

PACK RATS'



PACK RATS

CLUB CALL: W3CCX

MT. AIRY VHF RADIO CLUB, INC.

CHEESE BITS



SCANNED TO PDF BY BERT, K3IUV, 2013

MT. AIRY VHF RADIO CLUB., "THE PACK RATS", PHILADELPHIA, PENNSYLVANIA W3CCX
NET FREQUENCIES: 50.125, 144.150, 222.125, 224.58/222.98, 432.110, 903.100, 1296.100 MHZ
AFFILIATED CLUB: AMERICAN RADIO RELAY LEAGUE ARNS

Meetings: Third Thursday of each month at 8:00 PM
Southampton Free Library, 947 E. Street Road
Southampton, Pennsylvania 19866

VOLUME XXXIII

AUGUST 1991

NUMBER 8

THE PREZ SEZ

Summer is here and with it some severe weather in parts of Pack Rat country. I heard tales on the recent net of a seven inch rain fall in Southern New Jersey along with basement bailing. I hope all the club members survived the flooding. Let's all check out our systems for hidden damage and make it known on the net or by phone if repair help is required. Easton was apparently on the north end of the storm and my rain gauge showed .9 inches.

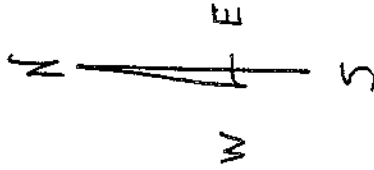
This month's meeting was the famous White Elephant Sale at WA2OMY's QTH in Norristown, Pa. I know that Dave, W3ZD has had the sale at his QTH for a number of years, over the past decade or two, so this was a major change for some of us old Rats. Gary was up to the task and at last count, 27 valuable boat anchors have new homes.

Change is something that all of us endure and it is not by itself bad; in most cases it is good to see some change. This year Amateur Radio will be changed by the influx of new hams in the codeless Technician ranks. At work, I have three new potential ham candidates and one new Technician N2MVP who passed the code test. These new hams need to be helped to understand the VHF bands and see if they might want to try the weak signal modes. Try to remember the learning curve you all went through and be patient and understanding. Invite the new hams over to your shack and by all means to our club meetings.

One last thought... get on the air, call CQ, and meet your new ham neighbors. It will be as much fun for you as for them!

73, William T. Murphy W0RSJ

PACK RAT AUGUST OUTDOOR MEETING: THE AUGUST MEETING OF THE PACK RATS WILL BE THE ANNUAL FAMILY PICNIC. ALL MEMBERS, WIVES, CHILDREN, AND FRIENDS WELCOME TO ENJOY FUN, FOOD, AND SWIMMING AT THE HOME OF DAVE AND SYLVIA HACKFORD, QTH OF N3CX.



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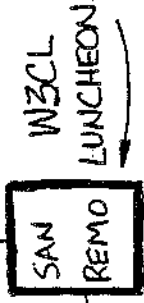
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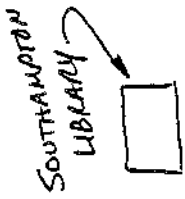
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CALENDAR OF COMING EVENTS

By Harry Brown, W3IIT

AUGUST

- 3-4 **ARRL UHF CONTEST.** Starts 1800 UTC on August 3, ends at 1800 UTC on August 4. See July QST, page 91 for the rules.
- 3-4 The Six-Meter Invitational Net Activity Day sponsored by the Colorado SIN will run from 1400 UTC August 3 until 0300 UTC August 4. See August QST, page 82 for rules.
- 8 **Pack Rat Board of Directors meeting** at the QTH of Ron, WA3AXV. Meeting starts at 8PM sharp. All interested parties welcome. Call 215-355-5730 for directions.
- 11 **Mid-Atlantic ARC (MARC) Hamfest** will be held at the Bucks County Drive-In Theater on Route 611 in Warrington, Pa. Site is 5 miles north of Exit 27 of the Pa. Turnpike (Old Pack Rat Hamarama location). Talk-in on 147.66/.06 and 146.520.
- 13 **Perseids Meteor Shower peak** at 0008 UTC. See August QST page 71 for more details on this and other meteor showers.
- 17 **Ramapo Mountain ARC Hamfest** in Oakland, NJ. Talk-in on 146.49/.19 and 146.520.
- 17-18 **ARRL Cumulative 10 GHz Contest**, first weekend. See June QST page 57 for rules. Second weekend will be September 21-22.
- 17-18 **New Jersey QSO Party.** See August CQ, page 112 for rules.
- 17-18 **Maryland-DC QSO Party.** See August QST, page 91 or August CQ, page 112 for rules.
- 18 **PACK RAT FAMILY PICNIC.** The August meeting of the Pack Rats will be a family picnic with all Pack Rats, friends, wives, kids, etc. invited. The picnic will be held at the QTH of Dave Backford, N3CX. Call Dave's wife Sylvia at 215-679-7293 if you wish to bring a covered dish to share. Start time is around noon. Bring your swimsuits. Rain date is August 25.
- 18 The **Moose ARC Hamfest** will be held at the Towson Moose Lodge in Towson, Maryland. Talk-in on 224.12, 224.16, and 145.330 repeaters.
- 18 The **Delmarva Hamfest** will be held by the Sussex ARA at the Delaware Technical & Community College in Georgetown, Delaware. Talk-in on 147.075, 224.84, and 146.520.
- 25 **Gloucester County ARC Hamfest** at the 4-H Fairgrounds in Mullica Hill, NJ. Talk-in on 147.78/.18, 223.06/224.66, and 146.520.
- 27-28 **220 MHz QSY Party** will be held to mark the final hours of amateur radio operator occupation of 220-222 MHz. Sponsored by the Eastern VHF/UHF Society. Operate 220-222 MHz from 2200z August 27 'till 0400z, then continue at 222 MHz and above from 0401z until 0800z. Exchange is grid square plus the number of years since your first 220 contact. (Remember the 221.4 days?) See August QST, page 82 for rules and info.

3456 MHz No-tune transverter Mod

by Dave Mascaro, WA3JUF

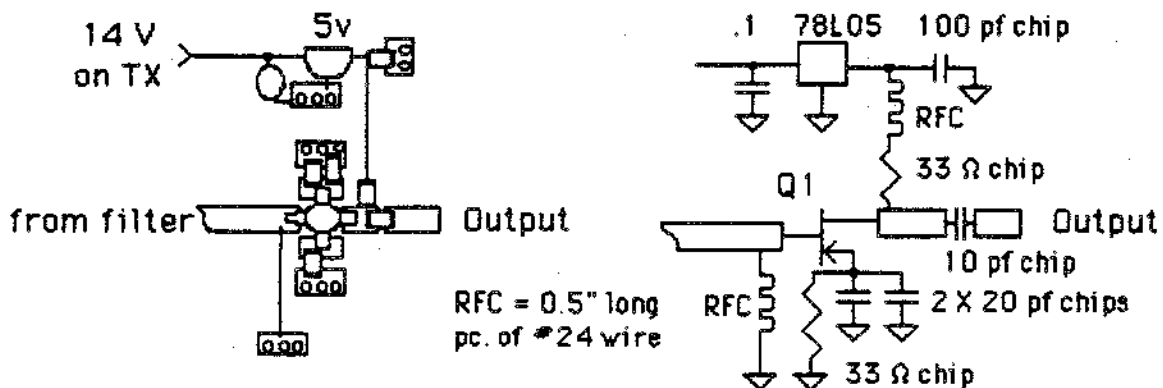
The 3456 MHz no-tune transverter designed by WA8NLC is an excellent design and has flooded the Microwave bands with activity. Many of the units work the first time they are fired up. Some of the units have instability problems associated with the output MMIC used, in particular the MSA-0885 (MAR-8).

The 0885 MMIC wants to be either driven harder with RF or turned on harder with DC. Since this is a linear amplifier stage, the former is not possible. Changing the supply voltage and/or the bias resistor will turn on the device harder, which seems to make it stable into a 50Ω test set-up. When operated into an antenna or another amplifier stage, the MMIC will probably oscillate.

Usually replacing the bias resistor with a 1/2 watt carbon unit of slightly lower value will help with stability. Use the whole resistor lead as the RF choke to the MMIC.

Removing the MMIC and replacing it with a GaAsFET produces a stable amplifier with more output. The grounding rivets are removed and the ground pads are used as connection of the source leads of the FET. Two additional ground pads are added close to the source pads. I used three rivets close together to make the additional ground pads.

There is no room for additional output matching of the FET, but the gain is still greater than the 0885 MMIC. Power output will be 10-25 mW depending on the amount of local oscillator and gain of the other stages in the transmit chain. No instability was seen into a 3:1 mismatch at the output of the FET stage.



Q1 = ATF132B4, ATF10135, MGF1302, etc.

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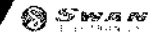


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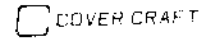
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HAMARAMA '91 UPDATE
Chairman Al Boblitt, K3EOD

It is a pleasure to announce that HAMARAMA '91 is running smoothly at this time. The following Pack Rats have accepted positions as committee chairman for the hamfest and are seeking your help and support:

PUBLICITY LEADER	WB2VLA, Dave Power
REGISTRATION	WB3DNI, Pat Cawthorne
NIGHT PARKING	WC2K, Rick Connor
TAILGATE PARKING	WA2OMY, Gary Hitchner
TICKET SALES	W3HMU, Tony Souza
SIGNS	WB3JYO, Paul Drexler
TALK-IN	WB2YEH, Bob Fischer

Remember, HAMARAMA is not a one person event, it takes TEAMWORK. The combined effort of a lot of people to help run this important event. Don't sit back and let the other guy do all the work. Contact one or more of the above committee chairmen and offer to work on their committee. The more help we have, the less each person has to do to make this the most successful HAMARAMA the PACK RATS ever held.

Remember, HAMARAMA benefits each and every member of the Pack Rats!

MICROWAVE UPDATE 1991, OCTOBER 17 - 20

The 1991 MICROWAVE UPDATE CONFERENCE will be held at the La Quinta Inn, Arlington, Texas. Conference Chairman is Al Ward, WB5LUA. Here's the line-up:

THURSDAY OCTOBER 17 - morning and afternoon surplus tours with WA5VJB. Evening swapfest and conference registration.

FRIDAY OCTOBER 18 - 5760 MHz Xvtrrs by Rick Campbell KK7B, Microwave Contesting Dave Ballidy KD5RO, 2C39 Amps for 3456 MHz by Barry Malowanchuk VE4MA, AMSAT OSCAR Phase IID Microwave Satellite by Bob McGwier N4HY, Memphis Area Beacons by Dave Meier N4MW, Radio Astronomy by Ron Falstreau K4ZFY, Getting on 10 GHz EME by Jim Vogler WA7CJO, Using WWV Information for Solar Measurements by Wes Atchison WA5TKU, High Power Solid State Amplifiers by Bill Olson W3HQT, Using the Smith Chart by Paul Shuch N6TX, PHEMT LNA's by Al Ward WB5LUA, Dish Antenna Feeds by Harold Reasoner K5SXX, 10 GHz Xvtrrs by Charlie Suckling G3WDG, Simple Multiband Dish Feeds by Kent Britain WA5VJB, swapfest, noise figure, phase noise, and filter passband measuring.

SATURDAY OCTOBER 19 - Ft Worth Flea Market/Tandy Center/Nortex tours, "Maxwell Without Tears" by Paul Shuch N6TX, Computer Controlled EME Arrays by Dave Meier N4MW, auction, Microwave Frequency Source Update by Greg McIntire AA5C, Low Noise 24 GHz Amplifiers by Tom Hill WA3RMX/7, Digital Signal Processing by Frank Perkins WB5IPM and Lon Cecil WB5PKJ, 1/2 and 1 Watt 2304/3456 MHz Amps by Greg McIntire AA5C, ARRL/WARC '92 by Paul Rinaldo W4RI.

SUNDAY OCTOBER 20 - General question and answer session by WB5LUA, Nortex tour.

PROPAGATION REPORT
By Paul Drexler, WB3JYO

Some good news to report this month! Don't forget to check out the bands during those mornings and evenings when rapid heating and/or cooling takes place. As the atmosphere fluctuates, tropo enhancement is likely to occur. The UHF contest comes at a time in the season when this phenomena is very common. Hope that you all had some tropo boost for the weekend. Let me know how propagation and activity were.

Propagation during the end of June included a fairly good 50 and 144 MHz aurora to New England on the 23rd, starting around 2300z and lasting more than an hour. Aurora signals were fairly weak for the propagation mode which I suspect explains why nothing was worked farther to the Northwest. On June 25, the 50 MHz band reportedly opened to Haiti (HH2) during the morning, and to the South and Southwest starting around 2000z. Several beacons from the South and SW were copied, including WB4AEG/B (EM74) on 50.066 and KB4UPI/B (EM73) on 50.073. Remember to look in the beacon portion of the band for an advance "heads up" alert to 6-meter openings. On June 31, 6-meters opened to Florida and Bermuda around 1500z with VP9IB running some tremendous pile-ups until the band finally closed several hours later.

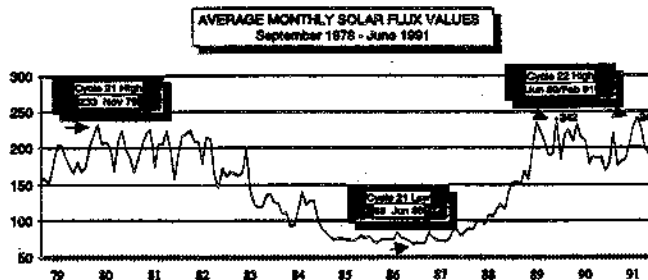
Many were able to get in on an excellent 50 MHz coastal opening starting late in the evening on July 4 at 0100z. The fireworks included VE1UT (FN65) and VE1MR (FN84), each having 20 over S9 signals and extending their communications as far south as North Carolina and west to Michigan. Although signals were extremely strong, the opening didn't materialize on 144 MHz.

Some locals are remarking that "the best E-skip in years" was into the Phila area on 2-meters for the evening of July 19. Apparently, W1's and W2's worked out along the Gulf coast as far as Louisiana and deep into Florida. Were any Pack Rats in on this one? I'd appreciate any additional information from readers.

AF1T, equipped with gear for 2-meters, 2.3, 3.4, and 10 GHz, vacationed on the island of Martha's Vineyard during the week of July 15 through July 23. At the same time, 10 GHz enthusiast W2TMM was spending his vacation on the beach at Cape Hatteras making a concerted daily effort to transmit beacon CW and listen for replies on 10.368 GHz. Also involved in the week-long experimenting were K2RIW (FN30), K2UYH (FN20), K2TXB, (FM29), and K1WHS (FN43). On July 20, AF1T worked K1WHS, K2UYH, K2TXB, K2RIW on 10 GHz and was hearing and tape recording the 10 watt W2TMM beacons from Hatteras. On July 22, AF1T WORKED W2TMM with solid signals both ways as witnessed by those of us fortunate to be present on 144.260 and hear the play-by-play transmitted by AF1T. It is believed that this contact sets a new East Coast 10 GHz distance record. AF1T was running 10 mW to a small dish! K2RIW also worked W2TMM from his Long Island QTH and in then when all of the whoopin' and shoutin' was over, WC2K worked AF1T on 2.3 and 3.4 GHz for new grids. All QSO's were tape recorded by Dale, AF1T and he was planning to play it all back for the boys at the Central States Conference. W2TMM was equipped with only two bands - 40 meters for morning reporting and 10 GHz.

K3HZO is back on the bands with an entirely re-built antenna system and shack. He's active from Maryland (FM18) on 50 Mhz through 2.3 GHz including 2-meter EME. Look for Harry on our weekly nets and during openings and contests.

TNX N2SS and FRC Newsletter for solar flux graph.
CU on the bands!



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8:00 PM - 144.150
8:30 PM - 222.125
8:30 PM - 224.58/R
9:00 PM - 432.110
9:30 PM - 1296.100
10:00 PM - 903.100


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