

# CHEESE BITS



**W3CCX**

CLUB MEMORIAL CALL



ARRL  
Affiliated  
Club

SCANNED TO PDF BY BERT, K3IUJ, 2013

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Number 11

## The PREZ SEZ

We should all be proud of the great job done at Hamarama 2K. Personally, I don't miss the drive-in! The parking is so much easier at the Grange! Everything went well this year, except for the food vendor, and we will repair that problem next year. Much thanks to our chairman, Joe, W3KJ, ("Kilowatt Joe") for his perseverance.

Next on the club agenda is the January contest. As busy as all of us seem to be, myself included, this is an opportunity to set aside a weekend, well in advance. I know I have invested quite a few \$\$ over the last few years on this RF stuff, and it sits unpowered most of the time (except most Mondays). Our contest chairman, Joe, AA3GN, is activating a plan to aid those who need it. I would like to encourage you to set aside the time now to operate, and also evaluate where you need improvement. In traditional Pack Rat style, we will try to find the stuff needed to round out your operation. The truth here: this is the only time of year most Pack Rats are "heard in Force". Do a little leg work, and make sure the gear is working!

The movie "Frequency" just came out on video, and has a strange angle on ham radio to support the plot. The brilliant Aurora displays would make for great VHF CW QSO's, but have a time warp effect in this movie. Check out the Heathkit transceiver used throughout! The last ham publicity I saw was when we saved the world via CW in Independence Day!

The weather is getting cool, so fix the aluminum now! Over here, 10 Gig is getting close. I could do a tripod thing now, but I am shooting for a dish on the mast soon!

73, Ed, 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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**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 10,368.152 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:	W3KJ	215-256-1464
VHF CONFERENCE:	KB3XG	610-584-2489



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## CALENDAR OF COMING EVENTS - NOVEMBER 2000

- 1 Only **81 days** until the 2001 January Sweepstakes (Jan. 21-22, 2001).
- 4-6 **ARRL November CW Sweepstakes**. See Oct. QST, page 102 for rules.
- 6 Check into the **6 Meter Net** on 50.150 MHz at 7:30 PM EST.
- 6 Check into the **903 MHz Net** on 903.100 MHz at 10:00 PM EST.
- 7 **Election Day**
- 9 Packrat **board of directors meeting** at the QTH of Ernie, W3KKN. Call 215-659-3485 for directions. All interested parties invited.
- 11 **Veterans Day**
- 13 **Check into the 2 Meter Net** on 144.150 MHz at 8:00 PM EST.
- 13 **Check into the 1296 MHz Net** on 1296.100 MHz at 10:00 PM EST.
- 16 **Regular meeting of the Mt. Airy VHF Radio Club** at the Southampton Free Library on Street Rd. in Southampton, Pa. All VHFers are encouraged to come and enjoy the evening with us. Ben, WA3RLT, will give a presentation on the Packrats activities during the Jan. 2000 VHF Sweepstakes (a must for those wanting to know what's workable and when and where to operate for those DX contacts). You need not be a member to attend. Do you need to attend this meeting to qualify for club contest minimum attendance? Come anyway and bring a friend.
- 17-18 Predicted peak of the **Leonids meteor shower**.
- 18-19 **ARRL International EME Competition** - 2nd weekend. See Sept. QST, page 103 for the rules.
- 18-19 **ARRL November Phone Sweepstakes**. See October QST, page 102 for rules.
- 20 Check into the **220 MHz Net** on 222.125 MHz or 224.58/R at 8:30 PM EST.
- 20 Check into the **1296 MHz Net** on 1296.100 MHz at 10:00 PM EST.
- 23 **Thanksgiving**
- 23 **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 those difficult long haul contacts 144.260 MHz is the suggested liaison frequency.
- 27 Check into the **432 MHz Net** on 432.110 MHz at 9:00 PM EST.
- 27 Check into the **903 MHz Net** on 903.100 MHz at 10:00 PM EST.
- 28-29 **CQ World-Wide DX Contest** - CW. See October QST, page 101 for rules.

### New Cheesebits Editor Needed!!

As of January 1, 2001, The Packrats need a new editor for Cheesebits. Harry, W3IIT, and his bride, Rose, are heading for Florida for three months (minus a few days back in PA for THE January contest). If you are interested and please seriously think of taking the job call Prez Ed, WA3DRC at 215-322-2105. It is recommended that you have a PC with internet access, a printer, a word processor and a few hours to spare each month - virtually everyone in the club meets these requirements. The rewards are great - you get to see Cheesebits before anyone else and you can put anything in Cheesebits that you desire. For additional information on the job call Harry, W3IIT, at 610-584-4846.

### 902 vs 903 MHz

de Kent, WA5VJB

About 15 years ago when we first started using the 33cm band, much of the country used the traditional Band Edge +100 kHz, or 902.1 MHz. The North East Portions of the US went to 903.1 MHz because commonly available LO Xtals could be used. Now as millions of consumer devices start to share the 33cm band with us we may need to revisit some of our operating patterns to better avoid interference.

The various Spread Spectrum systems are constantly jumping about in frequency, but there are tight FCC Part 15 limits on how much 'out of band' energy is permitted. The precise number changes a bit with bandwidth considerations, but in general the Part 15 transmitter emissions must be -70 db at 901.99 MHz vs. 902.01 MHz. So they must be squeaky clean at 901.99 and 928.01 MHz. The only practical way (Read that as Cheap) to keep the emissions below the limits is to avoid hopping near the band edges.

In Metropolitan areas we are starting to see as much as a 10 dB difference between the 902.1 and the 903.1 MHz noise floors. The long term future of 33cm weak signal work may be at 902.1 MHz. You might want to keep this in mind when designing your next

## Membership News

- **New Member!! Phil Lanese, K3IB**, was voted in as a Packrat at the October meeting. Phil has an extra class license and is active on 50MHz, FT726, 10W, dipole, 144MHz, Homebrew, Legal limit, 4 x FO 12, 432MHz, FT726+homebrew, 10W (KW in works). 2 x RIW, 1296MHz, homebrew, 150-300W, 4 x 55el loopers, 10GHz, DEMI, 5mw (20W in works), 1M dish. His address is 2059 Rohrbach Lane, Quakertown, PA 18951. According to Buckmaster his grid square is FN20hk.
- **Jeff, WN3A change of address:** 1465 Horseshoe Trail, Malvern, PA 19355, 610.917.3000. Late breaking news: The Township upheld my appeal, i.e. they concluded that I was right and their zoning ordinance is illegal as it's written. As such, I got the green light to build the tower, with the only restriction that if/when I move that I have to take it down. Now where did I put that shovel....
- **W2PED change of address.** Good to see a number of Rats at Microwave Update/Hamarama. I think the weekend went quite well. Many of you know that we've recently moved. We're now in Manalapan NJ, about 10 minutes East of Hightstown, and 10 minutes West of Freehold, NJ. Address: 64 Iron Ore Rd, Manalapan, NJ 07726, phone: 732-786-8565 (work phone unchanged), grid: FN20tg. We're in a decent radio location on 5 acres, but it's going to be awhile before we're back on the air as we're doing house renovations... hope to make the meeting next week. 73, Paul.
- **W1SD change of address.** As some of you know, I have relocated to New Hampshire. After many months of waiting for the building to finish building the new place, we are finally in. Since it is NH and the end of October, it may be a while before the tower(s) are up. We also have to build new antenna's since the movers destroyed every antenna for 144 and above. It took a while to figure out that I was holding the 1296 loopers since they were rather smashed. So, for those of you who care, the contact info is as follows: Steve Dallas - W1SD (ex WB3KRW), 5 Blake Rd., Raymond, NH 03077, 603-244-1062. I'd like to think that I will be on from home in January, but I kind of doubt it. It looks like it might be a multi-op year with WA1YHO.
- **WA3YUE change of address.** 17 Acoma Lane, Collegeville, Pa. 19426. This is in Perkomen township just west of Trappe. Phone: 610 831 5107. All other numbers the same.
- Our Denver Packrat, **Chuck, WA1KIR** reports the results of a successful hunting trip to Africa. Chuck bagged the following in a 25 day trip to South Africa and surrounding areas: A Cape Buffalo, Gnu, a small antelope, Kudu, Wilderbeast, Nyala and two Bluebock (sp?). The trip was delayed because of a very serious automobile accident he had last January which also caused him to miss MUD 2000.

## TID BITS

- **VUCC Award Checking:** If you want QSL cards checked for your initial VUCC Award or an update, contact Harry, W3IIT at 610-584-4846 or hbrown@voicenet.com.
- **Steve, C6AFP/N4JQQ will be QRV in FL16** from 11/5 - 11/11. Beacon on 50.062. If you are waiting for a card from me from July, please be patient. We recently moved from TN to FL.
- **VP2M Dxpediton.** Here is the final scoop on this trip.  
When: Nov 2-19; QRV on Nov. 3 on 50 MHz.  
Where: Windsong Villa, Olveston, Montserrat,  
Calls: VP2MJD Dick, K5AND  
VP2MJJ Jimmy, W6JKV  
VP2MJS Mike, K6MYC  
VP2MJS Myrna, K6MYM  
Equip: 50 MHz: FT-847 and FT-650, 8877 amp, 8 el on 40' boom  
144 MHz EME: two FT-100, 8877 amp, two LONG cross-polarized yagis.  
We will be on the internet on Monday, Nov. 6 on this reflector, on the Eu VHF Cluster and on Prop Logger, and of course will have e-mail and telephone. We will also be monitoring 28885 and 14345 (100 watts, ground planes and dipoles). Once we get on the air, we will announce frequencies for beacons, splits etc. Whenever condx are marginal on six, we will of course be on CW. Please visit Jimmy's web site at [www.w6jkv.com](http://www.w6jkv.com) for more details; click on Montserrat, then comments, then vhf dxpediton to Montserrat. Dick Hanson, K5AND, EM74, 7540 Williamsburg Dr. Cumming, Ga. 30041, 770-844-7002 home phone, 770-889-8297 home fax.
- **FYI: Far Circuits** de Ron Whitsel, W3RJW. In case you didn't know this place existed, or forgotten you knew it existed, here is a source for PC boards for hundreds of Ham projects that appeared in magazine articles going back into the 80's. <http://www.cl.ais.net/farcir/>.
- **Sequencers, etc.** The Moon-NET Reflector recently had a discussion on sequencers to use in denegizing preamplifiers, enabling high power amplifiers, etc. safely and a comment by Lance W7GJ and a visit to his web site is a worthwhile visit for anyone wanting a lot more information on the subject as well as a diagrams, etc. on how he did this for his station. Lance describes his station setup at: <http://missoula.bigsky.net/cr/w7gj/station.htm>.
- The latest edition of **OZ50MHz DX Bulletin #00-040** is now uploaded at <http://www.qsl.net/oz6om/>

## MICROWAVE UPDATE 2000 REPORT

de John. KB3XG, Microwave Update 2000 Conference Chairman

If you missed Microwave Update 2000 you should probably take the time out of your busy schedule to kick yourself in the pants for missing what turned out to be a long weekend of ham radio fun. Microwave Update really is a "Who's Who" meeting of the world's prominent microwave amateurs. Being the chairman forced me to miss a lot of the fun but this is what I heard:

**THURSDAY SURPLUS TOUR:** For those of you who are unfamiliar with this activity, Update organizes a tour of area electronic surplus houses. This is just like a hamfest except you have to drive from table to table. Update provides each registered guest with a package of paper including maps, directions, and a brief description of what you might expect to find at each stop. (Thanks to Paul, WA3GFZ, for organizing the data and making some of the initial contacts.)

If I had to say one bad thing about the surplus tour, it would have to be the morning Philadelphia rush hour. We left the hotel by 8ish and it took us over an hour to get to Bridgeport, PA to Fred Chassy's place. Our second stop was at Kentronix, way over in Farmingdale, NJ. After spending some money on APC-7 connectors, and a quick lunch, we headed for our 3rd stop at DownEast Microwave.

Steve, N2CEI, started what I hope turns into a regular Update thing. Steve rented the firehouse next to his Factory Outlet Store and initially invited a few select members from the NEWS group. Well the word leaked out, and the next thing you know, everyone wanted to be part of what turned out to be an all day swapmeet and beerfest.

At the firehouse, an early registration desk was set up. Celeste, N201GE and Michele, USAF started collecting money and handing out copies of the proceedings. The firehouse was full of tables of microwave goodies, the firemen were pouring beer and serving food, and tour guides were escorting small groups through the DownEast factory. The Tour Guides included Packrats Warren, WB2ONA, Bill, W0RSJ, and Bill, K1DY (ex W3HQT).

The NEWS group (Paul, W1GHZ, and crew) also brought a system that they have developed to measure the MDS (Minimal Discernible Signal) of 10 GHz rigs. I was sorry that I did not have the chance to check out my own rig just to see how it stacks up next to others.

I think the Update crowd enjoyed meeting in one place as opposed to driving all over the countryside.

**THURSDAY NIGHT HOSPITALITY:** The Thursday night Hospitality Suite was great. I would guess that about 70 people showed up including a few Pack Rats. The suite was no more than 2 bedrooms with the beds removed. A bathtub makes an ideal spot to ice down several cases of beer. I appointed Bill, W0RSJ to be the "Pack Rat Ambassador of Good Will." Bill is a regular at Update and Central States and was the perfect candidate for this job. The drinking continued until 2:00 AM. I'm happy to say that the last ones to leave went peacefully.

**FRIDAY CONFERENCE:** Friday started out early for me (8:00 AM) As I expected there were last minute things that required my attention. Tom, WA8WZG, and Tony, WA8RJF, agreed to introduce the speakers and moderate the conference. Paul, W2PED, agreed to act as a stage manager to make sure the upcoming speakers were in the cue. Celeste and Michele were assisted at the registration desk by Dick, N3AOG and Janice, N3CFE.

**PRIZES & AUCTIONS:** Sometime between 8:00 AM and 10:00 AM on Friday, Gary, WA2OMY and Paul, W2PED went through all of the prizes and determined which prizes should be auctioned off and which should be given away as door prizes. Paul told me that opening up all of the packages made Gary and him feel like 2 little kids under the Christmas tree. Paul's room was so full of prizes I was surprised he was able to find room to sleep.

Once again, for those of you that are unfamiliar, Update has 2 auctions each day as a way of offsetting the costs. Kent, WA5VJB, has been the auctioneer for several years now and has a special way of separating hams from their money by embarrassing them into paying too much. Everyone knows that the money raised by the auctions is for a good cause.

I hear the conference ended on time thanks to the 8's. (Tony and Tom)

**FRIDAY NIGHT FLEA MARKET & HOSPITALITY:** Friday night of the Update weekend is reserved for an exclusive flea market. Several of the smaller conference rooms at the hotel are reserved, and only premium microwave vendors are invited to attend. The local crowd was pleasantly surprised to see a good selection of microwave surplus that ordinarily would not be seen at area hamfests. I hear that several Pack Rats may soon be heard calling CQ on 24,192.100 MHz. This part of the weekend is also a favorite since it is a perfect opportunity to have those important eyeball QSO's.

Just down the hall from the flea market rooms was the hospitality suite. Phil, WA3NUF, made sure that nobody walked away thirsty. This is a hamfest vendor's dream: Hams with beer in one hand and money in the other. I shut the hospitality room down at 2:00 AM. I'm pleased to report that the rooms were still in pretty good shape even after 2 nights of hard partying.

**SATURDAY CONFERENCE:** Saturday was really a repeat of Friday. Dave, W3KM, was there bright and early to man the registration desk. The 2 auctions raised quite a bit of money for Update. Things were pretty much under control by Saturday afternoon and I actually had time to sit in on 4 of the talks.

There was an added bonus to having a large RAT presence at Update on Saturday. Right before the lunch break, Joe, W3KJ, was able to easily assemble a work crew to drive to the Grange to set up tables. There were plenty of guys to help and I think everyone was back at the conference to hear the last few presentations.

**SATURDAY BANQUET:** The Saturday evening banquet was really a nice affair. The dinner tables occupied both the main meeting room and the flea market room. (About 1800 sq. feet) I was glad to see so many XYL's in attendance. The prize drawing was administered by Phil, WA3NUF, and Paul, W2PED, in the usual fashion. We call your number and you come up to the table to take the prize of your choice. We had a very impressive selection of prizes.

**THANKS:** Special thanks to Gary, WA2OMY, for help with the surplus tour, the evening flea market, and the many door prizes. The "Prize Job" includes spending countless hours on the phone trying to persuade people to give you expensive stuff for free and then explaining to these same people that they should not expect anything in return. The MUD prize list was added to the RAT prize list, so poor Gary had to beg over 120 people for prizes.

I also have to thank Harry, W3IIT, for putting the proceedings together. Harry told me it was just like Cheese Bits; in that it only takes a few hours a month. All kidding aside, the "Proceedings" is another thankless job. In addition to negotiating with the publisher, you must be capable of translating a seemingly infinite number of word processor formats into a standard format. But by far, the toughest part of this job is figuring out a nice way of calling to inform a speaker that he is late with his paper. I experienced Harry's technique first hand. I was not the last guy to turn in a paper but I was close. The proceedings included over 317 pages of fresh material and it looked quite professional. Thanks again Harry.

I would finally like to thank the many RATs that came out to have a good time and support this event. We are a technical club. It's nice to see that we are still interested in technical stuff. I hear there is interest in a club project to build a bunch of 100 Watt 1296 MHz PA's. I know a guy who has connections in the RF power semiconductor industry. Let me know. 73, XG.

Interesting Tid Bits:

- 1) 174 people registered for Update.
- 2) 146 attended the banquet.
- 3) Everyone got at least 1 door prize.
- 4) We consumed 13 cases beer over 2 hospitality sessions.
- 5) We drank 23 gallons of coffee. Cost: \$1000. Note: Dick, N3AOG, was responsible for \$200 of this amount.
- 6) The tip for the banquet was \$1000.
- 7) Next Microwave Update will be in Sunnyvale, CA. September 27, 28, 29, 2001. See ya there.

### **Thanks for Update 2000!**

De Peter, G3PHO

Hi guys! My wife and I have just returned home to the UK this past weekend after 2 excellent weeks in the USA, including that fantastic period at Microwave Update.

This email is just to thank all of you for making me so welcome and also to thank John Sorter and the gang for all the hard work they put in to make the event such a great success. It was really great to meet you all and finally put faces to callsigns that I had only previously read about.

It was my first Update but it sure wont be the last! I'm already planning to come over to California next year and hope to persuade more G stations to come with me ... flea market watch out!

The quantity and quality of the fleamarket items was really amazing. Even at our premier microwave meeting over here in Britain we barely raise 10% of what you had on offer! You folks don't know how lucky you are.

I came back with some very nice "goodies", some of which (e.g. the 12 to 24GHz doubler amplifier modules) I have on test right now. I was delighted to obtain TWO 5.7GHz solid state PAs, something I had been trying to find over here for months.

So thanks again ... anytime you folks are over here in the UK just let us know. The best times are during the summer months when you might bring a small rover transceiver and take part in monthly microwave contests.... they are a lot of fun!

My best wishes to you all. Peter, G3PHO, Editor: RSGB Microwave Newsletter, amateur microwave radio webpage: (UK) <http://www.g3pho.free-online.co.uk>, (USA) <http://www.geocities.com/g3pho>, mirrored at: <http://www.qsl.net/g3pho>.

### **Notes on the Update Weekend**

de Lloyd, NE8I via Paul, W2PED

Returned from Update 2K, sponsored this year by the Pack Rats in Philly at the Holiday Inn Express, at Trevese. Drove 1300 miles through the mountains, which was very enjoyable at the beginning of the fall colors. Talked with several stations on 2M SSB there and back. For those who made the traditional Thursday surplus tour, there was quite a list of places to visit, with all sorts of goodies and bargains available. Friday and Saturday, was a really good selection of speakers and programs, covering a number of topics. Friday

evening, was the usual Update flea market, with all sorts of goodies and deals. They had a couple of rooms near the conference room, filled with a number of dealers, who were there all day Friday and Saturday. Saturday afternoon, I set up my pair of 47GHz SSB DB6NT transceivers, for demonstration and conversation. In the Parking lot, KA1ZE, Stan, set up his super rover station, with the 70ft telescoping tower for show and tell. Also N3OZO, Don, had his rover ex school bus conversion. Saturday night, also brought the banquet, and prize drawing. Sunday, is the usual Pak Rats Hamarama swap and shop. This is now held at the Middletown Grange Fair grounds, on Penns Park Road, Wrightstown PA. Those remembering, it used to be held at a drive in, that is no longer. Found many good deals. That made 4 days worth of bargain hunting!

Announced at the conference, next years update will be held in Sunnyvale California. Now there is a drive! Central States will be in Dallas in July.

As usual, in a couple weeks I will be sending Anomolous Propagation a set of video tapes of the conference. I shoot the video for me, nobody else. Several people were there taking video. I see my efforts were thanked by N6CL Joe in Oct CQ in his VHF column. Years ago, I learned that if I loaned my original copy out, it would return eaten by this machine or that one. Sponsors of this conference or that wanted a copy, to show their members who were busy hosting the conference and unable to see it. Speakers who wanted to see how their talk went. I found it was easier to make a copy and send it, and not have to worry about loosing it or who had it. VHS tape is cheap enough. The postage is the expensive part. I am not in the business of making or selling tapes. It is something I do to try and promote Amateur radio and the learning and knowledge we are doing in the spirit of Amateur radio. One of the primary foundations of Amateur radio is learning and advancing the state of the art. I send a few of my copies out to groups and people who will help these ends. What I ask is consideration of the people sponsoring the conference and the speakers. I have gotten some complaints about why I don't use a tripod. I have several tripods, and could make a professional looking video with titles and all. Simple. This is only a basic record of the conference. Want to see it without all the waterhose, looking at the floor or ceiling, out of focus, bumps and stuff. Attend the conference. Buy a proceedings. Help support the groups who sponsor these conferences. If you learn something, add more material and or write a paper for another conference, please credit the source, the author you saw and heard. Meanwhile, enjoy, and learn. 73 de Lloyd J. Ellsworth, NE8I P. O. Box 2132, Dearborn, Mi. 48123-2132 USA, e-mail: ne8i@arrl.net Packet: (uc) EN82ig + Rover 160-47GHz M-ARRL, LM-AMSAT, Seti League, NTMS, 10X481, SMIRK4720, RedRyder#10

### More TID BITS

- The October 432 and Above EME newsletter by Al Katz, K2UYH, is at <http://www.nitehawk.com/rasmit/em70cm.html>
- The 3rd Quarterly issue of Dabus for 2000 has an interesting article on the new singleboard 2.3 GHz Transverter from Michael Kuhne, DB6NT. It uses a 144 MHz IF and has a typical noise figure of 0.8 dB and has more than 1 watt out. It is designed for the European band of 2420 band although mods are available for a 2304 MHz version. It uses helical filters in all of the interstage filters. The LNA is a NE32584 and the PA is a MGF0904. Kits and complete units are available from KUHNE. Check [www.db6nt.com](http://www.db6nt.com) for information. Also reviewed is a 144 MHz LNA from miComm. It has >24 dB gain, a <0.3 NF and the Output IP3 is +22 dBm. It also is available from KUHNE. Simon, GM4PLM in his Microwave Europe column gives a rundown on Microwave Update 2000. He reports a new 24 GHz record by I0LVA in grid JN72CD and IW3EHQ/3 located in JN66EB. CW and SSB were used over a 461 Km path. Rigs were 250 mw/90 cm dish/1.5 dB NF and 750 mw/85 cm dish/1.5 dB NF.
- Free Demo Versions of EZNEC and ELNEC, Roy Lewallen, W7EL, the author of the popular antenna modeling programs ELNEC and EZNEC has posted free demo copies of the latest Windows based EZNEC program, and a demo copy of the older DOS based ELNEC program. These demos can be downloaded from <http://www.eznec.com/>. The demo programs are limited in the number of model segments that can be implemented, but should be sufficient for modeling small yagis, quads, dipoles, vertical, and two element phased vertical arrays. Also of note is that there is no time-out function on these demos, although there are other functional restrictions. The programs offer a nice intro into the world of antenna modeling at a can't lose price.
- 2.3 GHz Net Turnout: de Joe, AA3GN. Had a pretty good turnout on 2.3GHz net last nite. The following stations checked in: W3KJ, N3EXA, N3PLM, WA3DRC, AA3GN. 22:15 EST, 2304.100, liasons on 144.260 and 223.5FM. Hope to have more bands running next week. 73, Joe - AA3GN
- The ARRL Letter, Vol. 19, No. 41, October 27, 2000. Eastern Pennsylvania to get new Section Manager: Veteran ARRL Eastern Pennsylvania Section Manager Allen Breiner, W3TI, has announced plans to step down effective December 31. Breiner, who's 80, has been part of the ARRL field organization for many years. He was first elected as Section Communications Manager--as the SM job used to be known--in 1959 and held that post for 12 years. He was elected as SM in 1995 and re-elected in 1998 and 2000. ARRL Field & Educational Services Manager Rosalie White, K1STO, has named Eric Olena, WB3FPL, of Mohnton to replace Breiner effective the first of the new year. Olena has served as Section Emergency Coordinator since 1994 and was an Assistant SM from 1992 until 1996. He will complete Breiner's term, which runs through April 2002.
- The November issue of "The VHF Journal" published by the Rochester VHF Group reports they are embarking in a club 5760 MHz Transverter project. The issue also includes an interesting article by Peter Shilton, VE3AX on the use of a Digital Satellite digital aiming device for satellite TV for an elevation indicator for his 2 meter EME array. Best reading before you buy one.

**The ARRL Letter, Vol. 19, No. 40, October 20, 2000**

**NOMINATIONS OPEN FOR THREE ARRL 2000 TECHNICAL AWARDS**

Nominations are open for the ARRL 2000 Technical Service, Technical Innovation and Microwave Development awards.

• The **ARRL Technical Service Award** goes each year to a radio amateur whose service to the amateur community and/or society at large is of the most exemplary nature within the framework of Amateur Radio technical activities. These include, but are not limited to:

- \* Leadership or participation in technically oriented organizational affairs at the local or national level.
- \* Service as an official ARRL technical volunteer: Technical Advisor, Technical Coordinator, Technical Specialist.
- \* Service as a technical advisor to clubs sponsoring classes to obtain or upgrade amateur licenses.

The Technical Service Award winner will receive an engraved plaque and travel expenses to attend an ARRL convention for the formal award presentation.

• The **ARRL Technical Innovation Award** is presented annually to an Amateur Radio operator whose accomplishments and contributions are of the most exemplary nature within the framework of technical research, development and application of new ideas and future systems. These include, but are not limited to:

- \* Promotion and development of higher-speed modems and improved packet radio protocols.
- \* Promotion of personal computers in Amateur Radio applications.
- \* Activities to increase efficient use of the amateur spectrum.
- \* Digital voice experimentation.

The Technical Innovation Award winner will receive a cash award of \$500, an engraved plaque and travel expenses to attend an ARRL convention for a formal presentation.

• The **ARRL Microwave Development Award** is given each year to the amateur (individual or group) whose accomplishments and contributions are the framework of microwave development, ie, research and application of new and refined uses and activity in the amateur microwave bands. This includes adaptation of new modes, both in terrestrial formats and satellite techniques.

The Microwave Development Award winner will receive an engraved plaque and travel expenses to attend an ARRL convention for a formal presentation.

Nominations should include basic contact information for yourself and for the nominee. Submit support information along with a nomination letter, including endorsements of ARRL affiliated clubs and League officials. Nominations should thoroughly document the nominee's record of technical service and accomplishments.

Send nominations to ARRL Technical Awards, 225 Main St, Newington, CT 06111. Nominations must be received at Headquarters by March 31, 2001. For more information, contact Educational Programs Coordinator Jean Wolfgang, WB3IOS, jwolfgang@arrl.org or 860-594-0219.

**SOLAR UPDATE**

Propagation prognosticator Tad Cook, K7VVV, Seattle, Washington, reports:

The rise in solar flux that was predicted this week in last week's Solar Update did not happen.

Last week we stated that by October 18 and 19 we should see a short term peak in solar flux around 220. Instead, solar flux rose slightly over the weekend, then dropped below 160, and on October 18 and 19 it was 151.1 and 157.8.

The current outlook is for a slowly and modestly rising solar flux, with the values for Friday through Monday at 160, 160, 165 and 170. The latest best guess is for solar flux to peak for the short term at only 190 on October 29 and 30, then decline to 145 around November 5.

Geomagnetic conditions are expected to remain fairly stable on Friday and Saturday, but planetary A index may rise to 20 and 25 on Sunday and Monday. Geomagnetic indices are expected to calm down after that, but become unsettled to active around October 30 through November 1.

Sunspot numbers for October 12 through 18 were 187, 167, 157, 99, 109, 130 and 128 with a mean of 139.6. 10.7 cm flux was 162.7, 168.1, 163.3, 161.1, 160.9, 154.1 and 151.1, with a mean of 160.2, and estimated planetary A indices were 8, 27, 42, 8, 8, 9 and 8 with a mean of 15.7.

**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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November 2000

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- November 2000 Pack Rats Cheesebits Pg. 8 -



## Sabor 1.0, Software for the Analysis of Horn and Reflector Antennas

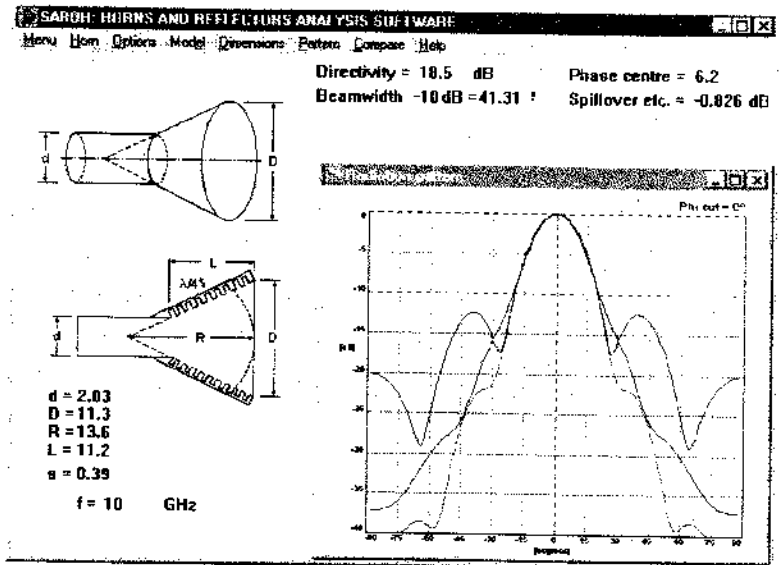
de Harry, W3IIT

SABOR is a computer program that I ran across that you may find useful. It was initially written to serve as both a pre-design and an educational program, which is capable of computing radiation patterns both for horns and for reflectors. It was developed at the Polytechnic University of Madrid Spain. It is available for downloading at [www.gr.ssr.upm.es/SABOR.htm](http://www.gr.ssr.upm.es/SABOR.htm).

**Horns:** The horns covered by this program are:

1. H-plane sectoral horn
2. E-plane sectoral horn
3. Pyramidal horn
4. Corrugated rectangular horn
5. Smooth conical horn

**Horn Calculations:** Maximum gain, beam width at a certain level, phase center and spillover losses are also calculated when the radiation pattern is plotted.

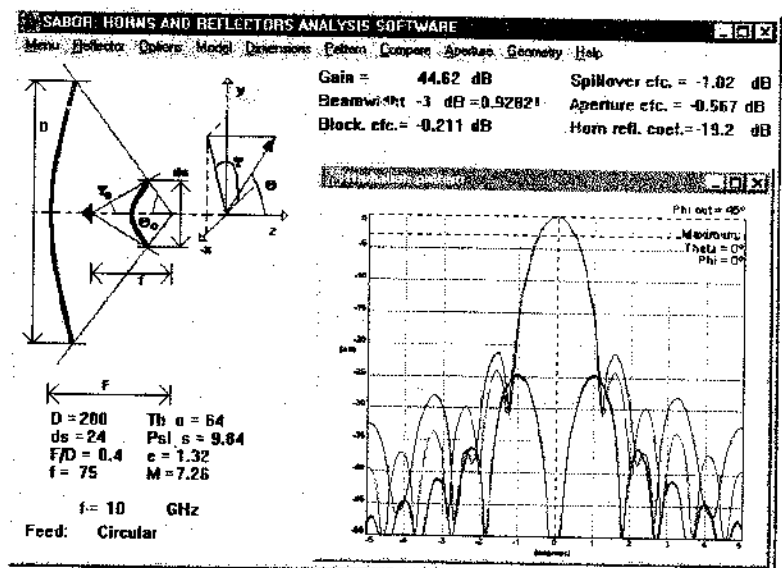


**Reflector configuration:** The following reflectors can be also studied:

1. Cassegrain Parabolic
2. Single Offset
3. Double Offset: Cassegrain or Gregorian

**Reflector Calculations:** The values of maximum gain, beam width at a certain level, blockage losses, spillover losses, aperture distribution losses, and the reflection at the feeder are computed when the radiation pattern menu is selected.

The feeder of these reflectors can be a cos-q feeder as well as one of the horns studied by SABOR.



**Compare option:** Several patterns can be superimposed in the pattern window.

**Fully tested:** The results of the calculations have been checked against professional programs (i.e. GRASP).

**User-Friendly:** All the software functions are accessible through windows, pop-up menus and mouse.

**Platform:** SABOR runs on PC-compatible machines under WINDOWS 3.11 or WINDOWS 95.

**Computational Speed:** Computation by each radiation pattern takes less than 10 seconds on a PENTIUM-100.

With a registration of US \$25.00 you will get a personal license and you will receive a comprehensive printed manual, and when available, the next version of the software.

A note on the operation of this program and it's capabilities can be found on page 95 of the IEEE Antennas and Propagation Magazine, Vol. 40, No. 4, August 1998.

## **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 Call Books 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: Icom 756,** HF + 6 meters, 100 watts output. DSP with optional 500 Hz and 2.3 KHz filters. A great rig. \$1695 plus delivery. Contact Emil, W3EP at 860-7272 or w3ep@arrl.com.

**FOR SALE:** I have some equipment that I am looking to make available if you know of anyone who might be interested. **Yaesu FT-726R** with 6m/2m/432/satellite modules. Works fine on 2 & 432 - since I never had a transmitting antenna up for 6m, I never used it on 6 other than to listen. It also has the CW tone board. Also included are the operating manual, technical supplement, power cord and 2 mics.. a Yaesu hand mic and a Heil desk mic. It is in good - very good shape, as I am the 3rd owner of the rig (I believe). It is ex KB3PD equipment. I'm asking \$500, but would be willing to negotiate. **AM-6155 amplifier** with 2m modifications. I got this amp from WA3BZT who got it from KB3PD. BZT used it early on for EME work until he went to a pair of 4CX250's. I bought it and never had a chance to put it on the air. I am looking for \$250 but would consider any reasonable offer. I would prefer to have the items picked up (especially the amp), but I can ship the rig if necessary. I'm not getting off of VHF/UHF, just trying to get myself established in a new job and it has taken me longer than I expected. I have a tower and antennas and a newer rig to get back on the air. Hopefully next spring will be when I am able to get back on the air. Spread the word to anyone you know that might be interested. I would greatly appreciate it. I can be reached evenings at (302) 798-4163 or thru e-mail at drambo@wserv.com. 73, Doug Rambo KA3KHZ, Claymont, DE, FM-29

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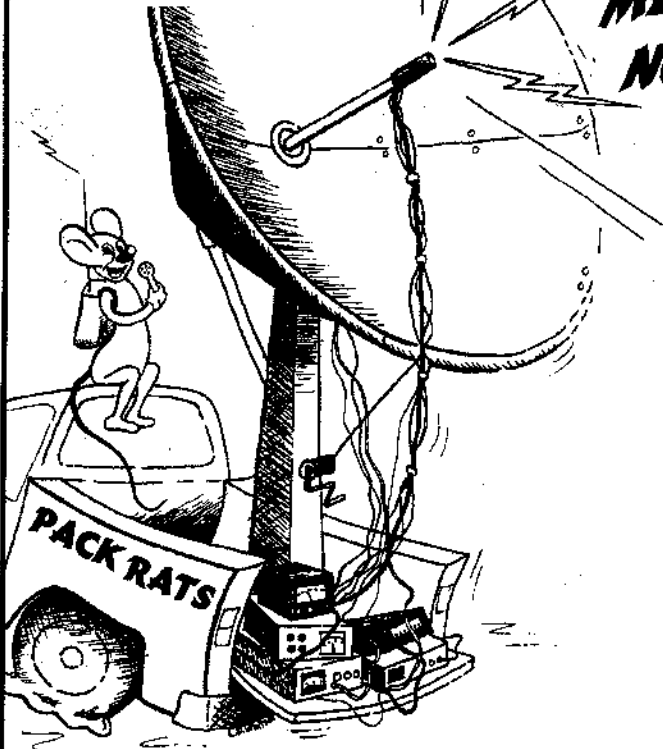
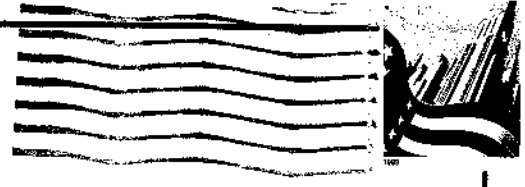
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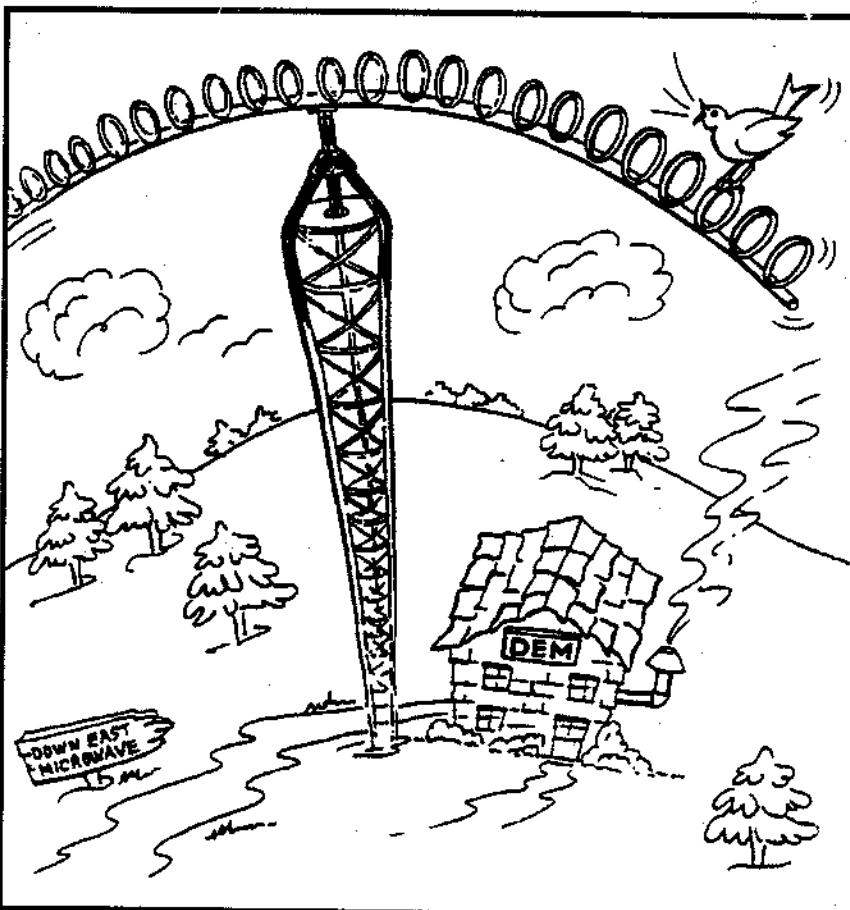


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