

# CHEESE BITS



**W3CCX**

CLUB MEMORIAL CALL



ARRL  
Affiliated  
Club

SCANNED TO PDF BY BERT, K3IUV, 2013

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Number 6

## The PREZ SEZ

As we roll into June, I find I have a whole weekend (plus) set aside to have some fun. That's right, fun ... The June contest. Lately, all I have been doing is NOT looking forward to anything (such as work travel). When I finally get back home, darn (I probably wouldn't use that expletive), no one has completed my chores, so I am all weekend doing that. Sound familiar? Well here's the chance. All I did was file a vacation request month's ago, and wrote in the "black out" dates on the calendar, with a little verbal reminder. Maybe I'm a bit more enthusiastic than most, since I haven't done too many of these. But if you are going to enjoy this hobby, it doesn't hurt to operate once in a while. Am I leading the horse to water yet? I don't know about you, but I am at the trough!

Don't forget about the Pack Rat summer season. We still have the white elephant sale and the newly revitalized picnic at N3ITT's upgraded QTH. A little advance planning will put those events on the radar screen too. Maybe we could start thinking about an "add a band" project for the fall. Perhaps a microwave antenna build?

Last month I was rambling a while about PSK31, after our ARRL speaker illustrated the mode. Well, I am about to try. I think I have my interface operational, but due to travel, have not fully tested it out to make sure it is hum free and properly driven. The computer is turning on the transmitter and power is being made. The receive side is recording. My test was with WinMSDSP2000, high speed meteor scatter software. That is my primary interest, however I will try some VHF PSK31 soon too. I may even have to put the HF vertical back up and try there too. I missed the whole packet era, so these modes may be interesting to play with, especially on VHF+. (If I could just stay home for a while!).

73, WA3DRC

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## MEETINGS

Third Thursday each month at 8:00 PM  
Southampton Free Library  
947 E. Street Road  
Southampton, PA 18966

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**PACKRAT 222 MHz REPEATER - W3CCX/R**

222.98/224.58 MHz, Churchville, PA FN20LE

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	N3XEM	(2 Yrs) Bob Minch, <a href="mailto:raminch@bellatlantic.net">raminch@bellatlantic.net</a>

**PACK RAT BEACONS - W3CCX/B**

FM29JW Philadelphia, PA  
50.080 144.284 222.065 432.295 903.072 MHz  
1296.251 2304.037 3456.220 5760.190 10,368.170 MHz

**MONDAY NIGHT NETS**

<u>TIME</u>	<u>FREQUENCY</u>	<u>NET CONTROL</u>
7:30 PM	50.150 Mhz	WA3EHD/K3EOD
8:00 PM	144.150 MHz	N3ITT
8:30 PM	222.125 MHz	W2SJ/N3EXA
8:30 PM	224.58R MHz	W3GXB
9:00 PM	432.110 MHz	W3RJW/WA3DRC
9:30 PM	1296.100 MHz	WA3NUF
10:00 PM	903.100 MHz	N3AOG

**COMMITTEE CHAIRMEN**

LADIES' NIGHT:	N3AOG	215-443-9965
JUNE CONTEST:	N3ITT	610-847-5490
HAMARAMA:	NK8Q	610-847-2285
VHF CONFERENCE:	KB3XG	610-584-2489



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## CALENDAR OF COMING EVENTS - JUNE 2000

- 2-4 Atlantic Division Convention and 66th Annual **Rochester Hamfest** at the Monroe County fairgrounds near Rochester, NY. Talk-in on 146.28/88. VE Sessions. Info at <http://www.rochesterhamfest.org>.
- 8 Packrat **Board of Directors meeting** held on the mountain at the contest site
- 9 The Arietids Meteor Shower predicted peak will be at 1500 UTC. See W6CL's column in the June issue of CQ for more details.
- 10 Columbia-Montour Amateur Radio Club is hosting the ARRL Eastern Pennsylvania Section Convention at our hamfest in Bloomsburg, PA. The website for the hamfest flyer is: <http://www.bafn.org/~cmarc/hf2000.html>.
- 10-12 **June VHF QSO Party**. See May QST Page 83 for rules. W3CCX will be operating from FN21HB, Camelback Mountain, near Tannersville, Pa. on all bands thru 24 GHz.
- 14 Flag Day
- 15 **Packrat meeting** at the Southampton Free Library on Street Road in Southampton, Pa. Annual election of officers. All members and interested VHFers welcome. Len Martin, N3NGE, will make a presentation on antennas.
- 17-18 **1998 SMIRK Party Contest**. 0000-2400Z. See rules see <http://www.smirk.org> Send entries by 1 August to Pat Rose, W5OZI at PO Box 393, Junction, TX 76849-0393. Brief rules are in the June issue of QST, page 98.
- 18 Frederick, MD, Frederick County Fairgrounds, Frederick ARC, 10494 Balmoral Place, New Market, MD 21774. TI on 146.64-, 146.52, 448.425-.
- 18 **Fathers Day**
- 21 +/- 1 month. Look for openings to Europe on 6 meters.
- 24 **LEAP INTO THE MICROWAVES** with the Packrats! 903 and above. Starting on the 4th Thursday of the month and continuing every 4th Thursday of the month operate from 8 to 10 PM local time on any band 903 MHz and above. For coordination on those difficult long haul contacts 144.260 MHz is the suggested liaison frequency. So here's your chance to fix what broke in the contest and work all those stations you missed.
- 24-25 **Field Day**. See May QST page 84 for the rules. Look for lots of activity on 50 and 144 MHz.
- July
- 8 The **2000 CQ World-Wide VHF Contest** sponsored by CQ Magazine. Any 27 hours during this time period. See page 102 of the June issue of CQ for rules. This contest is for 6 meters and 2 meters only.
- Aug
- 12 Packrat Picnic at the QTH of Al, N3ITT in Ottsville, Pa.

### JUNE CONTEST-FINAL PLANS!

Well here we are, on the final approach to the June Contest! For those who are planning to attend, here are the final plans, and some tips on what to bring, etc. We will be meeting at the QTH of W3GXB 8:30 Fri. morning, if you are signed up for Fri., please try to make it to Bob's we need all the help we can get.

Meals at the Mountain begin with Fri. dinner, so bring a lunch if you need it (I usually get something in town before heading up the mountain).

Some things you will need to bring:

Clothes for all seasons, it can get cool on the mountaintop, even in June.

Flashlight

Insect repellent

Sun Block (ok, so I'm an eternal optimist)

Rain gear (for our more traditional wx)

Sturdy work or hiking boots

Hand tools

Bear repellent (cause you never know!)

Contest starting time is 2:00 PM local time Sat., ends 11:00PM local time Sun.

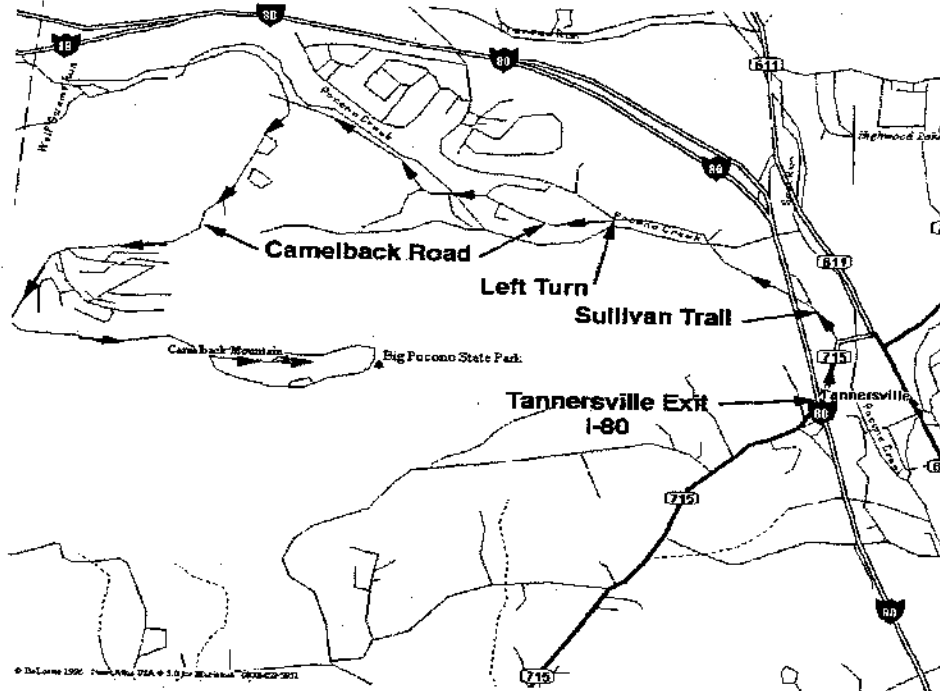
**WE STILL COULD USE SOME MORE HELP FOR SET UP AND TEAR DOWN!!**

Following is a list of those I have signed up for load up at Bob's, if you are on this list and can't make it let me know if you are not, and you can help out try to do so, your help is needed!!! W3SYN, N3OXO, WA3RLT, W2SJ, W3R JW, W3GAD, WA3NUF, W2SK, N3EVV, W3KM, AA3GN, WA3DRC, K1JT, WA3YUE, AA2UK, KIDS.

CU at GXB's or at the mountain! LET'S DO IT!! 73 AL N3ITT

## MAP TO W3CCX/3 ON CAMELBACK MOUNTAIN

Take the Tannersville Exit #45 from I-80. At the bottom of the exit ramp go right on Rt. 715 toward Tannersville, PA. Go 0.2 miles and make a left hand turn (should be sign to Big Pocono State Park) on Sullivan Trail (If you come to a red light you went too far). Proceed back under I-80 and then look for small sign on right side of road to 'Camelback Ski Area' ( or something to that affect) and make left on to Camelback Road. Wind your way up the mountain. Near the top of the mountain there is a restaurant area. Go past the restaurant to the top of the mountain. The park closes to visitors at sunset.



## IT HAPPENED AT HILLTOWN

(From July, 1973 issue of Cheesebits)

K3ZSG (now W0RSJ) returning to the FM site with a 10 amp fuse because he couldn't find a 7.5 fuse one which blew.

K3ZKO asked, "What are you going to do with that?"

K3ZSG replied "I'm going to put it in the 6 meter FM rig." I can't find a 7.5 amp fuse that blew."

K3ZKO smiled and said, "The 7.5 amp fuse that blew is the one that I put in when the 1 amp fuse blew."

### SWAP SHOP:

(send all ads to the editor)

**FOR SALE: CALLSIGN HISTORY.** Name and address of each holder since 1912. Cost \$20 plus SASE for printed CERTIFICATE. Wanted CallBooks before 1970 and QST's before 1940 will buy or trade. Also looking for 1x2 Ham Radio License Plates for my collection. Ron Allen W3OR, PO Box 73, Bethel, De. 19931-0073 or call 302-875-1100.

## ROVER EMERGENCY KIT

de, Rick, KIDS

Money, credit cards (gas and tolls)

Fire extinguisher, water, sealed food.

Swiss Army Knife

Bungees, duct tape, tool bag, solder and iron, fuses, spare 12v, 4PDT relay, switches, wire, multimeter,

Pencils and paper (sometimes the computer decides...)

100' extension (you may need to plug in somewhere)

Battery charger, cables

Extra elements for beams--you hit trees, etc..

spare coax with connectors, adapters

extra hand key and jacks to fit 3 sizes

cellular phone (sorry, but true)-- You never know..

I also usually have a copy of my license, and a sign in the side and back windows in about 72 font that says, "Ham Radio Station, FCC licensed" and some detail of being in annual exercise of emergency field capability--something similar to field day, but for VHF, UHF and microwaves.

A handout is also positive PR for all the public, police, rangers, and troopers who will be curious about what you're up to, and allow you to explain to everyone everywhere.

## 2000-2001 NOMINATIONS FOR CLUB OFFICERS

Elections will be held at the June meeting. Nominations will be open at the meeting prior to voting.

President: Ed Finn WA3DRC  
Vice President: Jim Antonacci WA3EHD  
Rec. Secretary: Walt Zumbach WA3AQA  
Treasurer: Dave Mascaro W3KM  
Cor. Secretary: Joe Landis AA3GN  
Directors (2 Required):

Rick Rosen K1DS  
Ron Whitsel W3RJW  
Bruce Loss WA3YUE

Remaining Directors 2<sup>nd</sup> Year (serving remaining year of their 2 year term):

Al Sheppard N3ITT  
Chris Getman N3PLM

### PACKRAT BANQUET AWARDS

1st Place Single Op, January VHF Sweepstakes Ron Whitsel, W3RJW, 317,702 points  
2nd Place Single Op, January VHF Sweepstakes Phil Miguez, WA3NUF, 226,590 points  
3rd Place Single Op, January VHF Sweepstakes Brian Taylor, N3EXA, 129,438 points  
1st Place Multi Op, January VHF Sweepstakes Mark Adams, W2UR (+N3EMY, K3GYS), 351,876 points  
2nd Place Multi Op, January VHF Sweepstakes Bill Murphy, W0RSJ (+ WB2ONA, N2IX, W3DFM, NET), 323,172 points  
3rd Place Multi Op, January VHF Sweepstakes Gary Hitchner, WA2OMY (+ WA3YUE), 104,104 points  
Mario Fontana Award Dave Mascaro, W3KM  
Packrat of the Year Dick Comly, N3AOG  
Millennium Award\* Ron Whitsel, W3RJW

### HOME BREW NIGHT AWARDS

**MOST AMBITIOUS:** Len Martin, N3NGE, 3456 and 5760 Transverter System, Tower Mounted  
**BEST CONSTRUCTION:** Chuck Grabowski, WA2ONK, 10 GHz Transverter  
**MOST MISERABLE FAILURE:** Walt Zumbach, WA3AQA, 6 Meter Vacuum Tube Transmitter  
**BEST USE OF HAND TOOLS:** Rick Rosen, K1DS, 1296 Interdigital Rev. Conv. and 432/1296 Tripler Amp  
**MOST UNIQUE:** Leon Rosen, N1XKT, Pair of Modulated Laser Communicators

### \*MILLENNIUM AWARD

(Our recipient, Ron W3RJW would call this the pre-millennium award, but oh well.)

First, some background: At a recent BOD meeting, and awards committee was formed. This committee consisted of myself, Ernie W3KKN, and of course Bob, W3GXB. The committee did most of its work by telephone, which meant isolated one-on-one conversations.

I started out by doing some research to find the past recipients. The guys thought that Ron has been an exemplary leader in the club with many accomplishments. But what committee member would vote for themselves. We are talking about Pack Rat of the Year, or the Mario Fontana award. That is when Ernie suggested the special once in a millennium award. The committee, sans Ron, thought it was great, and thus it was born! (sneaky, eh!)

Ernie gave a nice rationale behind the award speech at Ladies Night. (after he softened up the crowd with a couple jokes) I am sure I might miss a few (reasons), so Ernie can expand on Ron's list of services to the club in a future CB.

Our congratulations to Ron on his well deserved award! Ed WA3DRC

### CHEESEBITS SUBSCRIPTIONS

Cheesebits subscriptions are available to everyone interested in activities and information from the VHF through the microwave frequencies. Subscriptions are for 1 year of 12 issues. For a subscription, send the following information:

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Town: \_\_\_\_\_ State: \_\_\_\_\_ ZIP: \_\_\_\_\_

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June 1999

Send to: SUBSCRIPTION/ADVERTISING MANAGER:

Bob Fischer, W2SJ, 7258 Walnut Avenue, Pennsauken, NJ 08110

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## TID BITS

**VUCC Award Checking:** If you want QSL cards checked for your initial VUCC Award or an update, contact Harry, W3HT at 610-584-4846 or hbrown@voicenet.com.

W3RJW worked ZF2MU on Sunday, 21 May on 50 MHz. Turns out ZF2MU is Jim Holt, ex Packrat N3AHI who now goes by K4BI, still in Sugar Hill, GA.

Complete the **ARRL Survey** on what bands you've worked. Do it! In case this has slipped your view, surf on over to <http://www.arrl.org> and take their survey. It deals with our aspect of the hobby this week. Don't want to take the survey, but are interested in the results? Here's the link direct to them: <http://www.arrl.org/survey.php3>

**IM Toolbox.** You might want to visit this site in 'Bits. I stumbled upon it searching for "intermodulation". They have a free Windows IM tool that will do calculations for up to 5 transmitters. At least that's what the web site version will do. <http://www.tektoolbox.com/>. 73 de Joe KU3T

**RF Designer.** You can download the latest enhanced version of Windows98 RF Designer free from [www.qsl.net/km5kg](http://www.qsl.net/km5kg). 73. Grant Bingeman, KM5KG

The **432 and above EME Newsletter** can be viewed at: <http://www.nitehawk.com/rasmit/em70cm.html>

The June 2000 issue of QST, in "The World Above" column shows **144 MHz Standings**. Packrat Joe, K1JT, with 26 states, 2 DXCC countries, 61 grids with his longest contact at 2145 Km. Packrat Roger, W3SZ, has 19 states, 18 DXCC countries, 80 grids with his longest contact of 2110 Km. The same issue shows the **1999 CW Sweepstakes** results with Dave, W3KM working 275 contacts and 68 sections and Joe, K1JT, working 255 contacts and 72 grids (didn't know that vhf guys were allowed in these contests).

Paul Wade has put more good info up on his **Online Antenna Book**, including dual band horn feeds, like the coffee can/asparagus can that I use on 2/3 and the plumbers delight feed for 5/10 GHz. These work great and are easy to build. And I liked the asparagus too. Enjoy, Joe - AA3GN. See: [http://www.qsl.net/n1bwt/chap6\\_9p1.pdf](http://www.qsl.net/n1bwt/chap6_9p1.pdf)

**Suggested HSMS Operating Practices** are described in HSCW Procedures (v.7), available at: <http://www.nitehawk.com/rasmit/hscw-sop22.html>. Information regarding calculating station ERP can be obtained from W5UN's website <<http://web.wt.net/~w5un/>>. Other information, including hardware modification tips, software, and HSMS articles June be found at these URLs:

[http://www.nitehawk.com/rasmit/ws1\\_15.html](http://www.nitehawk.com/rasmit/ws1_15.html)

<http://www.ilk.de/sites/gap>

<http://www.mint.net/~n1bug/>

<http://www.qsl.net/k0sm/>

<http://www.sci.fi/~oh5iy/>

<http://www.cannon.net/~mattmc/kb0vuk/hsms/hsms.html>

<http://www.qsl.net/kd5bur/>

<http://www.qsl.net/n7stu/hscw.html>

## THE US 6 Meter CW SUBBAND, A LITTLE HISTORY

By Patrick J Dyer <pjd3@juno.com>

Would some of the OT's on the band care to resurrect the arguments that must have been made for the FCC to create the 50.0-50.1 cw subband in the first place in 1959 (long before I got on in late 1963)?

I'm pretty sure that they were along the lines that "We need a space for weak-signal work that is free from all those am heterodynes ..." This was, after all, near the peak of the historic Cycle 19 and more than a few rare QSO's were being missed with the US phone band clear down to 50.0 MHz. (And didn't the hf bands have cw-only subbands?)

So, for over 40 years now that space HAS been there. It was removed from the Tech-Gen Class (Nov 1968 until the late 1970's) due to a rather perverted misapplication stemming from RM-499 (the ARRL's "incentive licensing", which had never even addressed any VHF bands!) in the form of an FCC edict. I upgraded from Tech to Advanced in May 1977, just in time for its "return" to the Tech-Gen ops. (Much true cw experience for me didn't come until the FCC rule change in 1976 let us Techs use the Novice hf cw bands.)

After much pressure, the FCC relented and also allowed US stations to run "unattended beacons", as had been rather common in many other countries (let's not mention KH6EQI tho!) That additional subdivision of 50.060-50.080 has been later cited by some as a deterrent to two-way cw in the subband. The non-US use of 50.0-50.6 for beacons is so very common that someone down there trying 2-way QSO's might well get jumped on for QRMing another's ability to monitor for some specific beacon(s)!

Some from Cycle 21 might recall the situation with the two Liberian stations, EL2AV and EL2FY. They were given spot frequencies on which to transmit, one being 50.040 MHz - you either made a 2-way cw QSO there or a cw-to-phone crossmode one. Later on they were able to get equipped to operate split so that any ssb answers above 50.1 could be worked. In Italy, 15TDJ had a similar restriction then with his spot being at 50.020 MHz (hardly an area commonly tuned by many ops!)

(Continued on page 7)

### THE US 6 Meter CW SUBBAND, A LITTLE HISTORY (CONTD)

That said, there is still the 50.080-50.1 region nicely sitting there for US stations to use exclusively for 2-way cw. Personally, I have the IC-551D scan set for 50.080-50.110 (which will catch the HC2 beacon and avoid the 50.113 color-burst harmonic). Also, if I am going to be calling CQ on cw I prefer to use the 50.095-50.100 region (hoping that someone's vfo CAN tune below 50.1) and also not have to run the risk of some clueless operator answering me on ssb and maybe QRMing any DX response. (In April I had lost a ZL cw QSO on 50.105 due to some inadvertent ssb QRM from Austin.)

QRL on cw is easy enough, providing that the listener can also copy/understand it. Also, key-clicks from loud locals are far more "survivable" than the equivalent in ssb splatter!

I just have this troublesome worry that, with the failure of the 1999 CSVHF FCC petition to "protect" the low-end of some VHF bands from wide-mode signals, and the increasingly heavy use of cw above 50.1, that suddenly the "need" for any cw subband might no longer seem as tenable anymore to many as well. 73, Pat - WA5IYX. <http://home.swbell.net/pjd/yer/index.html>

\* With about 30% of my 6-m countries involving cw on at least one end.

\* My first 6-m F2 QSO in Apr 1968 had me on cw with LU3DHA on am, all above 50.1 MHz.

\* Long before that a few 2-way cw 6-m QSO's had been made using the PTT switch on the am rig with the harmonic of the local oscillator of an SX-110 serving as a bfo.

### 70CM INTERFERENCE

Joe, KU3T reported on the Packrat Reflector that he was having very high levels of interference on 432. Phil, WA3NUF's response to him is included here for those not seeing his response on the Packrat Reflector

Joe: Just had another thought which I am going to check out. It could very well be cable leakage. The channel audio hasn't changed and is cable channel 7.

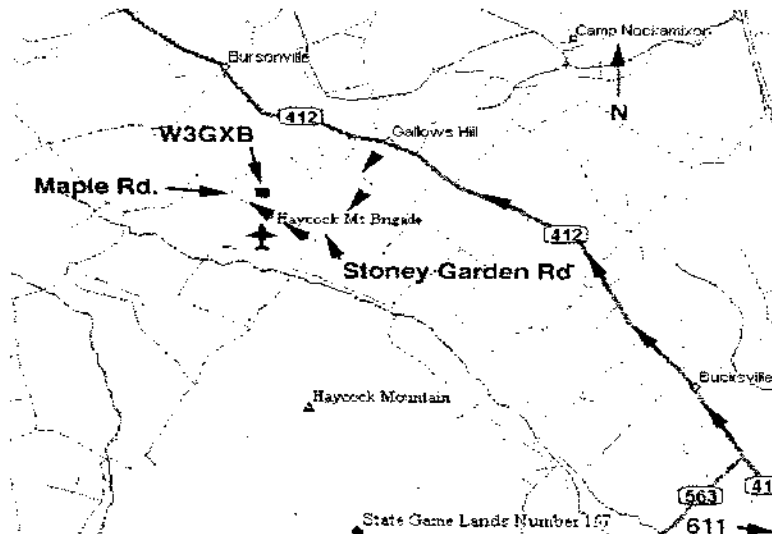
Phil, WA3NUF's response: You are most likely suffering from an unintended RF mixing problem. The national standard frequency for cable Channel 7 is 175.25 MHz which puts the audio at 179.75 MHz. However since cable is a closed system the operators can shift the frequencies and usually do by +/- 15 KHz to avoid beat products and thereby lower the composite signal distortion. Digital signals are confined to the 550 to 860 MHz band and the modulation used is typically 64 QAM or 256 QAM. These would appear as noise and not detectable in your receiver. The signal you are receiving is the normal analog TV channel.

My guess is that your neighbor added a new gizmo (booster amp, cable modem, etc) or disconnected a TV and left an unterminated cable which is acting as a radiator. The problem as you have defined it is coming from your neighbor and not the cable company. You will find the cable company can not do much unless the neighbor requests an inspection or gives permission. The cable company will respond to a cable leakage issue. The FCC is your friend on this issue. But once the cable goes inside the home they lose all control.

Hook the antenna to your spectrum analyzer (you will need a clean broadband preamp) and see what's out there. You will be shocked and amazed. Good Luck, Phil, WA3NUF.

### Map to W3GXB's

From Route 611 above Ottsville, make left on to Rt. 412 at the Harrow Inn. Proceed about 3 miles to Stoney Garden Rd. and make a left. Make Right at Maple Rd and proceed across School Rd. Then look for black mailbox on left (3rd house after School Rd. on right). Driveway on right across from the mailbox.



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[sruffin@c3iusa.com](mailto:sruffin@c3iusa.com)

### CQ WW VHF Contest Reborn!

Hello all -- After languishing for the past couple of years, the CQ World Wide VHF Contest is back, with some significant changes. Scheduled for the weekend of July 8-9, 2000, the contest will take place on 6 and 2 meters ONLY, with 2-meter contacts counting for twice as much as 6-meter contacts. The 2000 CQ World Wide VHF Contest is directed by well-known VHF contester and "CQ Contest" magazine VHF columnist Gene Zimmerman, W3ZZ, with assistance from "CQ Contest" editor and CQ WW DX Contest Director Bob Cox, K3EST. Complete rules will appear on page 102 of the June issue of CQ magazine; and are already posted on the CQ website at the following link: <http://www.cq-amateur-radio.com/vhfcontest.html>. 73, Rich, W2VU, Editor, CQ.

### MAKE A 6M HALO ANTENNA

De K0FF

Here is the parts list and dim. sheet for a 6m Squalo, made from copper water pipe. It is more or less omni-directional, and horizontally polarized. It presents a high angle of takeoff when mounted low, and singly (great for Es), and can handle 100W. It's just a dipole folded around on itself, and supported at the far end with a plastic insulator.

The shape is a closed 28" square, with a mounting bar through the middle.

This mounting bar is attached to a copper TEE at the drive end, and to a PVC TEE at the other end. The PVC TEE acts as support and end-insulator for the radiating element. A large (3/4") part is used, and adapted down to fit the water pipe, to increase its insulating qualities, as there is very high voltage at this point. A strip of brass or copper 1/2 by 3" is screwed to the outside middle portion of the PVC Tee, through a small center hole, and is rotated one way or the other as a resonance tuner (butterfly). A gamma match sets the impedance to 50 Ohms, and the butterfly adjusts the center frequency.

A U bolt and saddle through the central tube provides a center mounting point. Another approach is to install a copper TEE in the center tube, with the open end down. In that open end solder a 1/2" brass rod which has been drilled and tapped for 3/8-24. Side mounting on a tower can be achieved by using conduit clips to fix it to a horizontal mast.

(Continued on page 9)



## MAKE A 6M HALO ANTENNA CONTD

Material:

1/2" Cu waterpipe

3 ea. 27 inch piece

4 ea. 12.5 inch piece

3/8 inch i.d. Cu refrigeration tubing:

1 ea. 13.5 inch piece (P/O gamma match)

Brass plate: 1"x 2-1/2 in (to mount so-239, gamma rod)

4 Cu 90 Degree elbow

1 3/4 PVC TEE

1 3/4 to 1/2 PVC reducer

1 Cu TEE

Glue two of the 12.5" pipe sections into the PVC reducers first, then glue the reducers into the opposite sides of the PVC TEE. Lay the assembly on a flat surface with the center opening of the TEE facing the middle of the antenna. This is where the first 27" piece (mounting bar) goes in, via a reducer. On the outside edge of the PVC TEE is where the butterfly attaches. For mobile or portable use, use 3 s.s. #6 screws through each of the PVC TEE joints for added strength.

The rest of the antenna solders together to form a square, using the 90 degree elbows at the corners.

The brass plate is bent to form an "L" 1-3/4" tall with a 1/2" lip. A 5/8 hole is provided 1-1/4 inch from the bend, and an so-239 is attached. Two small holes are drilled in the lip and the plate is mounted to the copper TEE with #6 s.s. self tapping screws. Solder the center conductor of a 11" piece of RG8 insides (center wire and plastic dielectric only- remove and discard shield and outer covering). Slip the RG8 insides into the 3/8" copper tube 10.5", and tap the copper tube to the radiating element 13-1/2" from the SO-239 center, with a copper strap.

The tap on the Gamma sets the impedance presented to the feedline. Resonance (center frequency) is adjusted by turning the butterfly. Mount 15 feet or more high, for home use, and wherever you can for mobile. An antenna like this can be mounted 3" to 6" above the roof of a vehicle using PVC or acrylic spacers with suction cups. Have fun on 6. KOFF

### ICOM IC-821 SEPARATE TX/RX MODIFICATION

de Joe, KU3T

For 70cm EME, I run separate TX and RX feedlines from the array because it makes switching simpler I get the benefit of better receive NF. I've been using the ICOM IC-821 for TX and a 70cm-10m RX converter to an AR-7030 receiver on the RX side. During (mostly terrestrial) QSO's, zero-beating can be a pain, so I decided to modify the IC-821 for separate TX/RX. Any of you out there who use an ICOM IC-821 and would like (or need to) run separate TX/RX, here is a simple, temporary and totally reversible way to do it. I only did the mod on the 70cm side of the rig, but the concept should apply equally well to 2m as well. No drilling of the case or soldering was required. There is not much chance of damaging the rig, but be careful not to overstress the connector on the RF-B board when mating the new RX line. Undoing the mod is simple: Deinstall the new RX coax and remate the original RX coax.

Future plans are to permanently mount a connector to the case and install a mini-coaxial relay with a toggle switch so I can go between transceive and separate without having to remove the covers. Haven't looked into the FT-736R yet or other rigs, but similar mod might be possible. Also, I am going to try to obtain the connectors that ICOM uses.

Parts:

1 piece of UT-141 or other 50 ohm flexible mini-coax with the connector of your choice on one end (approximately 9" long). I used a piece of UT-141 with a male SMA connector which I had in the junk box. It helps to have the IC-821 service manual, but it's not necessary.

Procedure:

1. Remove the top cover of the rig.
2. Remove the screws holding the cover for the PA-B (70cm) unit and set cover aside.
3. Locate the grey mini coax which runs from W3/W4 on the PA-B unit to connector J4 on the RF-B unit. The coax plug is P2.
4. Demate P2 from J4. Place shrink tubing or other suitable insulator over P2. Can be taped to the RF-B PCB if desired.
5. Trim about 1/2" of the shield and dielectric from new RX coax. If you're using braided coax, probably need to tin the braid.
6. Cut the center conductor of the new RX coax to match the pin length of P2. This end should look just like P2
7. Feed the connectorless end of the new RX coax thru cooling vent at the back of the rig.
8. Route the new coax thru one of the notches in the partition between PA-B and RF-B unit to reach J4. (Left side with front of rig facing you).
9. Mate the prepared end of the new RX mini coax to J4. I had to gently spread the barrel of J4 a bit because diameter of the UT-141 is slightly larger than P2.

The snugness of the fit keeps the new line in place, but of course if you can get the ICOM connectors, that would be better.

10. Attach the corresponding TX/RX feedlines and test the new TX/RX configuration. I think I saw a slight increase in received signal strength (1/4-1/2 S-unit) after the mod.

11. Replace the PA-B cover and install the screws.

12. Install top cover of the rig.

13. Have fun!

Any feedback or suggestions are welcome. 73 de Joe, KU3T

## THIS IS YOUR LIFE ( THE PACK RATS) Part #1 "A CLUB IS BORN"

(Editors Note: This is the first part of a multiple part article written by the first Secretary of the Packrats. Frankie Brick, W3SAO. It is reprinted here from the August 1973 issue of Cheesebits)

Two fellows, W3IBH Charlie Clements and W3SAO Frankie Brick had a dream to form a V.H.F. Radio Club. W3SAO sent out about 15 post cards to fellows we knew were on 2 and 6 meters. The meeting was held at the QTH of Oscar Jacoby, W3FS on May 15, 1956. Since the club was organized in Mt. Airy it became known as the Mt. Airy VHF Radio Club.

The following principles were adopted:

1. Membership shall be by invitation only, and a limit to be set.
2. To qualify for membership a ham must be active on the V.H.F. Bands.
3. The purpose of the club shall be to promote interest in V.H.F. activity and improvement of existing equipment.
4. To help one another, join in any club sponsored event 100%.
5. The club shall meet once a month.
6. The club frequency shall be 144.2 MC and members will be given crystal
7. W3IBW was appointed President and W3SAO Secretary.

### CHARTER MEMBERS AS OF MAY 15, 1956

**W3CL, W3CPT, W3DHH, W3FSC, W3HWV, W3HYO, W3IBH, W3NKD, W3RZU, W3SAO, W3ZEY**

Refreshments were provided by W3IBH and W3FSC. A free will offering of \$ 4.50 was collected.

The June meeting was held at the QTH of W3FSC. All members present agreed to turn in their scores to the Club in any contest in which the club participated in as a Club event. W3FSC announced the August meeting would be held at the Chelton Hills Recreation Center at Lober and Upsal Streets, Mt. Airy. W3CL and W3CPT offered to serve on the House Committee.

Sunday, August 12th was selected as the date for our first annual picnic. Each family to bring their own food. Refreshments to be supplied by the club. W3ALR and W3FSC offered to investigate possible sites for the picnic.

HAMS PRESENT: W3CL, W3CPT, W3DHH, W3FSC, W3HWV, W3HYQ, W3NKD, W3RZU, W3SAO, W3ZEY, W3KKN, W3ALR, W3OZP, W3TYX, W3UMI.

Free will offering collected: \$8.25.

The July meeting was held at the QTH of W3KKN, Ernie Kenas. A choice of two sites were presented for the picnic, either Mermaid Lake in Ambler or Fort Washington State Park in Flourtown. The picnic committee to decide upon the site.

The members were asked to try and work W3HYO and K2DCF on 2 meters when they arrive at Mt. Caddillac, Maine. The refreshments were purchased by W3KKN and he was reimbursed by the free will offering.

HAMS PRESENT: W3CL, W3CPT, W3HWV, W3NKD, W3RZU, W3SAO, W3ZEY, W3KKN, W3ALR, W3OZP, W3TYX, W3VGN, W3FOZ, W3CCX (OUR MEMORIAL CALL) W3FCM.

Free will offering: \$12.00.

The picnic committee consisted of W3IBH, W3HYO and his XYL Violet and W3SAO and his XYL Helen. W3HYO and his XYL Violet wrote letters for Ham and Childrens prizes. W3SAO and his XYL Helen wrote letters for Ham and Ladies prizes and soda companies for liquid refreshments.

The picnic was held at the Fort Washington State Park, Flourtown, Pa. on August 12, 1956. A good time was had by all who attended.

The August meeting was held at the Chelton Hills Recreation Center. "Believe It or No " the first financial report turned in for the picnic showed it cost the club all of \$5.00. Helen, XYL of W3SAO deserves all the credit for keeping the cost down- with the help of W3HYO and his XYL.

A CHARTER for the club was discussed and a committee was formed consisting of W3CL, W3CPT, W3FSC, W3KKN and W3SAO. They were to present a draft of a charter at the September meeting. The following were appointed to the Membership Committee: W3KKN, W3NKD and W3RZU.

HAMS PRESENT: W3CL, W3CPT, W3AL, W3VGN, W3KKN, W3DHH, W3RZU, W3FSC, W3HYO, W3SAO, W3NKD, W3FOZ, W3TYX, W3VOC, W3YCL, W3QAS and W3NSI.

Free will offering \$10.64.

Frankie W3SAO Club Historian

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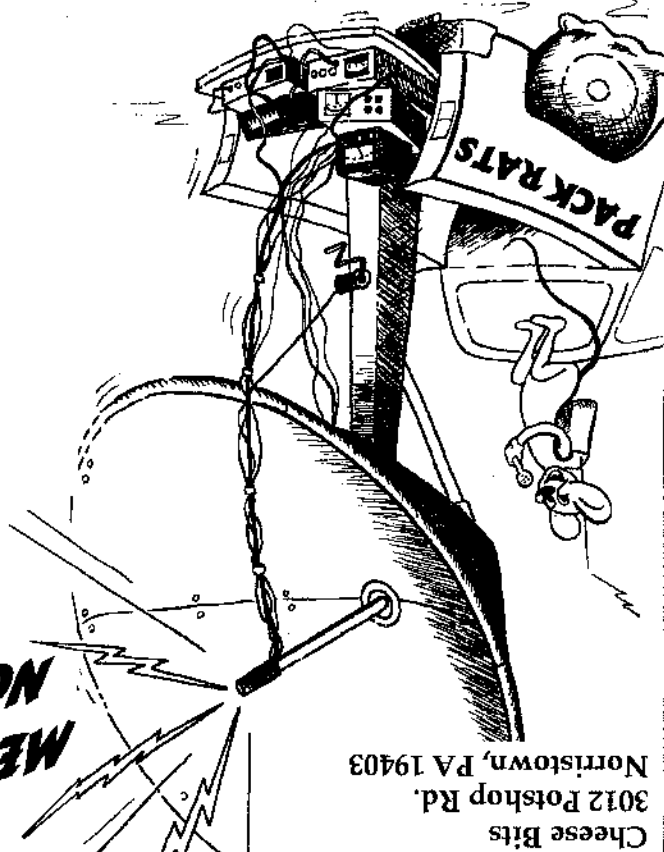
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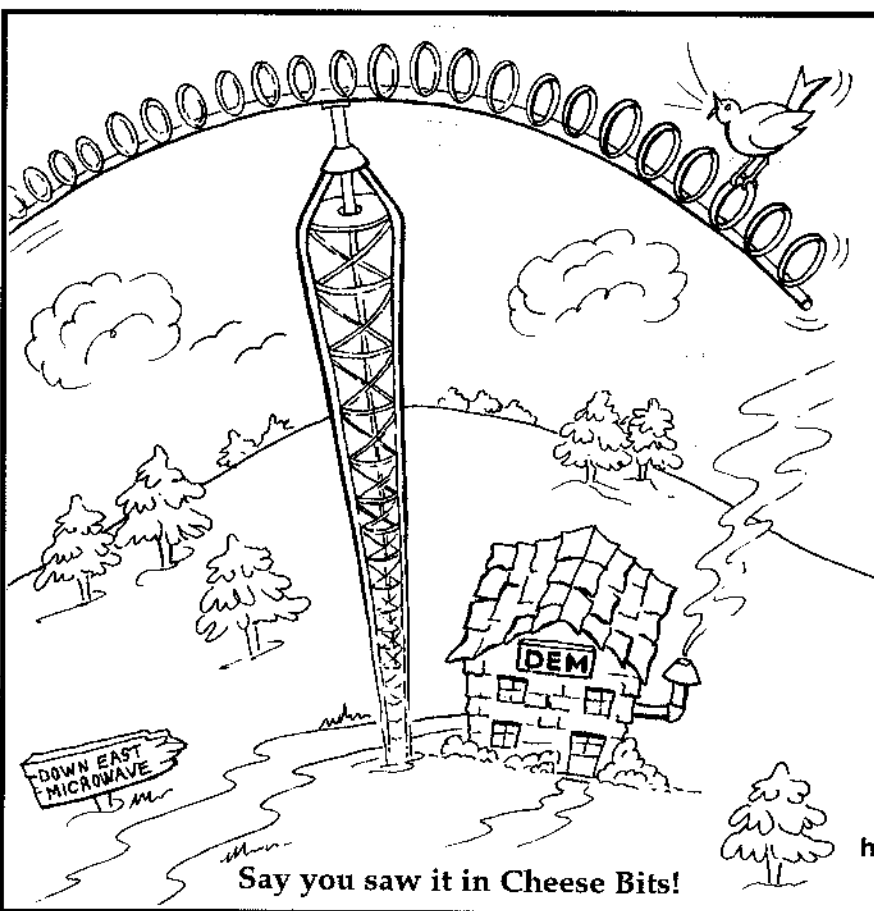
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