

PACK RATS



PACK RATS

CLUB CALL: W3CCX

MT. AIRY VHF RADIO CLUB, INC.

CHEESE BITS



MT. AIRY VHF RADIO CLUB, "THE PACK RATS", PHILADELPHIA, PA.
NET FREQUENCIES: 50.150, 144.150, 222.125, 224.58/222.98, 432.110, 903.100, 1296.100 MHz
AFFILIATED CLUB: AMERICAN RADIO RELAY LEAGUE

W3CCX

ARNS

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

SCANNED TO PDF BY BERT, K3IUV, 2013

VOLUME XXXVII

April 1995

Number 4

THE PREZ SEZ

Our March Homebrew meeting was well attended with a variety of projects on display. Congratulations to all of our homebrew award recipients! It's always interesting to see the ingenuity that others employ in building equipment. Homebrewing is certainly alive and well in the Packrats!

Perhaps it's not too early to start thinking about what type of club projects we'd like to pursue in the coming months. In the past we've met at Gary, WA2OMY's several times in the fall and worked together helping members build and debug their individual homebrew projects. This has turned out to be very successful, with a number of members upgrading their stations and getting on new bands. Another approach perhaps would be to build just one or two projects in an assembly line fashion. We could buy boards and components in quantity at lower cost, test all at once, maybe use a common packaging scheme and we'd of course benefit with greater efficiency. This way we could crank out lots of preamps, transverters, or power amps in a shorter time. This idea would work best if we build something that a lot of club members were interested in. If anyone has any thoughts on this or would like to lead and organize a construction project that would be of interest to club members, please contact myself or Gary, WA2OMY.

Our June contest plans are well underway. Chairman Pat, WB3DNI, is already planning our effort for the mountain with a few improvements over last year. We'll be operating all bands again on 50 MHz thru 10 GHz SSB and 24 GHz FM. This is one of our more "serious" club efforts and requires everyone's assistance to make it a successful event. We need band captains and equipment, people to operate, cook, supply telephone and power details, put up and tear down, and of course OPERATE! There will be at least one more contest meeting before June, but don't wait until the last minute to volunteer - there's plenty of work to be done NOW, so get in touch with Pat or one of the band captains and let us know what you'd like to do.

Our next meeting will feature a presentation by Tom, KB2AH, on big bruiser 1296 power amplifiers. CU there!

73, Paul Drexler, WB3JYO

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DEADLINE FOR ARTICLES AND SWAP SHOP IS THE MONTHLY MEETING DATE. NON-COMMERCIAL SWAP SHOP ITEMS-FREE OF CHARGE.

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Ron Whitsel, WA3AXV
(215) 355-5730

PACKRAT 222 MHz REPEATER - W3CCX/RPTR

222.98/224.58 MHz, Churchville, PA

OFFICERS: 1993-1994


PRESIDENT: WB3JYO, Paul Drexler
VICE-PRES: WA2OMY, Gary Hitchner
REC. SECR: WA3AQA, Walter Zumbach
TREASURER: WA3JUF, Dave Mascaro
COR. SECR: N3AOG, Dick Comly
DIRECTORS: WA3AXV, Ron Whitsel (1 YRS)
WB2YEH, Bob Fisher (1 YRS)
N3ITT, Alan Sheppard (2 YRS)
WA3NUF, Phil Migulez (2 YRS)

MONDAY NIGHT NETS

<u>TIME</u>	<u>FREQ.</u>	<u>NET CONTROL</u>
7:30 PM	50.150 MHz	K3EOD
8:00 PM	144.150 MHz	W2EIF
8:30 PM	222.125 MHz	WB2YEH
8:30 PM	224.58R MHz	K3ACR
9:00 PM	432.110 MHz	WA3AXV
9:30 PM	1296.100 MHz	WA3NUF
10:00 PM	903.100 MHz	N3AOG

COMMITTEE CHAIRMEN

LADIES' NIGHT: WA3YUE 610-630-1875
JUNE CONTEST: WB3DNI 215-672-5289
HAMARAMA: WB3JYO 609-538-1687
VHF CONFERENCE: KB3XG 610-584-2489



THE AMERICAN RADIO RELAY LEAGUE **OST**

HUGH A TURNBULL, W3ABC
Director, Atlantic Division

8903 RHODE ISLAND AVE
COLLEGE PARK MD 20740 (301) 927-1797


1-302-478-2737

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and
ADVANCED
COMMUNICATIONS**

"Gisele"
K3WAJ

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WILMINGTON, DEL. 19803

Graphic Design Illustration Production



Lynne D. Whitsel

204 Frog Hollow Road
Churchville PA 18440
215 355-5730

Calendar of Coming Events - April 1995

April

- 1 **AARG 6th Annual Hamfest & Computer Show** will be held at the Lebanon Area Fairgrounds, Lebanon, PA.
- 2 Daylight Savings Time begins
- 2 **HAMCOMP '95** will be held at Trenton State College on Rte 31, Ewing Township. TI on 146.07/67.
- 12 Physicist John Thompson demonstrated his discovery of a body smaller than the atom, a negative charged he called a corpusclen now known as an electron in 1897.
- 13 **Packrat Board of Directors Meeting** at the QTH of Phil, WA3NUF at 8 P.M. All interested parties invited. Call 215-675-4277 for directions.
- 15 **Passover**
- 16 **Easter Sunday**
- 17 **ARRL 144 MHz Spring Sprint** (Monday evening) starting at 7-11 PM local time. See March QST, page 123 for rules. Results will be published in the NCJ.
- 20 **Packrat Meeting** at the Southampton Free Library at 8:00 PM. Bring and/or invite your on the air VHF buddies. All VHFers invited. The speaker will be Tom, KB2AH, on **BIG Bruiser 1296 Amplifiers**.
- 22 **Lyrids meteor shower** peaks at 1527 UTC.
- 22-23 **Trenton Computer Festival** at Mercer County Community College, just north of Trenton NJ. This is the longest running computerfest in the world. Several sessions on amateur radio including no-code license cram sessions and exams as well as a separate packet radio conference. VE exams all day Saturday.
- 23 **The Pen-Del Hamfest** will be held at the NUR Temple, 198 DuPont highway (Rte.13 near US 40 split), Newcastle DE. Talk-in on 224.220 and 147.225+.
- 25 Italian engineer and inventor **Guglielmo Marconi**, inventor of the wireless telegraph and Nobel Prize winner was born in 1874.
- 25 **ARRL Spring 220 MHz Sprint** (Tuesday evening) 7-11 local time. See March QST, page 123 for rules.
- 28-30 **Dayton Hamvention**. If you've never been there you've never seen anything like it. If you're looking to buy it or sell or see it **GO**. The VHF/UHF Forum will include talks on both Saturday and Sunday. There will be a preamp gain/noise figure contest on Sunday morning.
- 1 May
- 13 **Packrat Ladies Night** will be held at the Mill Race Inn, Holland in Warrington, Pa. starting at 6:30 PM.

Cuban U-VHF Group 6 and 2 M beacon

DE: Jorge J. Sainz Casallas, CO2OJ on the Internet VHF Reflector

Hello VHF'ers. The Cuban U-VHF Group is testing a 6 and 2 M beacon. It signs CO2FRC/B. We are still using my radios in both bands, so it will not be on continuously. We will tried to build the transmitters as soon as possible and before the ES season starts. I will turned on the beacon as many times as I can at the afternoon in 6 M(from 22:30 to 23:30 Z) and later in 2 M (from about 0300 Z for an hour or so).During this testing period I will tune it near 50.123 and 144.198. Later we will decide the definitive frequencies (it will depends of the TX we can build).Please info me if anyone heard the beacons. We will appreciate any opinion.

73, Oscar,

Oscar Morales Jr., C O 2 O J, Grupo Cubano, POB 4910, Habana 4, V-UHF & DX Cuba, 10400. Ph:(537)3-7387 Cuban Group, e-mail: co2oj@tinored.cu Packet: co2oj@co2bqq.#HAV.CU.NA

CRYING TOWEL MEETING RESULTS - FEB. 95

de: John, KB3XG

The following is a list of excuses used during the February crying towel meeting. Many of these excuses can be applied to other life situations.

I prepared 2 weeks ahead instead of 2 days. No change in score.

My QSO rate was low due to a leaky band switch.

My grids were low because I couldn't get a sched with SZ.

My smoke detector indicated that I had a problem with my 432 rig.

A no-tune transverter is NOT an easy way to get on the bands.

The only thing that DID work was my oscillator.

Malaysian amplifiers use different dimensions.

My T-R relay was actually in the sometimes closed position.

My brick is dead!

I was using excessive power.

Lightning took out my 1296 LNA and 903 PA.

My 1296 rig performed poorly due to no LNA and a 432 yagi.

My arm went stiff when I crossed the 120 AC line.

I operated with Murphy - Bill Murphy.

I couldn't hear New England.

Someone put a wall up between here and Pittsburgh.

My logging program crashed at 50,000 points.

My computer log turned into a nice geometric pattern.

The angry neighbors created an ad-hoc committee.

The neighbor's touch lamps followed my voice pattern.

I invited the neighbors in so they could enjoy TVI at my place.

I blew up my own TV.

My wife invited a guy over to watch me operate.

One of my cows had a calf and I missed activity hour.

PRODUCT REVIEW: New Dialectically Compensated Load

How many times have you been able to get your RF circuit to work by holding your finger in exactly the right spot? This problem has been attacked by the new company "Digit RF Solutions". They invited several top RF technicians to touch the A11 port of the HP 8510 Network Analyzer. Using PSpice and TouchStone, a dialectically compensated load was developed duplicating the effects of a human finger. Sold under the name "The Finger", these handy little devices are now available to all RF technicians. *Your Amp doesn't work give it The Finger!*

Change of Address

Leonard Martin, N3NGE
313 N. Red School Road
Morgantown, PA 19543
610-286-9743(H)

UPCOMING PROGRAMS

By: Gary, WA2OMY

April: 1296 Big Bruiser 1296 Amps by Tom, KB2AH.

May: ARRL Night, David Newkirk, WJ1Z on the ARRL Radio Designer including a demo

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:

Name: _____ Call: _____

Street Address: _____

Town: _____ State: _____ ZIP: _____

Subscription Rate: \$10.00 per year (USA), \$12.00 (Canada), \$15.00 (Worldwide)

April 1995 Send to: SUBSCRIPTION/ADVERTISING MANAGER:

Bob Fischer, WB2YEH
7258 Walnut Avenue
Pennsauken, NJ 08110

10 GHz TRANSVERTER, "All the Boring Details", Part 1

de: John, KB3XG

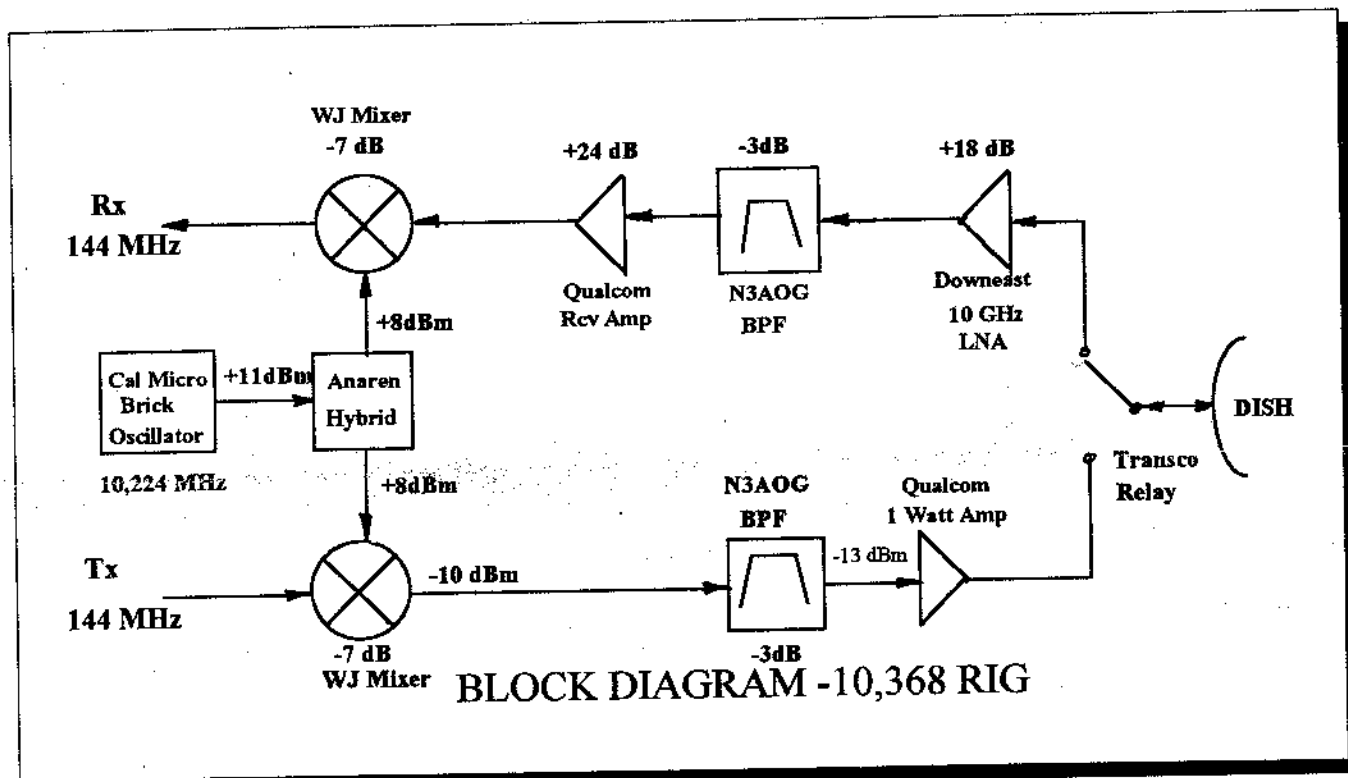
I'm sure by now everyone has heard about those 10 GHz surplus boards available through Chuck, WB6IGP. The few articles that have been published describe a few tuning steps, making you think that this will be as easy as a no-tune transverter. Maybe it's me, but I did not find this to be the case. It was a lot of tedious work-but an economical way to get on the band.

WHAT YOU GET FOR \$88:

These boards were manufactured by QualComm for a commercial user at 14 GHz. I ordered the complete package. (PA [with cover], LNA [with cover], synthesizer, power supply, & heat sinks). Chuck made a deal with QualComm to saw the heat sink in sections and return the unused pieces (QualComm doesn't want to see this equipment "re-enter" the market). Chuck takes care to keep everything you will need for ham use intact. I didn't use the synthesizer, but salvaged chip caps and other parts off of this board during the project.

SYSTEM DESIGN:

I was advised by a few of our New England friends that the on-board mixers and LO splitter could not be used due the difference in frequency (Make sure you save these microwave diode goodies for future experiments). I decided to go with the standard Pack Rat design.

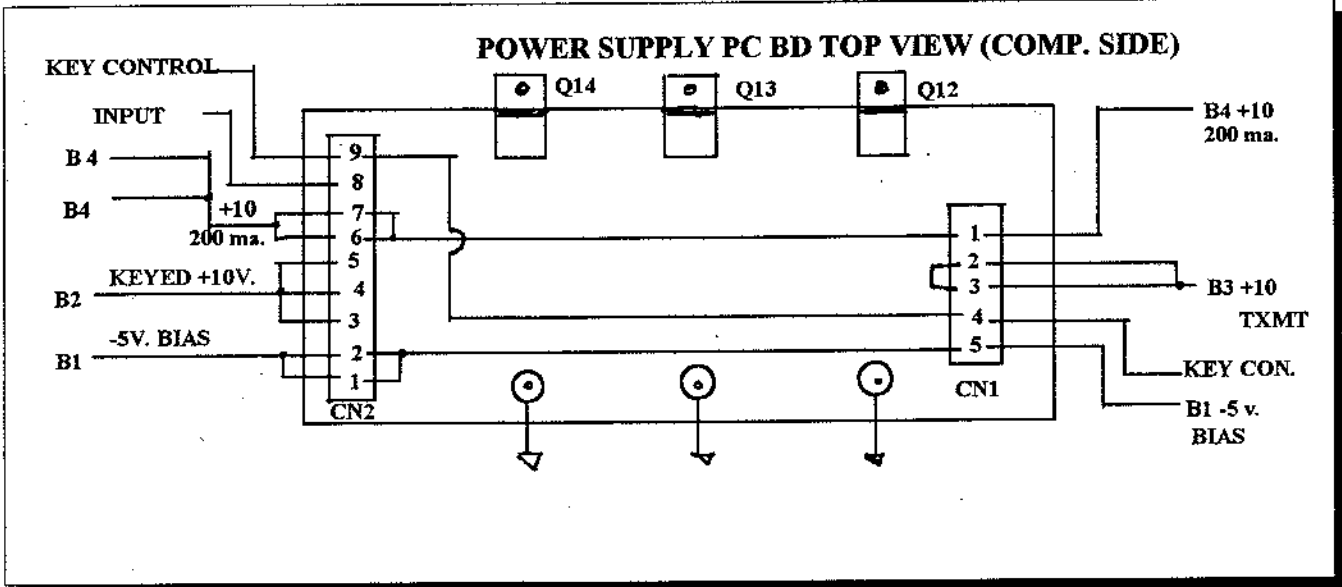


LO:
The California Microwave brick oscillator I used came with an odd ball waveguide flange. I removed the flange and noticed that the manufacturer had placed 4 tapped holes for a wide flange SMA connector around the probe (wide flange = 0.7", standard SMA flange = 0.5"). I installed my crystal (106.5 MHz X 12 X 8 = 10,224 MHz) and got about +10 dBm with a little tuning. Be careful with the tuning screw closest to the output. It requires a special tool (which I didn't have) and is easily damaged. I ordered the crystal from ICM part # 52-012378-07-F, (80-119 deg), 106.5 MHz.

International Crystal	(800) 426-9825
P.O. Box 26330	(405) 236-3741
10 North Lee	(fax) 235-1904
Oklahoma City, OK	73126

POWER SUPPLY:
Check the power supply before firing up any of the amplifier modules. Fabricate a mounting bracket or secure the board and power devices to a base plate. The TO-220 devices need to be electrically isolated but mechanically attached to either the base plate or mounting bracket to dissipate heat. Don't forget to use mica or Teflon insulating pads. Apply 12 to 15 volts to pin 8 of CN2 and allow the PTT line (pin 9 of CN2 or pin 4 of CN1) to float. +10 volts for the receiver amplifier should be present on pins 3, 4 & 5 of CN2 and 0 volts should be present on pins 2 & 3 of CN1 for the PA. Grounding the PTT line should reverse these voltages (+10V xmit, 0V rcv).

-5 volts gate bias lines should always be present (xmit or rcv) on pins 1 & 2 of CN2 and pin 5 of CN1. There is enough current available through the receive line to supply +10 volts to the DownEast or equivalent LNA. There are pots on the supply board used to adjust the transmit and receive drain and gate voltages. My board was only off by a few hundred millivolts. This power supply provides T-R sequencing and FET protection. (If -5 volt gate bias does not come up, the supply will not provide receive or transmit drain voltage.)



Cconn	Pin	Description
CN1	1	+10 volt, 200 mA (not used in my system)
CN1	2,3	PA drain supply +10 volt, 1.0 A
CN1	4	PTT floats to +10V during rcv, ground for xmit
CN1	5	PA gate supply -5.0 volts, 5 mA during xmit or rcv
CN2	1,2	LNA gate supply -5.0 volts, 5 mA during xmit or rcv
CN2	3,4,5	LNA drain supply +10 volt, 100 mA
CN2	6,7	+10 volt, 200 mA (not used in my system)
CN2	8	DC input +10 to +15 volt, 2.0 A max.
CN2	9	PTT (same as CN1 pin 5)

The power supply and amplifiers come with DC connectors. The connector does not include a ground wire. The original system used the heat sink assembly as a common DC ground. The ground at your bench may not be common to your power supply, IF rig, etc. Take the time to solder a wire (DON'T use a clip lead!) between the power supply to the amplifier. Absence of this ground connection will fry every GaAs FET on the board.

LNA:
Mechanical stability is very important when working at this frequency. Every building block in the transverter should be grounded to the best of your ability. Decide how you will mount the amplifier and devise the appropriate brackets before installing the board in the heat sink. The boards are delicate and will not tolerate much abuse. To give the semi rigid cables greater mechanical strength, I carefully measured and drilled a 0.085" hole through the side wall of the heat sink assembly. Inspect and clean the heat sink and PC board. I found there was corrosion (white powder) on the ground plane of the board and the heat sink. Perhaps this was caused by some sort of galvanic action. (Maybe that's why this stuff is on the surplus market?)

The LNA is a 3 stage GaAs FET design with maybe a 2 or 3 dB noise figure. N2LIV's article describes a tune up procedure that worked very well including a method for attaching a section of 085 semi-rigid to the input and output ports of the board.

Check DC voltages before proceeding with tuning.

DEVICE	Vg	Vd
FX-05	-0.48	+1.78
FX-35	-0.58	+1.80
FX-35	-0.80	+2.76

has also employed this method during the production test process. Compare your board to WIRIL's AFTER tuning picture and remove anything Qualcomm has added. Don't forget to add input and output coupling caps (1-2 pF). Use ATC A's or scrounge caps from the synthesizer board. ATC B series (what most of us find at hamfests) are 0.11" square which is close to a 1/4 wave at 10 GHz.

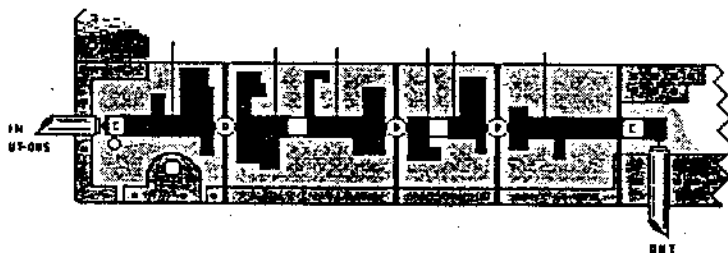
TESTING/TUNING:

Use your surplus mixer, brick oscillator, band pass filter, appropriate attenuators, and IF rig as a 10,368 MHz test source. I used my HP-608 as my 144 MHz IF source for more accurate control of output power. A -30 dBm signal at 10 GHz is adequate input power to use during tuning.

Snowflake tuning takes on a different meaning at 10 GHz. I cut a few pieces of copper tape in 0.050" and 0.010" squares (0.1 pF & 0.4 pF) and cut a Q-Tip in half with a razor blade. Stick the copper tape to the stem of the Q-Tip and use these as your tuning tools. Probe the board traces while monitoring the output power with a power meter or spectrum analyzer. Periodically remove the test source (IF rig) to be certain that you are not looking at an oscillation. Be cautious during the tuning process. With PC board traces so close together it is easy to short gates to drains, smoking the FET's. I advise against tuning late at night. I also suggest checking your blood alcohol level prior to tuning to determine if you have had too much to drink.

WIRIL 3/8/94 Modification of Qualcomm Omnitrac receiver board for 10 Ghz LNA use.

Enlarged view of traces AFTER tuning



□ = 1PF chip caps

Measured gain after retuning = 26.2 dbm.

Noise figure not measured

Figure 4a

WIRIL 3/8/94 Modification of Qualcomm Omnitrac receiver board for 10 Ghz LNA use.

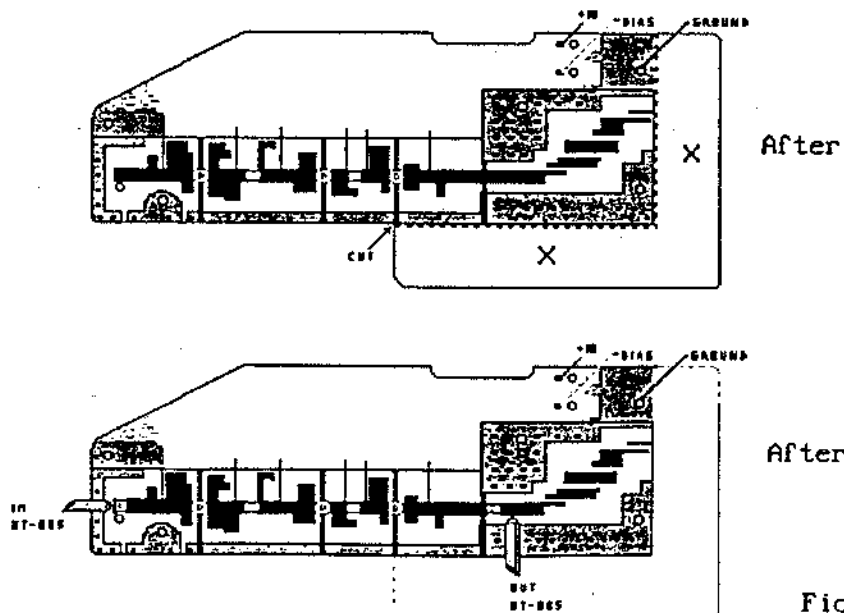


Figure 4b

Once you have located a good tuning spot with your tuning tool, WIRIL suggests removing the adhesive from a piece of copper tape and tinning both sides with solder. (Pre-tinning reduces the time it takes to solder the tape to the PC board traces.) Hold the tape in place with a pair of tweezers and quickly solder the tape to the PC board. Get in the habit of making sure the DC is off before you pick up the soldering iron. Believe me, mistakes can easily occur in the midst of all the excitement.

Turn the DC back on and remove the input source to make sure you are amplifying and not oscillating. Place the metal cover over the heat sink assembly and look for changes in gain. Optimizing the circuit with the cover was very frustrating. I drilled a 1/2" hole in a piece of aluminum and centered the hole over the area I was trying to tune. Use your tuning tool to determine if you added too much or not enough copper to the trace. This iterative tuning process must be repeated at each tuning point until you feel you have optimized the amplifier's gain and stability. This is tedious work and may take 2 or 3 nights before you are happy with the results.

The only thing none of the articles addressed was input return loss. I achieved 26 dB of gain (This is what LIV published.) but with only a 3 dB return loss. I found that the gain changed by 3 to 4 dB by touching certain parts of the coax or heat sink. I fooled around with the snowflakes again at the input of the 1st stage. I reduced my gain by 3 dB but improved the return loss to -13 dB. The amplifier was now much less susceptible to oscillation or gain changes due to "hand waving".

Next time I'll talk about the pain and suffering I went through to get the PA board up and running.

REFERENCES:

- 1) Ken Schofield, W1RIL - Modification of Qualcomm Omnitrack Receiver Board for 10 GHz LNA use.
- 2) Bruce Wood, N2LIV - Up, Up & Away to 10-GHz or 10-GHz Semi-Commercial Style, 20 th Annual Eastern VHF/UHF Conference.

HOME BREW NIGHT

Homebrew Night continued to show that the Packrats are more than just contesters and party go-ers. The following list of homebrewers and their projects shows the wide depth of the projects:

Mark, WB2JHG	6 Meter Amplifier and 2 Meter Transverter.
Al, N3ITT	Band Switch, IF Amp.
John, KB3XG	2.3 MHz Transverter, 3.4 GHz Transverter, DC/DC Converter, 10 GHz Antenna Mounted Transverter.
Walt, WA3AQA	RF Wattmeter, Attenuators.
Don, N3OZO	Rover Truck
Joe, W2EIF	RF Power Meter, Signal Source, 2304 MHz Power Amplifier using a 7289.
John, N3DQZ	1296 MHz Transverter
Doug, WA2LTM	3456 MHz Transverter

Award Winners were as follows:

Most Ambitious: John Sorter, KB3XG

Best Construction: Doug, WA2LTM

Most Unique: Don, N3OZO

Special Award: Most Years of Active Home Brewing, Joe, W2EIF

DOWNEAST MICROWAVE HAS CHANGED HANDS

Well, it's been a good ride! As of December 31, 1994, I am retiring (at least for a while) from the business. Down East Microwave will continue however as I am selling the business and the buyers plan to keep things exactly as they are. Actually, with new energy injected into the business, things will probably pick up somewhat.

The main part of D.E.M. will go to Steve Kostro, N2CEI, and will be run as Down East Microwave, Inc. The new address is 954 CR519, Frenchtown, N.J. 08825, and the telephone number is: 908-996-3584. He will have all the VHF, UHF, Microwave equipment transverters, amplifiers, preamplifiers, etc. He will also handle the components and be a dealer for the amateur antennas. Steve designed a lot of the gear and has been the number one DEM dealer for a number of years.

The antennas are going to Dave Olean, K1WHS. His business is Directive Systems, RR1, Box 282, West Lebanon, ME, 04027. Phone and FAX are 207-658-7758. Dave has been building and shipping my loop yagis for the past year so there will be essentially no change here except some new stuff (lower frequency and custom antennas) as well.

Both new owners plan to keep the DEM dealer system intact. Steve has a lot more work to do to get up than Dave so he will not be taking orders from dealers until this spring, say after Dayton. Dave is set up right now and will take orders from dealers right away. Best to check with them in person for details!

It's been ten years and time for a change I guess. The business has grown far past anything I had ever envisioned and I was faced with making the next growth step (YOW!!!) or doing this. I will become a full time contra dance caller and musician, and have some time to spend enjoying my hobby. I'll probably be back selling components or something very small and mail-order- like in a few months. I've enjoyed working with all of you. See you around, or on the bands!

SILENT KEY

Tom Rutland, K3IPW, owner of Rutland Arrays, became a silent key on February 26, 1995.

SWAP SHOP

(send all ads to the editor)

FOR SALE: 1296 Power Amps, 250 watts to 750 watts, 2, 4, and 6 tube cavities using water cooled 7289, 8907 or single tube cavities using TH308, 328, 338 or water cooled Y730. Call or write to Tom Dinyovszky, KB2AH, 405 Union Lane, Brielle, NJ, 08730, 908-223-5067.

FOR SALE: 3456 MHz TVRO LNA, 1.3 dB noise figure, with "N" connectors. Modified by WA3JUF \$10. 10 GHz, 2W TWTA with data sheets. Condition unknown \$10. One dead Alfred S-band TWT in a chassis with power supply (power supply indicates good de: WA3NUF) \$10. Glassman regulated power supply, variable 1 to 15 kV, 10 mA. Works \$40. 40 feet of brand "X" tower, disassembled, ready-to-go \$20. 286-20 mother board with 2 Mb RAM, co-processor, 40 mb HD and disk drive controller board. All documentation, everything works \$20. VARI-L 1.7 to 4.2 GHz mixers/SMA's \$5 ea. Merrimac 2-4 GHz 90 deg hybrids/SMA's \$5 ea. EG&G ovenized xtal oscillators. Can be re-crystaled for ham bands \$5 ea. DownEast 2.3 GHz LNA kit \$30. Pack Rats take an additional 50% off the already low list price. de: JOHN, KB3XG (610)270-3158

FOR SALE or TRADE: SSB LT23S, 10 watt 1296 Transverter, \$600 Post Paid or will trade even for a LT33S Transverter. Contact Ron, KB3QM, 302-875-5257.

WANTED: Rohn 45G or 55G Tower sections and a heavy duty rotator with control. Will dismantle and/or pickup. Contact Len, N3NGE at 717-355-0157 (W) or 610-286-9743 (W).

FOR SALE: 2M KW Amp with power supply. HB Plumbers Delight with two 4CX250's, rack mounted on wheels. Needs 110 v. 20 amp variac. 2-6 watts i results in 400 to 600 watts output. \$400.00. Pick-up only. Contact Rick, KB3PD at 302-737-7966, 1930 to 0100 hrs.

FOR SALE: Gel Cell Batteries, 12 volt, 57 Amp Hour. Removed from equipment, excellent condition, \$20.00 each. Contact: Bob, W3GXB at 610-346-8698.

FOR SALE: VUCC Record Books: Worldwide 50 MHz - \$20.00, North American 144 - 1296 MHz \$25.00, All mailed first class. Contact Harry Schoois, KA3BB, 1606 South Newkirk St., Philadelphia, PA. 19145. US Postal Money Orders preferred.

FOR SALE: Commodore C-64 Computer. Working computer plus two spare computers for parts, Power Supply, EPYX Fastload Cartridge, WICO Joystick, Tons of Software, MW350 Printer Interface, Dust Cover, 1541 Drives, Two working Drives, Cables, 1702 Color Monitor With all cables. Original Owner \$149.00. For All Above contact: Ron Whitsel, WA3AXV, 215-355-5730 or e-mail to packratman@aol.com.

WANTED: (2) or more CUSHCRAFT 432 BOOMERS model # 424B, in any shape OK. Contact Bill Blazina, K3EAV @ 814-643-5264, Rd 3 Box 219M, Huntingdon, Pa 16652, e-mail BLAZINA@juncol.juniata.edu.

DAYTON VHF/UHF FORUMS

from the Feb. 95 issue of "Anomalous Propagation", newsletter of the Midwest VHF-UHF Society

(Tentative list of speakers)

Questions on UHF by Joe Lynch, N6CL
Microwave DX Slide Show by Tom Whitted, WA8WZG
No-Tune Converters for the Microwave Bands by Dr. Rick Campbell, KK7B
Microwave Band Sharing - Latest Intelligence by Paul Renaldo, W4RI
Six Meter Cuban/American DX by Joe Lynch, N6CL
New Devices by Rick Littlefield, K1BQT
Cheap Yagis by Kent Britain, WA5VJB
VHF/UHF Contesting by Joel Harrison, WB5IGF
Smith Chart Impedance Matching by Dr. Al Katz, K2UYH
Horns, Dishes, and Lenses by Paul Wade, N1BWT
(no Antenna Measurements this year)

April 1995 Packrats Cheesebits Pg.9-

19th ANNUAL MID ATLANTIC VHF CONFERENCE - CALL FOR PAPERS

The Mid Atlantic States VHF Conference will again be held at the Horsham Days Inn in Horsham, Pa., just north of Philadelphia. This years conference will be held on Saturday, September 30, 1995. Sponsored by the Mt. Airy VHF Radio Club, the conference continues to present a wide variety of technical papers covering all aspects of 50 MHz through light frequencies. Talks on operating, propagation, construction and theory are among those requested. Speakers are encouraged to contact the conference chairman early.

Contact: John Sorter, KB3XG, Conference Chairman
1214 N. Trooper Road
Norristown, PA 19403
610-999-7658

TID BITS

The 1995 Mid Atlantic States VHF Conference date has been scheduled for Saturday, 30 September. The following day, Sunday, 1 October is the date for HAMARAMA '95.

Preliminary estimated score from our friends in Rochester is 1,718,650 points from 127 logs per their March 1995 newsletter.

The March issue of QEX has an article by Russ, NJ2L on "A Modular, High-Performance 5.76 GHz Transverter. It has a 432 MHz IF, 1.6 dB NF, and +3 dBm output at the 1 dB compression point.

The March 95 issue of "VHF EME REPORT" has an article titled "Antenna Polarization Switching "by Leif, SM5SBZ. Also, Bob, K6QXY, in his 50 MHz Report says that with a ground gain of 4 - 6 dB, a single long yagi you can generate an ERP in excess of 70 KW and that he worked Jimmy, W6JKV/VP2 who was running this setup.

Paul Shush, N6TX, reports hat he is on a one year leave of absence from teaching. He is the Executive Director of the SETI League that is involved with searching for Extra-Terrestrial Intelligence. He can be reached via e-mail at n6tx@setileague.org. For those with www capabilities they have a homepage at <http://seti1.setileague.org/homepage.html>.

Lou, NB2T reports hearing the WA2UMX 2 meter propagation beacon on 26 of 28 days in February. The beacon is located at FN23xc running 20 watts into a phased pair of big wheel antennas with horizontal polarization, 70 feet on a tower on 144.290 MHz.

The Jan/Feb issue of the Amsat Journal announced that AMSAT now has a World Wide Web (WWW) page on the Internet. For those of you with access, they can be found at the following URL <http://www.amsat.org/amsat>

The April 95 issue of the N.E.W.S. Letter reports that newer versions of Qualcom X Band receiver boards are available. The reported performance is 27 dB gain 2.7 dB NF that are tunable to 30 dB gain/1.1 dB NF. The cost is reported as \$25.00 without a case. Contact Chuck Houghton, WB6IGP at 6345 Badger Lake Ave., San Diego, CA. 92119.

The Rats articles continue to be reprinted by other newsletters. In the Jan 95 issue of Anomalous Propagation, KB3XG's article on Parallel MMIC's and WA3JUF's article on Microwave RF Power Monitor appeared.

Jack Lindauer, WA6EFM, has established a Swan 250/250C Owners Group. The group's purpose is to exchange information on equipment problems and circuit modifications. Contact Jack at 18881 Brymer Court, Northridge, CA 91326, phone (818) 831-0526.

NEED your QSL cards checked for a VUCC Award or an upgrade ? Contact Harry, W3IIT - address/phone on page 2 of this newsletter.

The new ARRL UHF/Microwave Project Manual is now available covering 432 MHz up. Packrat contributors include Dave, WA3JUF, Bill, W3HQT, Dave, N3CX, and Chuck, WA3IAC.

The Feb. 1995 issue of "VHF EME REPORT" has an article by Gerald, K5GW on Yagi Design Computer Software - A Powerful Tool for All of Us.

Walt, N3EUV, sends a note that he is busy at school and plans to be back operating at the contest site during the June Contest

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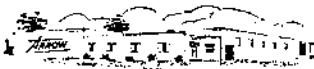
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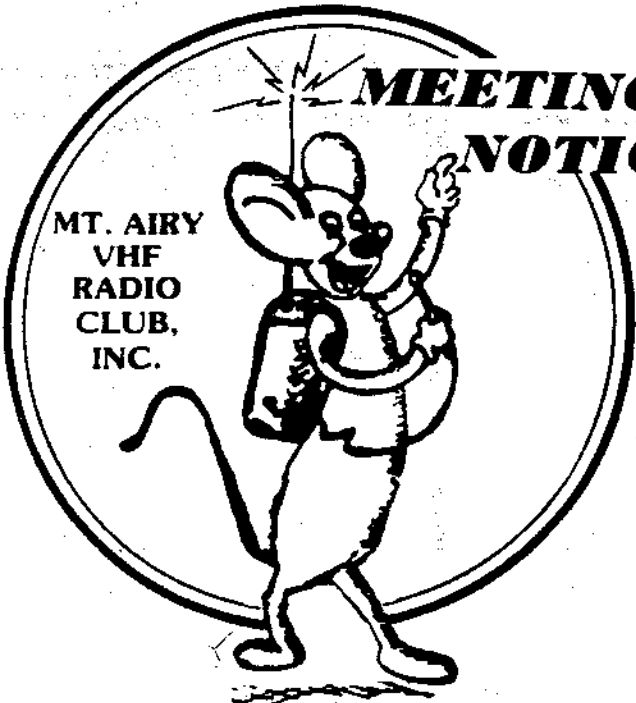
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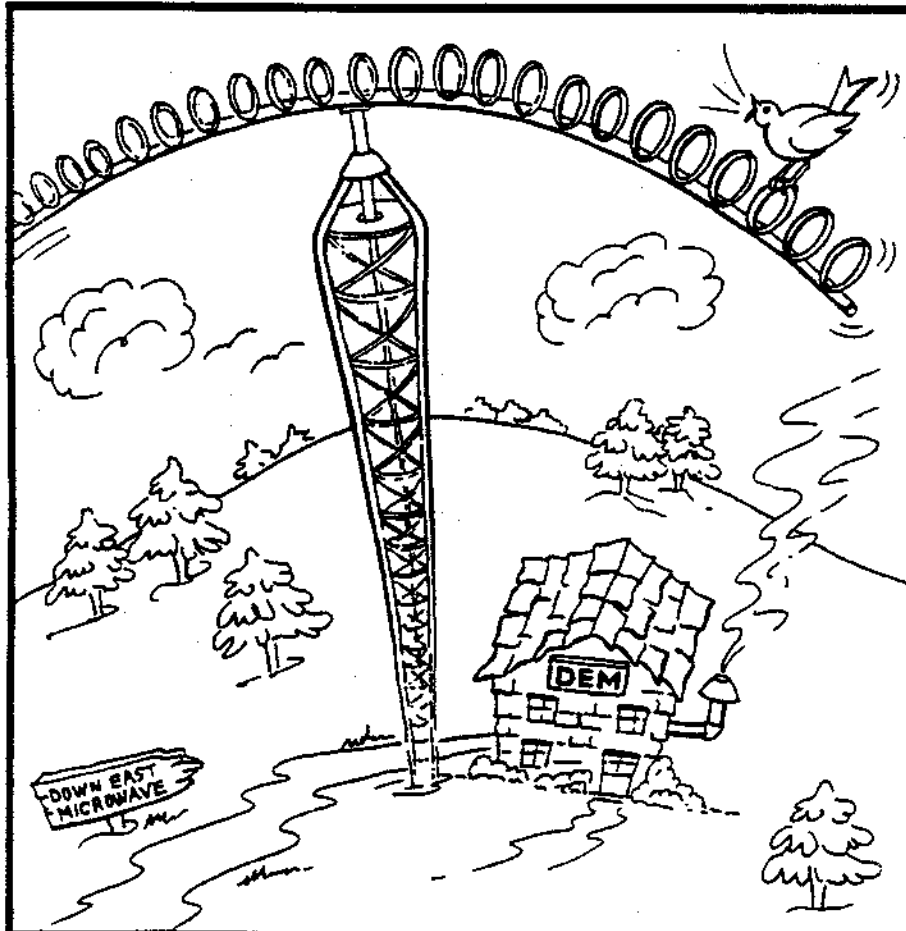


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