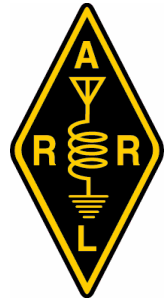




CHEESE BITS

W3CCX
CLUB MEMORIAL CALL

ARRL
Affiliated
Club



Volume LII

December 2011

Number 12

PREZ

Happy Holidays to everyone!

SEZ:

Thanks to the efforts of Bert K3IUV there is now plenty of written history and club tradition available on the PACKRATS website in the form of past issues of Cheese Bits. I was pleased to observe that this column has been known as Prez Sez since the very early days.

This is a special season – the time between Thanksgiving and Christmas – when we all pause from our regular daily routine to party, buy those special gifts for loved ones, family and friends and to attend many outside activities. You may even be putting out a colorful string of lights, and animated critters as part of your preparations.

All these activities take time and are important for the family. Our hobby, despite what some may believe, is secondary to family. However during all this preparation for Christmas or what ever holiday you choose to observe, we dedicated PACKRATS somehow find time to squeeze in a few extra ham activities: preparations for the January contest, the important December club meeting and the net activity where we can confirm the performance of our stations.

We must remember to thank our wives for the understanding required to persevere with all the extra effort being put in to ham radio. And this despite the impending holidays.

Faith in our ability to build a reliable station and keep it running for the January contest is only proven by, as KB1JEY puts it, BEING RADIO ACTIVE. Take some time now to get all those transverters tweaked, antennas checked, rotators aligned and computer interfacing completed.

Don't be sitting there on January 20th wishing you had just one more day to complete all those repairs. Prove out your efforts by checking into the Monday evening nets and get familiar with any improvements made to your station before the pressure of the contest descends and you discover you forgot some significant connection.

Our meetings are planned to be educational and informative. The December meeting is no exception. In preparation for the contest, K3TUF and others plan to present some contest strategy ideas after a tour of the Battleship New Jersey radio room by Rich KB3NRL.

Moving forward on ham radio here at W3GAD has been hampered a bit by Arlene's recent hand surgery and the need

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PACKRAT BEACONS - W3CCX/B

FM29jw Philadelphia, PA
50.080 144.284 222.064 432.286 903.072 1296.245 MHz
2304.043 3456.207 5763.196 10,368.062 MHz (as of 1/08)

MONDAY NIGHT NETS

TIME	FREQUENCY	NET CONTROL
7:30 PM	50.145 MHz	K3EOD FM29II WA3QPX FM29di
8:00 PM	144.150 MHz	N3ITT FN20KI
8:30 PM	222.125 MHz	KB1JEY FN20je
8:30 PM	224.58R MHz	W3GXB FN20jm
9:00 PM	432.110 MHz	WB2RVX FM29mt
9:30 PM	1296.100 MHz	K3TUF FN10we
10:00 PM	903.125 MHz	OPEN

Visit the Mt Airy VHF Radio Club at: www.packratvhf.com or www.w3ccx.com

for me to do all the cooking, house keeping and animal care as well as work 8 or more hours a day and try to get the station ready to roll.



As her recovery progresses she is more able to use both hands and so a few of the chores are now shared and there is a bit more ham radio time. There are only a few more "urgent" items remaining on the station list and, of course there is the never ending list of improvements. Some will just have to wait their time and may not be incorporated in the January station. The station will be fully functional for January and I believe the bugs that have plagued the station for the past few years, and my health will allow for a better operating effort in 2012.

From my house to yours have a Merry Christmas and **Listen for the weak ones...and work them.**

**73,
de Doc W3GAD**

EDITORS NOTE

Well the year is winding down. Personally 2011 has been a very difficult one and I'm looking forward to a better one in 2012.

I'm doing my best to have my station in fine shape for the January contest... with a little luck maybe 6-700 watts on 6M. I hope you'll be ready too!

All the best for the HOLIDAYS and for NEW YEARS. And thanks for your support with the many fine articles submitted in 2011. Keep it up in 2012!!

73, Lenny W2BVH

November Meeting Pix

At the November meeting



....we featured two parallel themes:

Tech Night. With plenty of top quality test gear



... and guys who could get the best measurements from it.

We also had great presentation by Bert, K3IUV on Rotor Maintenance and Repair



....with examples of what to do, what not to do, and why



Watch for the complete ROTOR presentation by K3IUV in an upcoming issue of Cheese Bits!!

Something for Rover's to think about. And Fixed stations too.

While listening to the presentation given by Steve and Sandra (N2CEI & K4SME) from DEMI on their 12 grid rove at MUD in October 2011. I took note on something they said and showed in a couple of pictures about communicating with the fixed stations that were looking for them. I wonder how many of those who listened to the presentation took note?

Steve said that they used channel #2 on 60 Meters for their liaison frequency to let the stations know when they were at a new grid. When they got to a site they set up a 60M mobil3 vertical. They put the antenna onto a stake mount that they stick into the ground, hook up the coax from antenna to radio (FT- 857D), go to ch#2 (which is already in the memory bank) and announce which grid they are in and then they are ready to run the bands, 6 meters thru 10 Ghz. The mobil3 is available from www.hamstick.com for around \$31; www.mfj.com has them too.

Now we all know about and have been using 2 meters for years for coordinating but, 2 meters is not always reliable and sometimes is distance limited. 60 meters is rock solid in close and out several hundred miles and for the most part is quiet. I have no problem talking to Steve in FL from my home in NY State any time I call him on ch#2 and at my end I am using a 40M inverted V with 40 watts.

We in the K2LIM contest group have been discussing this and are excited about trying this out. We have purchased a 60M ham stick and have a dedicated rig for ch #2. (In our case the rig is an Icom 706 MK IIG that I have sitting in my shack that I use for my 10M beacon.) This will be in place and ready for use starting with the January 2012 VHF contest.

We really appreciate the effort that all the Rovers put forth in activating grids and we want to work you all in every grid on all the bands that we have. But, we have missed some of you on some bands and in some grids in the past and we don't want that to happen anymore. I really feel that using this simple tool that we already have available to us in the new rigs that most are already using, will help us all to make those contacts and enhance the fun. So **rovers**, I hope that some of you will step up and try this along with us and we can report on the results after a couple of contests.

Fixed stations, you should think strong on this also. What a great way to coordinate with the rovers.

Looking to work you in the VHF contests.

Ken

KA2LIM

OCXO POWER SUPPLY FOR PORTABLE USE

Chuck Steer WA3IAC

I was looking for a power supply for a 10MHz OCXO that I purchased on Ebay for locking my 10GHz transverter when operating portable. The voltage required was 12 +/- 0.5 volts at 750mA. Wishing to use a battery to operate the 10MHz. reference source, I was concerned that as time went on in a contest the battery voltage would drop to a point that the oscillator would not work.

The OCXO drew about 750mA for the first 5 minutes or until the unit reached its operating temperature. At that point the current dropped to below 250mA.

My solution to the problem was to run the oscillator from a boost switching regulator. The main chip was a LM2577, 3A 15 watt regulator from Digi-Key. With an input voltage from 3.3 to 30 volts and an output voltage of almost the same range, I went to work on a design. One thing you must keep in mind about this boost switcher is that it is a 15 watt regulator. You can get 30 volts out with 3.5 volts in only if you have a load that is no higher than the maximum wattage. Otherwise, as the output current is increased, the maximum output voltage is decreased (e.g. it will drop out of regulation). In this case, if you set an output of 12 to 15 volts at about 1 Amp you could have an input voltage as low as 3.3volts.

You also need a minimum input-output differential. With +12 volts on the input of the switching regulator the output was +12 volts and the regulator was out of regulation. As the input voltage decreases to an input/output differential of about 0.5 volts the regulator begins to regulate. As a result, the output voltage remained stable under a one amp load (a 12 Ohm resistor) with an input voltage as low as 3.5 volts. By that time my 12 volt battery would be as good as dead anyway.

Under test and with a one amp load, the input current increased as the input voltage was lowered. With the oscillator as the load, the input current reached 600mA at 4.2 volts.

Test data with boost power supply and 10MHz OCXO.

Input voltage	Input current, mA.	
11.3	560	Cold start
11.3	198	After 10 min. (constant load)
8.2	281	
6.2	389	
4.2	611	

Data on this chip can be found on the web at: <http://www.national.com/ds/LM/LM1577.pdf>

73's Chuck WA3IAC

W2SZ/1 June Contest Operation

With Credit to Dick Frey WA2AAU, and the NEWS newsletter

(Extract of an article describing the June contest setup for W2SZ/1. The information may be dated — about 10 years old — but still representative of their current operations).

W2SZ/1 is the call sign used by the group of VHF contesters that has been using Mt. Greylock for the last 35 years. The W2SZ call sign belongs to the RPI Radio Club. RPI is an engineering school in Troy, New York. Many of us VHF contesters are alumni of the school, but over the years, many others have joined the crew. There is no formal organization to our VHF contest group. Instead we are a group of hams united by VHF contesting from Mt Greylock and we are very SERIOUS about doing just as well as we possibly can during each contest.

Unlike many contest groups, we BUILD most of our equipment. Except for the HF transceivers used as the starting point of our stations, virtually ALL of the remaining parts of our stations are custom made. We make all our own transverters, power amplifiers, and antennas. By making the equipment ourselves, we try to make it just a bit better than anything that can be purchased. We can also make it so that it fits our operation just the way we want. This approach stems from the engineering background that many of us have from being graduates of RPI. Even so, much of the building is done by individuals good with their hands, not the "egghead" engineers. Just because you can design something doesn't mean you can build it well!

Setting up a VHF station the size of W2SZ/1 in about a day and a half takes a lot of people with a lot of skill. We put up a total of 9 steel Rohn-25 towers ranging from 30 to 60 feet in height. They are used as follows: 6M, 2M, FM, 222, 432, 903/1296, 2/3/5G, 2/3/5G Extra, and 10/24 G. Each of these towers has good size antennas on it too! For example, on 6 Meters we use 4 beams with 5 elements on 21' booms. On 2 Meters we use 4 DL6WU style yagis each 32' long. All this stuff has to come down on Monday too!

Just the logistics for our operation take a lot of effort. We use 3 aluminum "step-van" style trucks for our operating positions. We also bring an additional window van, 2 tower trailers and 1 antenna trailer. All these vehicles must be kept in running condition. We must do most of our own repairs. It would be too expensive otherwise. Our utilities team has the responsibility to set up power, telephone and computer systems for the contest. They must also organize, prepare, repair, and maintain the systems before the contest. These folks are run ragged and could really use some help too.

For those that participate, they have to work their butt off. They get little sleep. They may have to work in the rain. They may be putting up antennas in a screaming gale. They may be frustrated, and conditions might stink BUT they also experience the satisfaction of working with a team where everyone is trying their damndest to do the very best that they can. There will be some absolutely beautiful sunny days and spectacular sunsets. There will be a nice warm lodge

....W2SZ/1 continued

on the mountaintop to sleep in. There will be a restaurant for bountiful breakfasts and dinners, regardless of the weather. There will be days when you enjoy a beautiful warm summer day on the summit when your friends are cooking and sweating in the humid 90s in the valley. There will be days when you can see 130 miles into the Adirondacks. There will be days when you see the inversion on the horizon. There will be days when we will work Florida on 1296 with 1 Watt. There will be days when 6 meters opens and you work Europe. There will be days when the night sky is so clear you never saw so many stars. There will be many weekends when we win the contest (we hope). There will be some weekends when we loose.... boooo hisssss. There will be days when we set a new all time record for VHF contests. But most of all you will enjoy the camaraderie of a crew that enjoys doing something they love to do the very best that they can.

Thanks to K3IUV for finding this article and for reformatting Cheese Bits

Hints and Bits

from the archives by WA3JUF 1983 (now W3KM)

Use fuses between your high current DC power supplies and your amplifiers and transverters. The transverters and other equipment have reverse polarity diodes inside that protect against accidental reversal of the DC supply leads.

Without an in-line fuse, your Astron 20 Amp power supply will pump its full current into the transverter which will certainly blow the reverse polarity diode and many other semiconductor devices.

Replace the 50-cent fuse OR the transverter.....it`s your decision.

Azimuth Reader

Here is a very clever azimuth reader for an EME antenna. The object in the lower right hand corner of the picture is a small inexpensive video camera that`s wired directly into the shack. Azimuth readings show up right on the screen in the shack. No need for shaft encoders, 400 degree pots or any signal conversion... Use a weather proof camera, or put a more delicate one in a clear plastic box, and you`re set.

This pic is extracted from a MUD PowerPoint presentation by John W3HMS. Let`s see if John is willing to flesh out the PowerPoint slides into a full fledged article for Cheese Bits! It will be a very welcome piece.

— W2BVH



K3TUF Tower Party November 12, 2011

At the Tower Party we set out to and accomplished the following:

Remove old 5 element Cushcraft 6 meter beam and replace it with a C3I 6 element beam.

We added a new boom tray for another beam and added a Cushcraft X7 tri band beam for the low bands.

Then we installed a .98 meter dish at 140 feet along with the matching 5GHz and 10GHz electronics box just below the dish.

Last we installed the 24GHz system at the 155 foot location.

The best part of the day was the great fun we had together and the award winning chili that Claire made for the event.

Thanks go to: NN3Q, N3NGE, N3JYD, KB3NRL, WA3GFZ, W3FEY, WB2ONA, K3JJZ, K3IUUV and KA3TUF

73, Phil K3TUF



...Tower Party cont'd



WAY UP THERE — Work safe guys!



UP UP

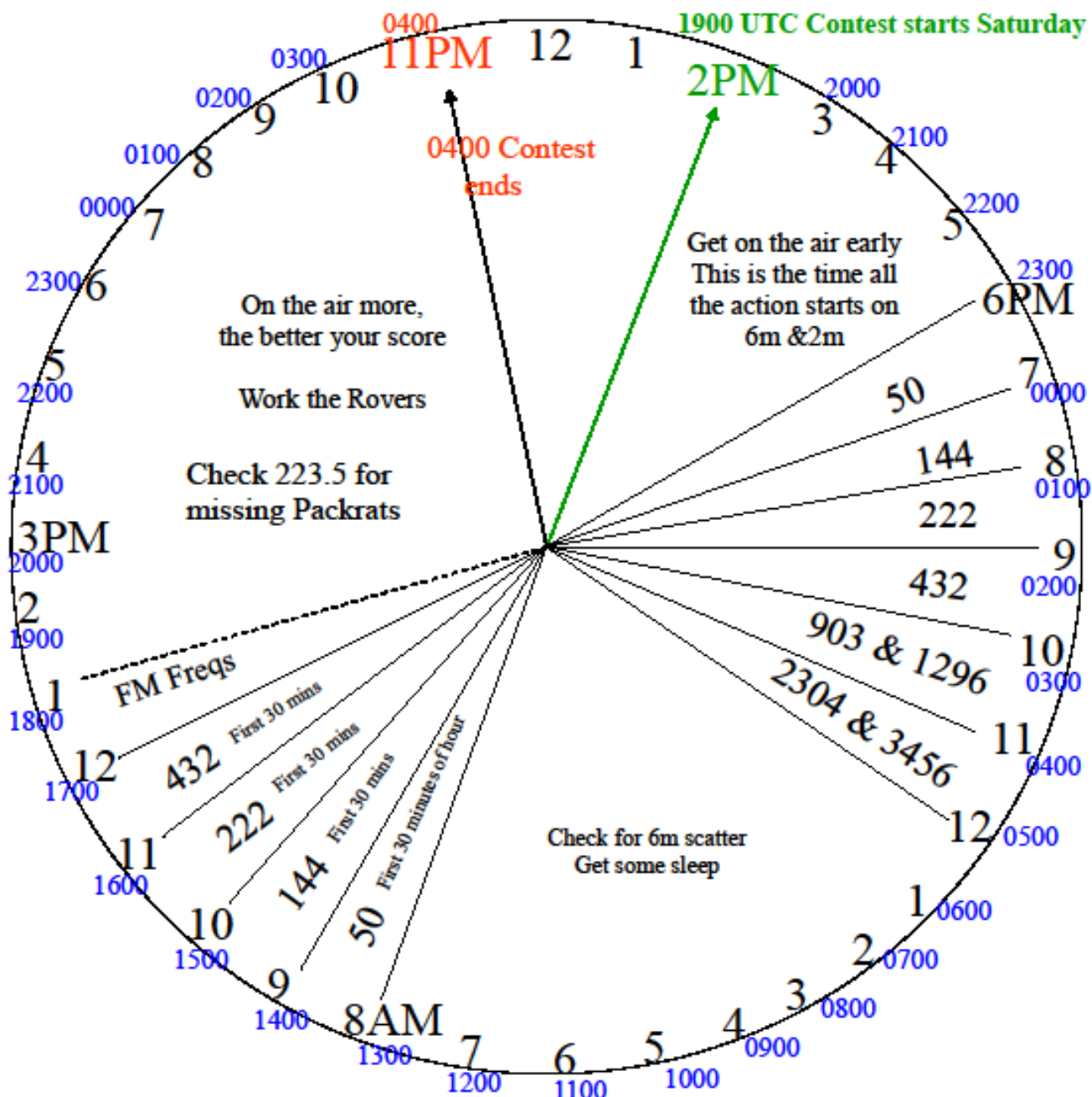


UP



Base

January Contest Clock Activity Hours



Work all Packrats on all possible bands

Check 6 & 2 at sunrise, sunset and noon for DX

Eat and Drink right. Get some sleep

DO NOT USE 223.5FM for coordination

FM Frequencies: 146.55 and 146.58
223.50
446.000

Work the Activity Hours Have Fun!

Every contact adds to the club aggregate score

Revised 10-28-2011

The Wayback Machine

Gleaned from the pages of
Cheese Bits, December, 1961
(Vol. IV Nr. 9)

de K3IUV

(author's comments in italics)

- The cover of this issue was devoted to a full-page article announcing nominations for the tenth annual Edison Radio Amateur Award. GE's Electronic Components Division sponsored the award, which is presented for Outstanding Public Service. "Candidates nominated will be judged by an impartial panel consisting of the American Red Cross Chairman of the Board, an FCC Commissioner, and G.L. Dosland, President of the ARRL". The article describes the requirements, has a nominating form, and comments on past recipients. The selected recipient receives a trophy and \$500, to be presented at a banquet in Washington D.C. *(The 1960 recipients were KH6UK, Ralph Thomas, and W6NLZ, John Chambers. Awarded for their distance record of 2540 miles on 432 (California to Hawaii). This and earlier records on 144 and 220 confirmed that UHF signals were not limited to line of sight, as once thought).*
- *(Related to the above, I recall the semi-monthly GE "Ham News" bulletins, published by the GE Radio Amateur's Club. The bulletins contained construction details and information for*

some interesting pieces of Ham gear (Obviously using GE tubes!). I used to pick mine up at A&G Radio (Now defunct.) in Elkins Park).

- The club officers' list notes W2AXU as the President, and this author as the VP. Monday night nets announced as follows: 144.2, 7:00 p.m.; 50.2, 8:00 p.m.; 221.4, 9:00 p.m. and the Nitwit net at 10:00 p.m. *(If you don't know what the nitwit net was, ask an old-timer).*
- Several "Official Bulletins" issued by the ARRL were printed verbatim, as was the custom in early Cheesebits. Of particular interest is Bulletin # 824 from ARRL Headquarters Nov. 10, 1961, as follows: To all radio amateurs BT. Amateurs who have two-meter gear are reminded to keep their equipment in readiness for Project OSCAR. When launch time approaches, extra bulletins will be transmitted by W1AW at frequent intervals on its announced frequencies listed on page 64B of October QST. The OSCAR transmitter will operate with 100 milliwatts power on 145.0 Mc and will transmit the letters HI on CW.
- As EI, K3JJZ was prone to do, this issue carried a tongue in cheek article by him entitled "MVF AND TOWER". The article details in humorous tones the struggles to erect a tower and antennas at the QTH of the club treasurer, W3MVF (SK). Replete with

ladders, bad drills, rain and assorted other tribulations, the article was pure entertainment. *(Too lengthy to include here. Hold your breath for a Special issue of Cheese Bits in the near future, which will republish this, and a number of other humorous and/or interesting articles from the early issues).*

- Helen notes that three “I” stations; W3ISV, Syl Einhorn (SK), K3IUU, Bert and K3IUZ, John Hannes (SK) recently passed their General exams.
- Bob, W3GXB notes that he is expecting a new offspring on the 31st of December. *(Bob, I don’t recall. Was the date forecast for the tax deduction accurate)?*
- Smel-A-Rhat’s banterings included comments on the club nets. He pointed out that the nets serve: 1) to promote VHF activity, 2) to provide timely announcements to the club members, and 3) to foster comradeship between club members. He goes on to berate those members that call “in and out”, and then head off for other activity on the bands. He also has negative comments about members that rush in to be first, make their transmission, and then leave without listening to anything from anyone else. *(I think we still see that happening)*. Lastly he expounds on the few that do not know how to “zero beat the net frequency with a VFO” *(The advent*

of SSB and Transceivers pretty much eliminated this problem, but back then, after getting on the air, your objective was to “Get a VFO”).

- Lynn, W3NSI’s monthly column “New Products of Interest to Hams” described a bolt-in Nuvistor socket. *(Show your age and remember what a Nuvistor was!)*.
- Talk about coincidence: at the November meeting, Bert, K3IUU introduced the Speaker W2GQK, Jack Sterner. His topic was “Nuvistors”!
- The Technical Highlight of this issue was the inclusion of a schematic for a Transistorized Polar Relay “RTTY” converter. Designed by Phil Catona, W2JAV (SK) *(we used to call Phil Mr. Teletype)*. Phil had previously designed a tube converter that would take the two-tone AFSK signals and convert them to the dc pulses required to operate the Teletype machines. *(A number of club members and others in the area (including ye author) were active in RTTY operation in this time period. Operating primarily on 144 using AFSK, the stations included unattended autostart, a Model 12 Teletype (or if you were lucky, a Model 15. Or if you really got lucky, you found a Model 26 (quiet) machine). The “reperfs” that we used generated chad or chadless paper tape. Our first introduction to what later became a*

Events

For inclusion, please direct event notices to the editor.

EME Contest, 50-1296 MHz (round 2) - Contest Nov 19-20, 2011. See <http://www.arrl.org/eme-contest> for details

January VHF Sweepstakes - Contest January 21-23, 2012. Details to follow. Not too early to start planning!

ARRL June VHF QSO Party - Contest June 9-10, 2012. The annual Camelback trek. Details to follow

ARRL August UHF Contest - August 4-5, 2012. Details to follow

10 GHz and Up (round 1) Contest - August 18-19, 2012. Details to follow

September VHF QSO Party - Contest September 8-10 2012. Details to follow.

10 GHz and Up (round 1) Contest - September 15-16, 2012. Details to follow

...Wayback

household word, thanks to the Florida election fiasco). Phil was responsible for getting many of the RTTY stations in operation. His basement in Hammonton, NJ, was a veritable warehouse of machines and parts. (If you think a "Sword Box" was a place to store your Swords, think again, or ask an old-timer).

• 30

A news reporter named Bertie
Wed a copyeditor called Gertie.

When the stork paid a call,
They decided "That's all,"

And that's why they named the kid Thirty.

'Till next time 73, K3IUUV

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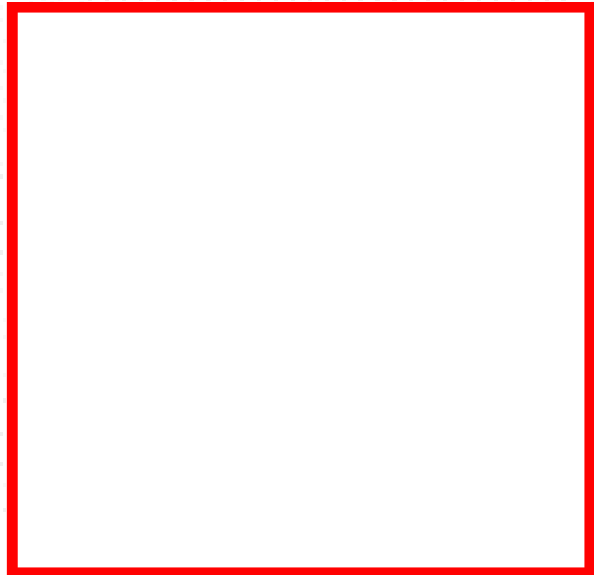
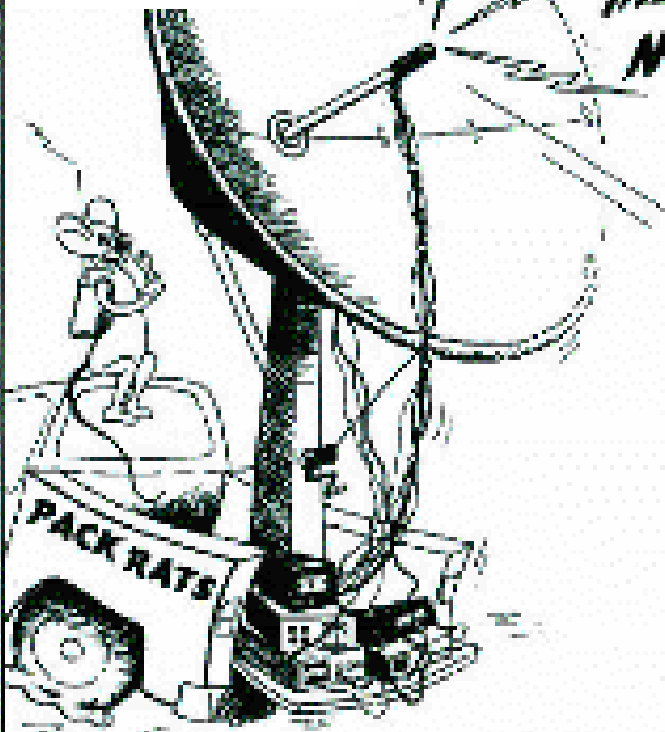
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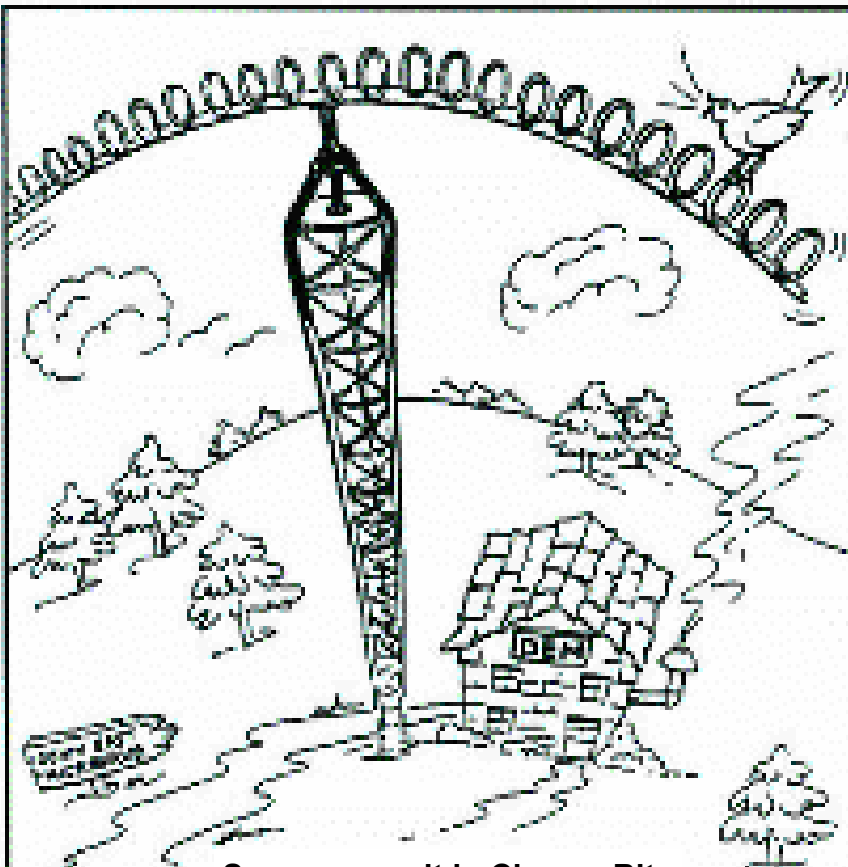
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