

# CHEESE BITS



**W3CCX**

CLUB MEMORIAL CALL

SCANNED TO PDF BY BERT, K3IUV, 2013



ARRL  
Affiliated  
Club

VOLUME XLI

January 1999

Number 1

## The PREZ SEZ

We had a really good turn out at the December meeting. It shows that the interest in the January contest is high and getting higher. It is nice to see that old tradition of last minute preparation and only getting on for the contest is finally starting to fade. There will always be the last minute people, scrambling to get something working for the weekend. The club appreciates the effort, but I don't think it's why we all became amateur radio operators. At least it's not why I started in this hobby 34 years ago. Use the contest as an excuse to get back on the air, but don't stop there. Try getting on the air and calling CQ solely for the purpose of having a rag chew. Not just because the band is open or just because of a meteor shower or just to see if the equipment still works. Get on and rag chew. Be at one with K1PXE. I know it's a radical concept. Operating, however, is highly contagious. There is great pressure from commercial interests for the VHF/UHF frequencies that we call home. We have to demonstrate band utilization like never before. Once a year in the contest won't do it. The cell phone crowd will win. Money talks, amateurs will walk.

As we start a new year it's a good time to think about where the club should be heading. If no one says or does anything then it will be business as usual. If you have some ideas on things we should be doing or perhaps a new activity to replace an old activity, or an idea for a project that the club as whole should be involved in, then why don't you come to a board meeting and express your ideas. Change is good.

If you haven't looked at the club WEB site ([Error! Bookmark not defined.](#)) lately there have been many changes in both appearance and content. Some new technical articles have been added and the 6 digit squares and member e-mail list, among other things, have been updated. We also have an announcement for the 1999 January Contest worked the most Pack Rat QSO's award. Each year the club give out a really nice award to the single operator station that works the most Pack Rats, on the most bands, during the January Sweepstakes. When you are on the air for your rag chewing session, be sure to pass the word about the award and to look on the Pack Rat web site for more information.

Happy New Year.

73, Ron, W3R1W

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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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**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.ij.net/packrats>

**SUBSCRIPTION/ADVERTISING MANAGER:**

Bob Fischer, W2SJ  
7258 Walnut Avenue  
Pennsauken, NJ 08110  
(609) 665-8488  
[fnst57a@prodigy.com](mailto:fnst57a@prodigy.com)

**EDITOR:**

Harry Brown, W3ITT  
3012 Potshop Road  
Norristown, PA 19403  
(610) 584-4846  
[hbrown@voicenet.com](mailto:hbrown@voicenet.com)

**CLUB TREASURER:**

Dave Mascaro, W3KM  
1603 Mink Road  
Ottsville, PA 18942  
(215) 795-2648  
[dmascaro@gi.com](mailto:dmascaro@gi.com)

**AWARDS CHAIRMAN:**

Bob Fox, W3GXB  
(610) 346-8698

**TRUSTEE OF CLUB CALL - W3CCX**

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AA3GN (1 Yr) Joe Landis, [landis@nad.com](mailto:landis@nad.com)  
W2SJ (1 Yr) Bob Fischer, [fnst57a@prodigy.com](mailto:fnst57a@prodigy.com)

**MONDAY NIGHT NETS**

TIME	FREQ.	NET CONTROL
7:30 PM	50.150 MHz	K3FOD/WA3EHD
8:00 PM	144.150 MHz	N3ITT
8:30 PM	222.125 MHz	W2SJ
8:30 PM	224.58R MHz	W3GXB
9:00 PM	432.110 MHz	W3RJW
9:30 PM	1296.100 MHz	WA3NUF/AA2UK
10:00 PM	903.100 MHz	N3AOG

**COMMITTEE CHAIRMEN**

LADIES' NIGHT: N3AOG 215-443-9965  
JUNE CONTEST: N3ITT 610-847-5490  
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## JANUARY CONTEST PREPERATIONS

By: Bill, AA2UK, 99 CONTEST CHAIRMAN

Hi Guys, I don't know about the rest of you but I am getting very excited about this year's January contest. Looks like some of our members will be on a variety of new microwave bands. Others just need a little push "help" to finish some of thier microwave projects. This contest is different to me because of the relocation of my station to Mark W2UR's location. So far it has all of the excitement of my first contest. Mark and I have been revamping some of my hastily made mistakes to get on a band a week when I first joined this great organization. It was a thrill to work K1UHF on 2304 last Monday night. Dels signals were very good 549 he gave our 100 watts a 579 not bad for our first pre contest DX. We plan on being on all bands from 6 meters thru 24GHz.

Anyway everybody have a Merry Christmas and a Happy New Year and see you all in the QRM. 73 Bill AA2UK

**TEAM #1 W3RJW Captain**, N3AOG, W3KM, N3EMY, W3HK, W2SK, WA3U, WA3RLT, WR3P, K3EOD, K3DMA, K3PHY, K1DS, K2FK, WA3AQA, WU3C, WA3NFV, K3JJZ.

**TEAM #2 N3NGE Captain**, WA3NUF, KB3IB, N3GSA, K3BPP, N3PLM, K3MFL, WA3IAC, N3ITT, W3DFM, N3OZO, K3HZO, W3SYN, K2UT, N3DG.

**TEAM #3 WA3DRC Captain**, W3OR, NE3I, W3IIT, KA3MGB, WB3KRW, K3IUV, K3ESJ, N3NID, N3DQZ, WA3EHD, KU3A, W0RSJ, WB2ONA, N3EXA, WN3A, KU3T, K3LOM.

**TEAM #4 AA3GN Captain**, NK8Q, WC2K, K3GNC, K3EBZ, N3XEM, WA3AQA, W3HFY, N2SB, W3GXB, N2DEQ, KU3T, N3EVV, WA2OMY, WA3YUE.

**TEAM#5 W2PED Captain**, W2UR, W3KKN, W3HMU, W2SJ, KB3XG, WB2VLA, K2TXB, KB3PD, W3GAD, WA2GFP, K2UT, AA2UK.

## CALENDAR OF COMING EVENTS - JANUARY 1999

- 1 **New Years Day** Only 22 days until the 1999 January Sweepstakes
- 3 Predicted peak of the Quadrantids meteor shower at 1311 UTC. Check the following URL for additional info:  
[http://science.nasa.gov/newhome/headlines/ast28dec98\\_1.htm](http://science.nasa.gov/newhome/headlines/ast28dec98_1.htm)
- 14 **Board of directors meeting** at the QTH of Ernie, W3KKN. All interested parties welcome. For directions call 215-659-3485. Meeting starts at 8:00 P.M.
- 21 **Regular meeting** of the Mt. Airy VHF Radio Club at the Southampton Free Library on Street Rd. in Southampton, Pa. All VHFers and would be VHFers and friends are welcome.
- 22 **LEAP INTO THE MICROWAVES** with the Packrats! 903 and above. Every 4th Thursday of the month operate from 8 to 10 PM local time on any band 903 MHz and above. For coordination on these difficult long haul contacts 144.260 MHz is the suggested liaison frequency.
- 23-24 **THE CONTEST** Everyone's help in getting at least 51 logs submitted this year is necessary to qualify the club for the Unlimited Class in the club competition. See Dec. QST or consult your contest package for the rules.
- 31 **Maryland Mobileers ARC Post Holiday Swapfest** and Flea at Odenton Vol. Fire Dept. Hall in Odenton, Md. VE Exams. TI on 146.205/.805.

Mar. 17 **HOME BREW NIGHT** at the regular meeting.

### SWAP SHOP:

(send all ads to the editor)

**FOR SALE:** KB6KQ Loop Antennas Home Page can be found at <http://qsl.net/nd2x/pouch/kb6kqnorm.html> per Bob, N3KEM. Loop antennas for 10 M (28 MHz) through 70 cm (432 MHz) available from Norm Pedersen, KB6KQ, KB6KQNORM@aol.com

**FOR SALE:** CALLSIGN HISTORY. Name and address of each holder since 1912. Cost \$12 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.

**FOR SALE:** Frequency West phase locked oscillators (brick) with cavity on 1152 MHz, internal 96 MHz oscillator, tested, checked out and ready to go, with crystal. \$31.00 PP 48. Contact Ed Bruns, W3EKT, 3420 Shady Lane, Gicewood, MD 21738, edbruns@juno.com.

### TID BITS

**VUCC Award Checking:** If you want QSL cards checked for your initial VUCC Award or an update, contact Harry, W3IIT at [hbrown@voicenet.com](mailto:hbrown@voicenet.com) or 610-584-4846. I'll do updates (up to 25 additions) at regular club meetings.

The Jan 1999 432 and Above EME Newsletter by Al Katz, K2UYH, is at: <http://www.nitchawk.com/rasmit/cor70cm.html>

**K3GNC'S FEARLESS FORCAST - JANUARY VHF SS 1999**  
**GO PACKRATS!!**

<u>SCORE RANGE</u>	<u>SINGLE-OP</u>	<u>MULTI-OP</u>	<u>ROVER</u>
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>= 250K	W3RJW WC2K		
>= 200K		W0RSJ	
>= 150K	WA3NUF W3OR WB3KRW		
>= 100K	W2PED K2TXB N3EXA N3DQZ N3NGE	WA2OMY	
>= 75K	W2SJ W3KM AA3GN WA3DRC K3GNC	W3ITT	
>= 50K	NK8Q W2SK K3HZO N3AOG		
>= 25K	WA3EHD KB3IB N3XEM KU3T K3IUV W3KKN K3BXG W3DFM W3MFI		KIDS
>= 10K	WA3AQA WA3RLT W3IFT W3GAD WA3U		N3EVV
>= 1K	EVERYONE ELSE		

**TOTAL PREDICTED POINTS: 3,000,000+ !!**

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January 1999 Send to: SUBSCRIPTION/ADVERTISING MANAGER;

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

## A No-Frills Voice Keyer

Paul Drexler, W2PED

If you're serious about contesting, an automatic voice keyer can be a tremendous asset. A voice keyer will save wear and tear on your voice, and help to minimize fatigue during extending contesting. Many of the voice keyers on the market these days are computer-based, like the one by Packrat Dave Mascaro (W3KM), using the Sound Blaster board. While I'm sure I'd be quite happy using Dave's computer-based voice keyer, I still have an old 286 in the shack, so a stand-alone voice keyer made sense for me.

The keyer shown here has been adapted from a design by Joe Jarrett, K5FOG, presented in the January 91 issue of QST<sup>1</sup>. I took the original design and simplified things a bit by providing just one memory (after all, that's all I ever use on my CW keyer...) and designed a simple PC board for the circuit. The heart of the keyer uses the Information Storage Devices, ISD1020 capacitive memory voice storage IC. The ISD chip has several neat features - number one is that since it isn't microprocessor-based there are no clock signals to worry about ... no nasty birdies in my 50 MHz receiver! Secondly, the ISD chip has a nonvolatile memory that will save your "CQ contest" message for up to 5 years without power. The ISD1020 will store up to 20 seconds of recording time - plenty for even a long CQ<sup>2</sup>. Additional circuitry provides a PTT keying line (PTT low) to accommodate most transceivers. The entire circuit may be built in an evening for under \$35 in parts. All components are readily attainable, and may be purchased at Radio Shack or thru mail-order sources.

Looking at the operation of the ISD chip, the playback/record function of U1 is controlled by pin 27. It's tied low for record and set to +5 VDC for playback. A chip-enable pin, pin 23, is initially set HI, and then pulsed LO for playback, and must stay LO during recording. At the end of recording, when the chip enable pin goes high, an end-of-message bit is inserted into memory, telling the chip to stop when it's reached the end of the recorded message. Each time the chip enable is activated, the power-down pin (#24) is used to reset the chip to prevent a memory overflow condition. The C1/R1 network forms a positive pulse to accomplish this. The ISD chip has an internal mic preamplifier with AGC; R5 and C2 form the necessary time constant for the AGC. Two NOR gates are used (U3) to form a PTT keying circuit. Keying is initiated when the PD signal goes low, and is then reset when the chip enable goes low at the end of a message. The output from U3 drives a common-emitter NPN transistor to provide a PTT low condition. U1 is meant to drive a 16 ohm speaker. If an 8 ohm speaker is used, however, serious distortion will be experienced. Since most speakers are 8 ohms, a series 10 ohm resistor (R8) keeps the output amplifier happy with the proper impedance. For more detailed information on how the ISD chip functions, see the ISD literature or the December 91 QST article.

Circuit values are listed on the schematic and most of the component designators match the QST article for ease of reference to the original article. Most of the circuit values are pretty forgiving of substitutions; watch capacitor voltage ratings, though. The circuit board shown here was made using a board-cutter machine, so no etching was necessary. Overall size is roughly 2x3 inches, small enough to integrate it into your HF rig or CW keyer. Although I show surface mount components for most everything, the circuit lands are large enough to use small leaded components. A summary of the key components is shown below. There are nine wire jumpers required for this board layout (the price you pay for not having a *real* etched circuit board...). Don't forget any of the jumpers -- they're easily overlooked during assembly.

D1	1N914 diode	Q1, Q2	2N2222
D2	1N4001 diode	R9	3 K ohm pot
U1	ISD 1020 voice record chip	S1	Normally Open push button switch
U2	78L05 5 volt, 100 mA regulator	S2	SPDT toggle switch
U3	4001 quad NOR gate	SPKR	8 ohm miniature speaker
		MIC	Electret mike. Radio Shack p/n 270-090

I stumbled upon something interesting after building several keyers. If you use an IC socket for U1, you'll find that the chip tends to get a little warm. Although it only draws 25 mA at 5VDC, the generated heat is only dissipated through convection. One way around this is to avoid the socket altogether and mount the chip in "surface-mount" fashion. Carefully bend all of the leads to form small surface-mount "feet" and solder onto the board. The IC will run significantly cooler by allowing the heat to dissipate through the leads and surrounding traces.

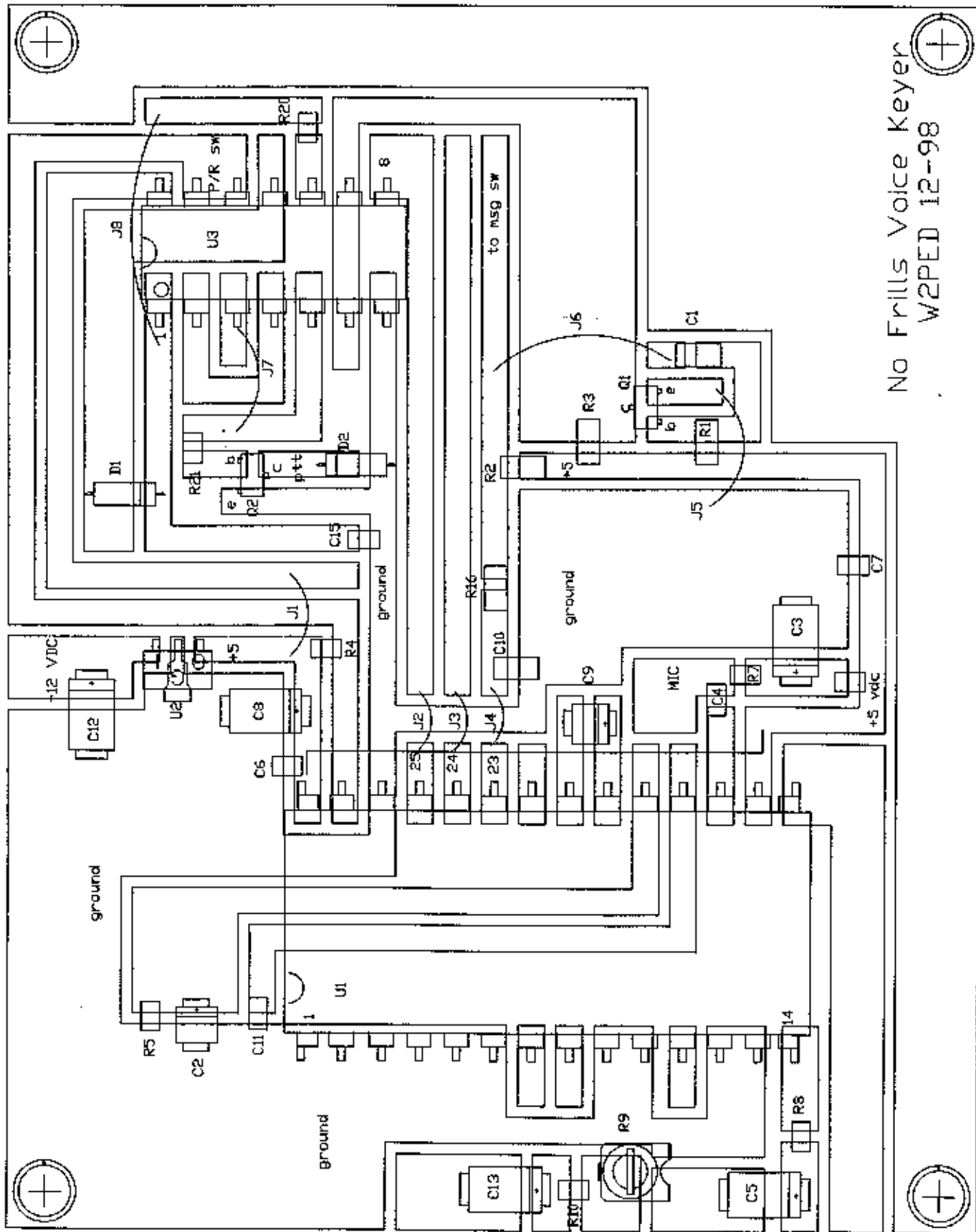
Once you've completed construction of the keyer board, you'll probably want to test it on the bench before packaging the unit. If, after assembly, you find the circuit doesn't work as advertised, turn off the power and carefully check for the proper placement of all components. After testing the board, it can then be mounted in its intended housing. Small shielded cables are recommended for making PTT and Output connections to the PC board.

Happy contesting!

<sup>1</sup> Thanks to Fred Stefanik, N1DPM for pointing me to this article.

<sup>2</sup> Longer recording time devices are now available from ISD





No Frills Voice Keyer  
W2PED 12-98

mic out

spkr

spkr con

# The Pack Rats Announce 5th Annual January Contest Award!

(For Non-Members Only! Pack Rats Not Eligible)

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Once again as an incentive to increase activity on the VHF + bands during the ARRL January VHF Sweepstakes on January 23-25, 1999, The PACK RATS will sponsor a special award to be given to the NON-CLUB MEMBER, SINGLE OPERATOR STATION that works the most PACK RAT QSO's on all bands.

For example, if W3ABC works W3RJW on 5 bands and works WA3NUF on 2 bands he will have a total of 7 PACK RAT QSO's.

Please submit a copy of your logs with PACK RAT QSO's worked indicated for verification to Bob Fischer, W2SJ at the address below.

Deadline for logs received will be 30 days after the contest. The award will be a handsome brass key mounted on a finished wood base with an engraved plate and a pen holder. This award was on display at our "HAMARAMA" hamfest in October. If you saw it you will want to display it in your shack soon!

All participants submitting logs will receive a certificate suitable for framing.

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**NOTE: SEE LIST OF PACK RATS AND BANDS THEY WORK ON BACK.**

**For Any Questions, Please Contact:**

**Bob Fischer, W2SJ**

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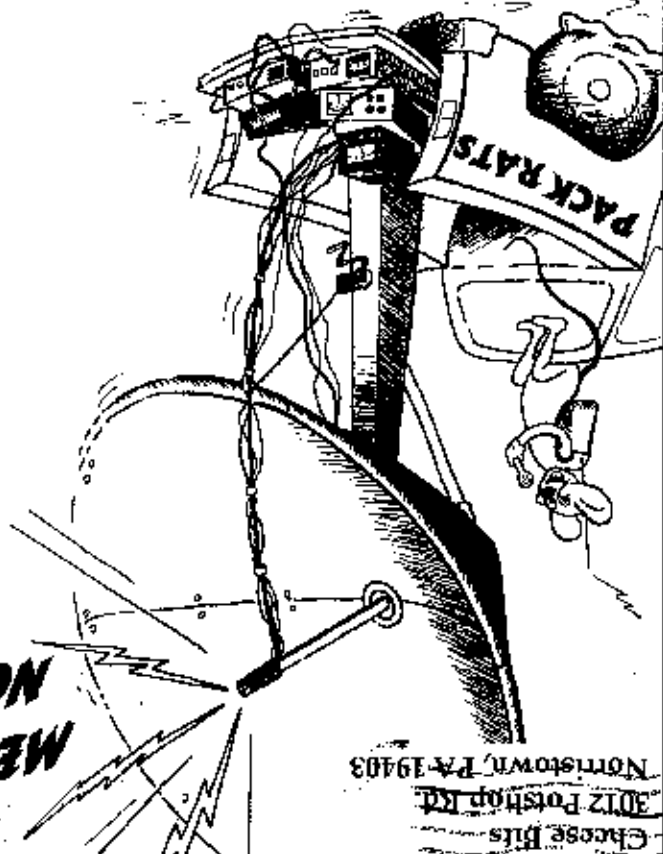
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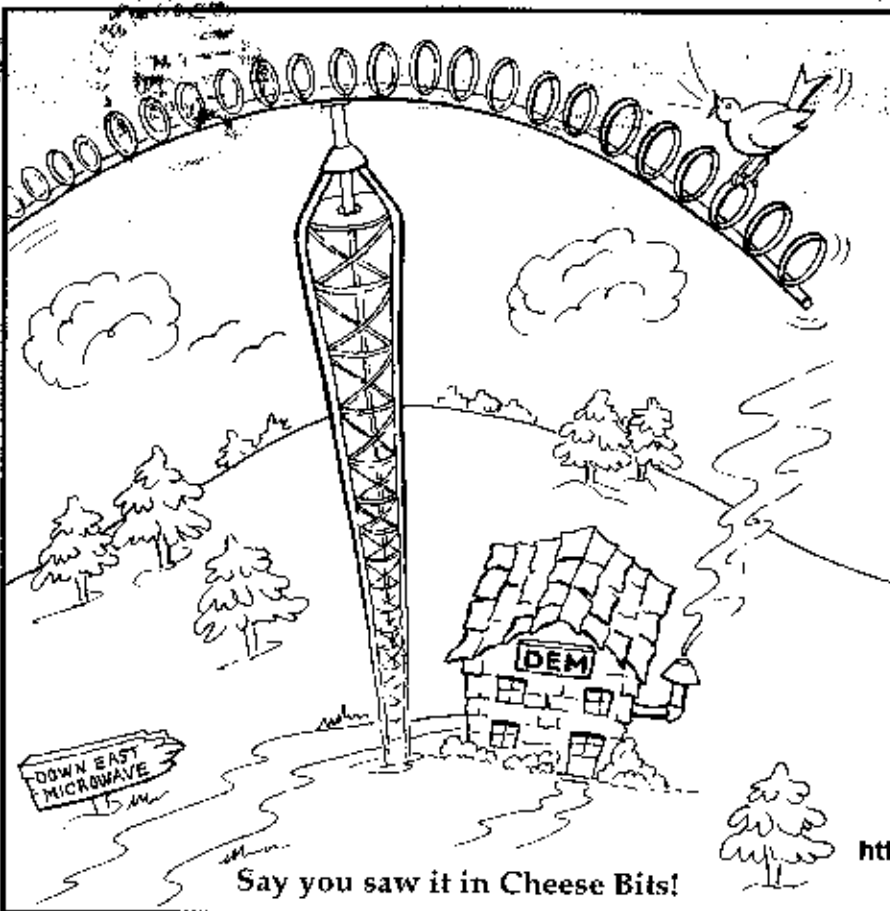
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