hours.

I've got 6, 2, 222, and 432 with small antennas, no rotator and only one beam on 222 pointed east. I heard (for the first time) the 222 beacon this morning. And that's with a long run of RG-58. Going to remedy that as I have some LMR 400 coming just for that antenna! Below is a nice photo of my short (only 13 foot) tower. Any higher than 20 feet and I'll need a permit. I'll never get the scores I was getting while in Maryland, but at least I can contribute a log for our club! 73, de George WB3IGR



.. CQ WW cont'd

From Lenny W2BVH:

Had fun working the contest with the time available between weekend obligations. Happy to work 4 or 5 other 'Rats.

Band	QSOs	Grids	Points
50	40	18	720
144	19	8	304

Total	59	78	2028

Engineering Jokes

Understanding Engineers 1:

To the optimist, the glass is half-full.
To the pessimist, the glass is half-empty.
To the engineer, the glass is twice as big as it needs to be.

Understanding Engineers 2:

What is the difference between mechanical engineers and civil engineers?
Mechanical engineers build weapons.
Civil engineers build targets.

--Tnx WA3QPX

Growing 6M JT65 Activity

For those who haven't seen it, there's a FB newsletter / website www.amateurradio.com with daily articles by hams, for hams. I find quite a bit of the content interesting and worth a look. When you go to the website you're invited (though not obligated) to enter an email address so you can get a email when content is added to the site (this happens around once a day and has 1-3 articles featured).

The article on how JT65 is increasing in popularity on 6M is at <http://www.amateurradio.com/growing-6m-jt65-activity/>?

www.amateurradio.com/growing-6m-jt65-activity/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+amateurradiocom+%28AmateurRadio.com%29

Its representative of the sort of articles you'll find on the site. I find the presentation of most of the articles pretty compelling -- the style is like something you'd find in a club newsletter.

Give a look.

--Lenny W2BVH



Congrats!

K3IUU, Bert in June 2015 VHF Contest.

SOLP Best score EPA Laser

K0BAK NPOTA

Pete K0BAK proudly wore his Pack Rat shirt while operating on Independence Mall on July 3. The Mall was getting ready for a large National Park Service festival, ending with a concert in the evening. Pete and KB3SBC installed and operated the station as a part of the festival. This was an activation of a rare park in the year-long ARRL NPOTA event, and for two hours was the Philadelphia bonus station WM3PEN for the 13 Colonies special event.



Wandering around the Sussex County (NJ) ARC Hamfest a couple of weeks ago, I stumbled upon these fine fellows! Hail fellows well met!

Hope they were successful in selling the "schtuff" they brought. According to Tom, it was about a 2 hour drive from "Packrat Territory"

--Lenny W2BVH



2304 Story

By Phil K3TUF

So I installed a self contained weatherproof box (see picture) in January 2016 that housed a 2304 system complete with preamp and amplifier. **It didn't work.** Then I had the flood in my home in February and all that followed that!

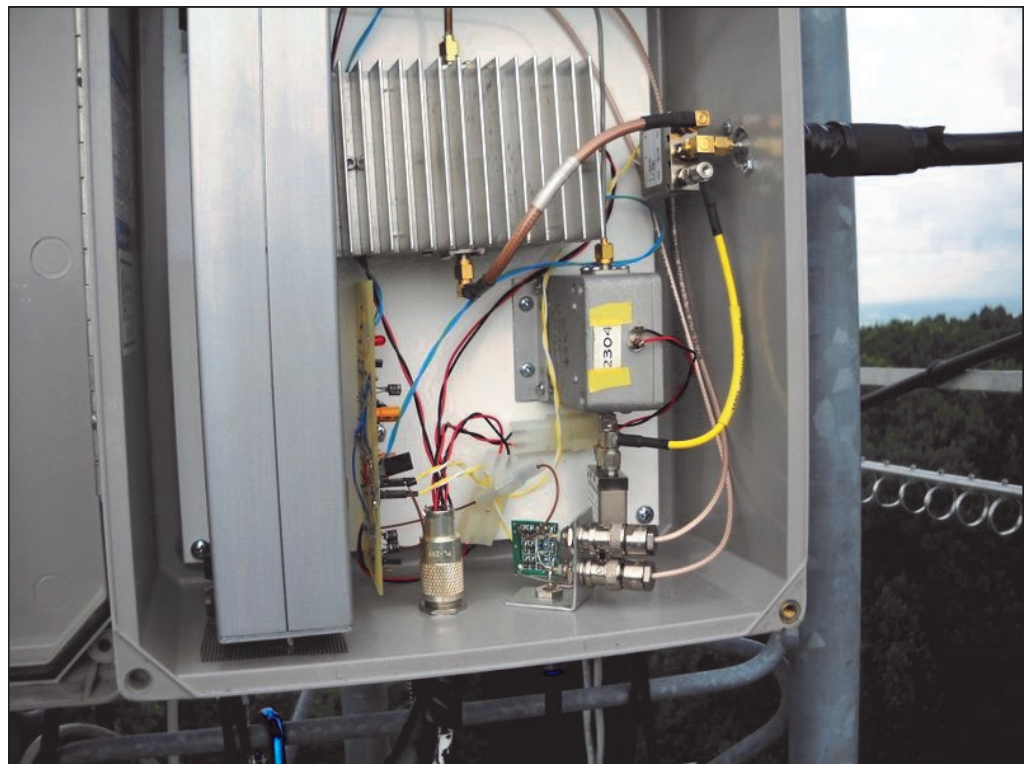
Well I tested micro's with Roger recently and have all bands but 2304 working again. So I knew it was time to fix the 2304 tower top box.

You may remember that my construction of the self contained box includes facing the transverter pointing down so that, through a fiber screen, the indicator lights are visible from below. I had not used that tool much and the other night I got to thinking that it was because normally I want diagnostic data during the day when the lights are not visible. So I waited till night and went outside with the binoculars and saw a blinking blue light. Further investigation narrowed it to the lower of my existing three boxes; the 2304 box. It wasn't getting 10MHz.

Today (August 1) was finally the day to go up and retrieve the box and see what was up. Before the heat of the day I climbed the tower and when I reached the 2304 box I opened it up to find that the BNC connector inside that grabs 10MHz from the triplexer *was not connected at all!* (Duh). Who builds this stuff?? I attached the connector; descended the tower and tried out the band.

First I saw nothing on the band. But quickly expanded the panadapter wider and saw this tall signal way up the band. I thought nothing of it as I was accustomed to birdies on some bands. But it seemed to move a little. Drilling down on the signal it appeared to have some intelligence to it, but it was weird. When I narrowed and went to cw with 200Hz filter I could listen to the signal and heard the W3HMS beacon **30db out of the noise**. This is a new beacon that has recently been moved from the 2400MHz band where it was previously used by satellite ops.

I am using a phase locked IF radio with a phase locked 28-144 intermediate unity gain transverter to a phase locked 2304 transverter and I measure 2304.365440 at this time. I will tell you that this morning, observing for only an hour that the signal moves around. Sometimes as much as a KHz but that's not bad. The good (even great) news is that we have a working 2304 beacon which has been absent for a long long time. The beacon is located in FM19qv along with a 5760 and 1296 beacon.



The Ankle-Biter Guide to EME (Part Two - WSJT/CW)

By Jerome Byrd – K3GNC

“If you have a small station, you can’t run with the big dogs but you can nip at their ankles.”

As stated previously, I will not be giving any technical analysis on various subjects. I will be dealing with observations from the trenches. I will be discussing only the JT65B and JT65C components of the WSJT suite in this article. JT65B is used for 144 MHz and 432 MHz digital work. JT65C is used for 1296 MHz and higher digital work.

If you have a “super” station with auto moon-tracking, working stations can be easier with JT65B/C than with CW, in that the computer does the sending and decoding and not your “fist” or ear. For smaller stations CW is usually more difficult and JT is the only way to get a QSO. JT65B/C is visually what CW is audio wise. There are however some instances a JT65B/C contact is harder to complete because it is sometimes easier to separate audio noise-interference than visual interference and DSP filters, CW filters, etc can’t be used on JT65B/C. Even a noise blanker and agc may hinder JT65 reception. If you live in a noisy environment like me, you may be looking at a screen filled with birdies and traces (signals on the waterfall) of unknown origin.

To use JT65 modes, the primary thing that must be accurate is your computer clock (within a second). This can be handled via on-board programs or syncing ones’ clock with one of the on-line time accuracy services before each JT65b/c session. The next thing you need is a means of accurately pointing azimuth wise (and elevation-wise if available) at the moon. The WSJT screen always displays the moon’s azimuth and elevation in relation to your stations grid square. You can do antenna sighting by eye or via a camera (when the moon is visible), after aligning one’s rotor(s) to be accurate. Auto-tracking rotor control programs are used to handle the pointing requirement, depending on your means.

For computer interfacing, I use a “SignalLink” external sound card. I set the “playback/recording” levels for the sound device in Windows Control Panel “Sound” selection to about 50%. The settings show-up as “USB Codec” under “Speaker and Microphone” respectively. I then set the TX gain control on the SignalLink to 12 o’clock and adjust the RX gain control to get a “0 db” noise floor on the WSJT screen (at the bottom). If the Rx gain control seems to have no effect, click one of tx buttons on the WSJT screen to get things running. That usually solves the problem, otherwise you have to work through the problem of establishing the proper configuration in Control Panel and or “Options” under “Setup” in the WSJT program. Using SignalLink minimized a potential configuration nightmare for me. YMMV.

Digital eme contacts usually are conducted between 144.100 and 144.150, 432.60 and 432.100. CW contacts are ~ 144.050 – 144.100, 432.030 – 432.060. I don’t know if the above are the “official” ranges, but they are how it usually plays out. The 1296 ranges are very similar to 432. For best results, the medium to small station needs to set up skeds with other stations using the following web sites: Ping Jockey - <http://www.chris.org/cgi-bin/jt65emeA> , LiveCQ - <http://www.livecq.eu/> for 144 MHz., and HB9Q - <http://www.hb9q.ch/hb9q/> site for 432 and up.

When starting out it is probably best to try and get one’s first decode from one of the super stations:

I2FAK, KB8RQ, RU1AA, HB9Q, UA3PTW, and any station you see posting that has more than 4 large yagis on 144 MHz, 8 or more yagis, or a 15ft or larger dish in the case of 432 and 1296 (HB9Q, UA3PTW, DK3FG, NC1II, OK1DFC, OK1KIR, DL7APv, etc)..

The default WSJT "waterfall" is 1.2KHz wide (+/- 600 Hz). If the signal you are tracking is on your tuned frequency within that bandwidth and is at least -27db in strength, the program will usually decode.

It is **very exciting** to see out of nowhere "**K3GNC UA3PTW K093**". A typical exchange would be: I get a decode **CQ UA3PTW K093**. I would then send **UA3PTW K3GNC FN20**. If I am decoded he responds with **K3GNC UA3PTW K093 OOO**. I respond with **RO**. He responds with **RRR**. I respond with **73**, and he responds with **73** ending the QSO. **That sounds easy and sometimes it is ...** but not often for us small stations. Real world scenarios have us looking at a bunch of traces on the waterfall trying to determine if any are valid signals or they're all spurs and birdies. We then double click on suspected trace and that narrows the decoding to a small 50hz bandwidth reducing interference from unwanted signals. Sometimes it turns out to be a valid signal and often not. There are a lot of tricks of the trade, that I discuss in one of the later installments.

To be continued

Installation Complete on World's Largest Radio Telescope

500 Meter Spherical Dish in Guizhou, China. (Arecibo is 300 Meters) . See http://news.xinhuanet.com/english/2016-07/03/c_135485389.htm for details of this amazing feat of engineering.



After a Century Ham Radio Club Still Connecting

By Kevin Riordan (Snipped from the June 12, 2016 Philadelphia Inquirer by Steve W1SMS)

The tech-loving kid who grew up to be president of the South Jersey Radio Association was just 14 when he first messaged the universe.

"I said something like, 'My name is Ken. My location is Clementon, New Jersey,'" Ken Botterbrodt recalls.

"I was in the basement with an 18-watt transmitter I built from parts of TV sets. I sent a signal out, and somebody — a guy in Michigan — came back.

"It was magical."

As Botterbrodt and other association members mark the centennial of the oldest continuously operating club of its kind in North America (sjra.org), they insist ham radio's power has in no way been dimmed by the digital communications revolution.

Tweeting? Texting?

Snapchatting?

"Where's the magic in that?" says Botterbrodt, 56, who joined the club in 1974.

Those were the days when kit-built transmitters were common and ham operators often were a prominent part of civilian safety teams at public events.

In other words, the days before tablets and smartphones became ubiquitous.

"Take away the internet, and those devices become inert," Botterbrodt, an engineering consultant and Marlton resident, says.

"Hams communicate by sending a radio wave directly from Point A to Point B. We could be bouncing the wave off the moon and sending it back to Earth. It's the same wave and it doesn't get exchanged by other media."

Don Beaulieu, at 91 among the oldest of the club's 110 members, nods.

The retired electrical engineer has invited Botterbrodt and me to his Cherry Hill home for a conversation about all things ham.

"It's sort of a universal hobby," Beaulieu says, noting that the club enables social gatherings as well as provides technical advice, learning opportunities, and competitive events. Something for the casual as well as the more committed, in other words.

"For me, it's the technology," Beaulieu says.

With about three million participants worldwide — including more than 700,000 in the United States — amateur radio is a growing global community with its own customs, lore, and lingo.

"This is my shack," says Beaulieu, sitting at a desk where his rig (transmitter) connects to a computer interface that enables other operators' call signs (IDs) to be displayed on a screen.

"That's an Englishman, and there's a Cuban, and an Estonian," Beaulieu says. "They're trying to reach anyone who will answer."

The desire to connect, to be heard and to "make some noise,"

in Botterbrodt's words, is as much a part of ham radio as a love of the technology that makes the communication happen.

When the club was founded at the Collingswood home of a man named William G. Phillips on June 12, 1916, commercial broadcasting was several years away.

But amateur radio was taking off. And Camden was a center for developing communications technology.

The dozen men who attended that meeting were alerted by "wireless telegraph," according to one account.

"I surmise many of them were electrical engineers at Victor Talking Machine [in Camden]," Beaulieu says.

A century later, the club includes perhaps 10 women — among them Carol Hutkin, 66, of Voorhees, whose father was a member. She was inspired to study for and obtain an amateur radio license from the Federal Communications Commission after her car broke down on Route 70 during a pouring rainstorm in the 1980s. Later, her grown children and other relatives also became hams.

"When I first became a member of the club years ago, the wives and children of members participated in a lot of activities," Hutkin recalls.

Collingswood student Holden Correia-Fisher, 15, is the youngest member.

"I like using the science of how radio waves work to be able to talk to people in other countries, on a device that doesn't connect to the internet," he says.

Correia-Fisher joined the club after passing the test for his federal amateur radio license in 2015.

"It's been amazing," he says. "Everyone in the club is so nice and supportive. People have given me equipment and really good suggestions."

On Friday, Botterbrodt headed for Camelback Mountain in the Poconos for the VHF Sweepstakes, a competition sponsored by the American Radio Relay League.

"We're setting up a dozen transmitters," he tells me via cellphone. "The goal is to make as many contacts as possible."

So after his 42 years as a ham, does he still feel the magic?

"It's in the challenge," Botterbrodt says. "To do something I haven't done before. To talk to someone I haven't talked to before."

✉ kriordan@phillynews.com
☎ 856-779-3845 📧 @in@kriordan
🌐 www.philly.com/blinq

KOBAK Rove Attempt

Pete K0BAK secured permission to operate his minivan rover from the top of Camelback in the July contest. Wanting to maximize his performance for the first 3 hours of his rove, Pete intended to use his newish 18' 5 element 6m beam and new-to-him 1kw 6m amp. After arriving, he spent an hour and a half deploying the 6m and 2m beams on a walk up mast, using the limit of his strength and probably the limit of the mast system; those stiff 2" mast sections and his spine were bending seemingly to the breaking point as they were raised. It was a hot day with bright sunshine; Pete was literally dripping with sweat, and his brain was getting addled.

Crawling to the back of the minivan, Pete attached the leads of the voltage booster to the 12v battery to power up the station. After he heard a pop he never heard before, Pete looked down to see that he had the leads reversed. The voltage booster was kaput, and the **rove was over before it began**. That new beam did look pretty up there on that mountain though. To soothe his disappointment and wounded pride, on Sunday Pete activated 3 National Park Service units in Manhattan for the **NPOTA** event; all three were **never activated before**.

WTB 2M POWER AMP

After spending a year at this QTH and relying on the good ears of other operators to pull my signal out of the air, I'd like to add a 2m amplifier to my station. I have 50 watts of drive available, and am looking for something in the 200-300 watt range. I'm willing to put some work in converting something, or completing a "project" amp.

Marten
K3HUW

HackRF 1296 QSO

AI K2UYH reports that Zilvinas LY2SS completed a 177km QSO with LY2WR using a barefoot HackRF transceiver (30 mW) on 1296 MHz and a biquad antenna.

HackRF is an inexpensive (~\$300) wideband (1 MHz - 6 GHz) radio.





Look at you -- folding laundry. And last night it was the dishes. Just what part of "no, you're not buying a new Flex 6700" that you don't understand?

Sent to Cheese Bits by Doc W3GAD, from WARC FEEDBACK

THANKS LEN!!!

For picking up the cost of food at Camelback!!

73 from Phil K3TUF, the BOD and all the Camelback ops and visitors

Dayton Hamvention Moving to Xenia, OH

Here's the basic info on the move of the Dayton Hamvention, from a press release. Much more detail will come out in the months to come.

The Greene County Agricultural Society Board of Directors in partnership with the Greene County Board of Commissioners, the City of Xenia and the Greene County Convention & Visitors Bureau is pleased to announce the Greene County Fair & Exposition Center will be the new home of the Dayton Hamvention®.

Since 1952 Hamvention has been sponsored by Dayton Amateur Radio Association (DARA). For many years it has been the world's largest amateur radio gathering, attracting hams from throughout the globe. Over 25,000 amateur radio operators and their families will descend upon Greene County and the entire Miami Valley for three days of camaraderie, education and exhibits. In 2017, the Dayton Hamvention will be held May 19-21.

KB1JEY Temporarily QRT as 222 Net Control

Until further notice, my station will be unavailable to serve as the Monday Night 222 MHz SSB net control. My 222 MHz SSB equipment hears fine but I have been told that my transmit audio is light. My suspicion is that the cause will require assistance to correct. I have no ETA on when the problem may be corrected. 73, Michael KB1JEY

WB2RVX Temporarily QRT as 432 Net Control

While attempting to raise the tower for Monday's net, I noticed that several of the feedlines and control cables were torn and hanging free alongside the tower from the last batch of storms. I am regrettably QRT until I can take the tower down for repairs. A temporary substitute net control for the next few weeks will be needed. . Tnx. Mike - WB2RVX

Electricity finding the path of least resistance on a piece of wood

Here's a link to a short video of electricity burning its way across a plank of wood, creating fractal-like "Lichtenberg Figures" (patterns) in the process.

<https://m.youtube.com/watch?v=f1U6owqN7TE>

If you look on the right of the web page there are several links to videos of similar "experiments".

--W2BVH

Revised UHF Contest Planned by ARRL for 2017

Thanks to Mickie, W1MKY for passing on the following:

The ARRL will be running a revised UHF Contest the first weekend in August in 2017. According to the most recent info, the contest remains in August (it's **not** being moved to May as initially indicated). It is being changed to a distance scored event, which will include multiple regions. It will probably have a team structure that's slightly different from the proposed rules that were revealed at the VHF Superconference in April.

A 'preview' was provided by Kermit, W9XA (chairman of the VHF Contest Revitalization Committee), to the attendees of the Central States VHF Society Conference just last weekend in Rochester, Minnesota. The 'new' contest will be named the "**222 MHz and Up Distance Contest**".

I don't know when the rules for the 'new' contest will be more broadly and officially released.

"We" (sponsors who have taken on the continuation of the August UHF Contest 'as it was' for 2016) have not decided if 'we' will continue in 2017 (the 40th) but *might* run it one more year as a 'contest within a contest' (continuing the QSO times Multiplier based scoring as an alternative to the distance scoring, encouraging folks to submit their logs to BOTH 'us' and ARRL. If so, entrants could choose to submit logs to one or both contests.

Feel free to share the info with any reflectors you have access to, pointing folks to that <http://augustuhf.org/> web page (and sub-pages).

73,
John Kalenowsky, K9JK

10 GHz and UP Contest Station Info Requested

To assist in **operator-to-operator liaison**, I am collecting info to assist us all in trying to coordinate contacts in the ARRL 10 GHz and Up Contest coming up on August, 20 & 21, and for the second weekend on September, 17 & 18, 2016. If you plan to operate on those weekends from home and/or portable locations provide me a schedule of your planned activities so can I aggregate it and distribute it.

Please provide the following information:

1. For the first weekend: Call, Name, 6-digit grid on **8/20/2016**, 6-digit grid on **8/21/2016**, Bands, Contact Info (liaison freq, cell nr., etc.), Station Info (antennas, pwr, etc.), Location Notes
2. Similarly for the second weekend: Call, Name, 6-digit grid on **9/17/2016**, 6-digit grid on **9/18/2016**, Bands, Contact Info (liaison freq, cell nr., etc.), Station Info (antennas, pwr, etc.), Location Notes

I will get this listing out to you in the week before the August and September weekends, by e-mail. We need your information. Please also let others know who you think may be operating the 'test.

Thanks everyone, and see you on the air those weekends.

73, Dave K1RZ FM19jh
301-980-5507
K1RZ@arrl.net

Ham Licensing Class

Do you have any friends who would like to get their ticket (or a spouse)? There is a licensing class coming up in Fairless Hills, PA. Info on the class can be found at <http://k3tuf.com/packrat/091016HamClassFT.pdf>

This is just the way KA3TUF got her ticket.

Pass this along to any interested party.

73, Phil K3TUF

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

Nibbles from August 1966. Vol. IX Nr. 5
de Bert, K3IUUV
(author's comments in italics)

- **“Our Prez Sez”**. Prez K3GAS, Doc wrote his farewell and welcome to the new officers column. In addition he penned his thoughts on what made our club great. *(I thought the timelessness of the comments would make them worthy of repeating, as follows :)* “We have moved forward in the VHF and UHF field beyond that of any other club in the world *(maybe just a little boastful?)*. What does Mt Airy have that other clubs lack? We have members from different backgrounds and all different walks of life, as do other clubs, and yet, we are much more cohesive and active than others. The answer can be found amongst our leaders. It has been said by some, that we have a clique that runs things all the time; well, if our progress has been due to a dedicated handful of men, then we are run be a clique. A clique of such dedication to the Packrats, that without them we would fall by the wayside. I have said time and time again that anyone can become an active part of the organization by joining a committee and doing a job. New blood will keep us moving forward and will bring out new ideas. So I say to you, volunteer for some committee (or job) when your new president asks you to, and do the best job you can. Talent will be recognized

and you will gain satisfaction by knowing that you have played a part in the club success.”

- **SJRA**. Celebrating their 50th anniversary (*100th this year!*), a banquet was planned at the Ivystone Inn in September. Packrats and friends were invited. The meal; Lobster or Roast Beef. **The price: \$6.95!!**
- **Technical Tips**. Member Mario, K3UJD (*yes, of the auction table fame*), described modifications to improve the Cushcraft collinear Antennas that many of us used in that period. The problem was poor contact to the elements, as a result of the original mounting method. Mario’s modification required a bit of filing on the Lucite insulators, coupled with a hard contact to the element and a star locking washer. It brought the antennas back to life.
- **More Technical Tips**. Doc, K3GAS, described a number of easy modifications to the Utica 650A. These would; improve audio modulation quality, better the S-Meter sensitivity, and increase the meter indication on transmit. *(If you have a new idea for an improvement to equipment, why not submit it to Cheese Bits? Lenny would welcome the article.)*
- **Travelogue**. Not sure what else to title it. An interesting, lengthy article by Paul, K3MEH was in this issue of C’Bits. Paul was a sound engineer, working for KYW-TV, Channel 3 in Philadelphia. In that capacity he traveled quite a bit in the US and abroad. He reported on an assignment to interview K7UGA, Senator Barry Goldwater. Arriving at the home a day

early, he said “I was awed by the most fantastic antenna system I had ever seen”. An aide to Goldwater saw him gawking at the antenna, and asked if he was a ham. He told Paul that the Senator was operating in the Ham shack, and took him there. Shortly, Paul ended up operating the rig with Goldwater, and they spent most of the day together in the shack. He ended up with an **exclusive interview** that was shown nationwide. Paul’s article continued with narratives of visits to Syria, Monaco, Japan and Vietnam, and a helicopter landing on an aircraft carrier on one of the assignments. (*You’ll enjoy reading the entire article in the Cheese Bits archives on W3CCX.com.*)

- **W5NFD report.** Member George Glaukomis had relocated out west, and reported on his ham activities. These included; trying to fix a NBFM (narrow-band-FM) adapter for the 6-meter rig of WA5JFN. JFN was scheduled to go to Vietnam and planned to take his 6-meter SSB rig with him. George recently visited K6IBY and saw his 30’ 6-meter Long John antenna in operation. Together with a 750-watt SSB transmitter, the station puts out a BIG signal.

Membership. W3MXM, Lee Cohen was voted in to membership. (*Lee later became an enthusiastic Packrat flea market vendor!*). As a result of reviews by the membership committee of activity and dues payments, 5 members were dropped from the rolls. (*we referred to that as “weeding out the dead wood”*). (A word to the wise. Review your own situation.)

Swap & Shoppe. The monthly column by W3ZRR. Available from W3ZTL was a 1900 V, 200 mil transformer and a 2mfd

4-kV capacitor. (*Today’s 12, 24 and 48-volt power supplies are a lot safer!*).

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 K3IUU



A Note from W6AAJ (ex-WA3AAJ)

Greetings from San Diego where VHF/UHF are not as popular as they are back home (too many mountains)

About a month ago I had a qso with the current owner of call sign **W3CL**.

When he qsl’ed he asked me for a copy of one of Harry Stein’s W3CL cards. I could not find it in my qsl shoeboxes and was wondering if any of you can scan me a copy of one in your collection?

If you are ever out in SOCAL, please let me know.

73

Jim Ward

Events

For inclusion, please direct event notices to the editor.

Fall Sprints 50MHz - Contest - 2300Z August 13 to 0300Z August 14, 2016 Full rules available at http://svhfs.org/2016_Fall_Sprint_Rules.pdf

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. Rules available at <http://www.arrl.org/10-ghz-up>

September VHF - Contest - September 10-12, 2016. Rules available at <http://www.arrl.org/september-vhf>

10 GHz and Up (Round 2)- Contest - September 17-19, 2016. Rules available at <http://www.arrl.org/10-ghz-up>

Fall Sprints 2M - Contest - 7 to 11 pm local Monday September 19, 2016. Full rules available at http://svhfs.org/2016_Fall_Sprint_Rules.pdf

Fall Sprints 222MHz - Contest - 7 to 11 pm local Tuesday September 27, 2016. Full rules available at http://svhfs.org/2016_Fall_Sprint_Rules.pdf

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

EME - 50 MHz to 1296 MHz - Contest - October (TBA), 2016. Details to follow.

MUD 2016 - Conference - October 13-15, 2016. St. Louis, MO. <http://www.ullmann.us/MUD2016/index.htm>. Details to follow.

Fall Sprints 432MHz - Contest - 7 to 11 pm local Wednesday October 5, 2016. Full rules available at http://svhfs.org/2016_Fall_Sprint_Rules.pdf

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

Lunar-Link International

VHF & UHF amplifiers
for demanding modes

50 - 144 - 222 - 432 MHz

EME - Digital - Contesting



www.lunarlink.com

info@lunarlink.com

33 Ball Pond Road Danbury, CT

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.

G AND G ELECTRONICS OF MARYLAND

JEFF GOLDMAN, K3DUA

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

-Dealers in New and used electronics-



Bob Fischer Company, Inc

Eastern Van Ladder Sales Representative

*Ask Me: "How can I reach
45ft high from my Van"?*

283-B Egg Harbor Rd. #125
Sewell, NJ 08080
(800) 852-0120
Cell: (609) 440-2916
bobfischercompany@gmail.com

Bob Fischer

DESTINATIONS TRAVEL

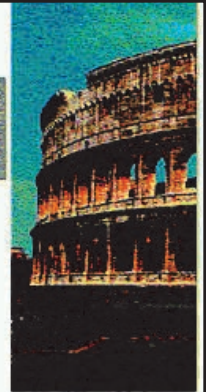
A Full Service Travel Agency

HARRIET SOLTOFF
Travel Consultant

XYL, K3IUV

229 Fairway Dr
Warminster, PA 18974-3797

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



Joel Knoblock W3RFC

www.therfc.com

The R.F.Connection

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

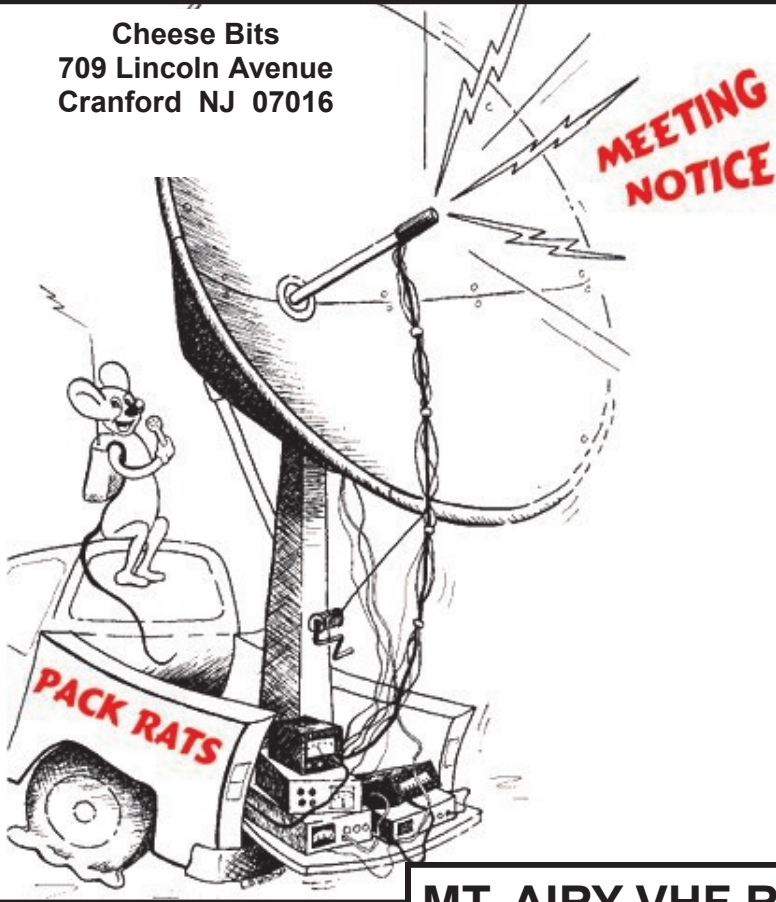
World wide shipping via FED-EX or US Post
Office

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

Fax Line 301/869-3680

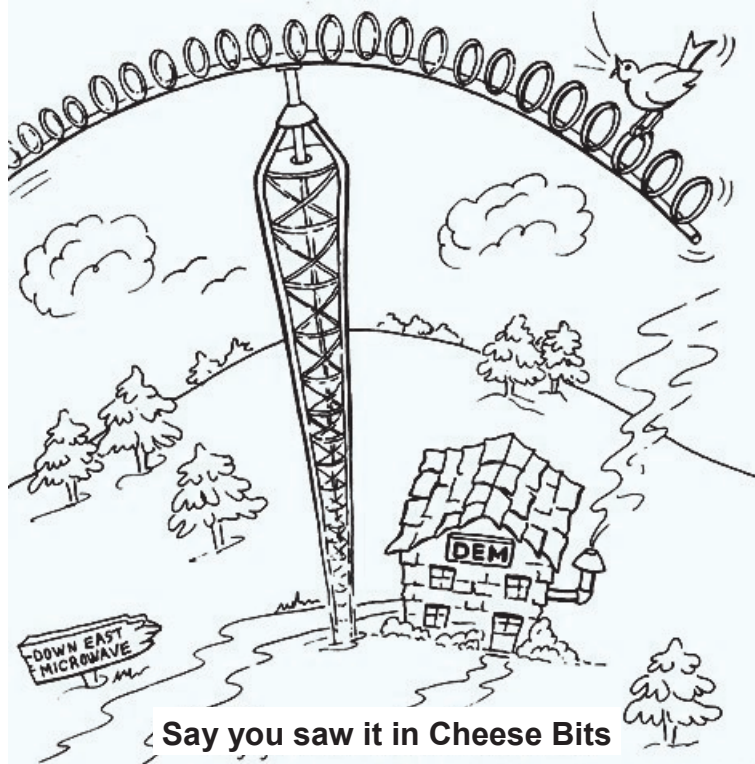
Hours: Monday-Friday 9:30am-5:30pm Eastern
All major credit cards accepted

Cheese Bits
709 Lincoln Avenue
Cranford NJ 07016



TO:

MT. AIRY VHF RADIO CLUB, INC.



DOWN EAST MICROWAVE

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

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

For All Equipment
Steve Kostro, N2CEI

<http://www.downeastmicrowave.com>

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