

# PACK RATS'



## PACK RATS

CLUB CALL: W3CCX

MT. AIRY VHF RADIO CLUB, INC.

# CHEESE BITS



MT. AIRY VHF RADIO CLUB, INC., PHILADELPHIA, PENNSYLVANIA ARNS  
50.125, 144.150, 220.125, 432.110, 1296.110 MHz, W3CCX/R RPTR-222.98/224.58 MHz

Affiliated Club: AMERICAN RADIO RELAY LEAGUE

Meetings: Third Thursday of each month at 8:00 P.M.

Southampton Free Library, 947 E. Street Road  
Southampton, Pennsylvania 19886

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VOLUME XXX

OCTOBER, 1988

NUMBER 10

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### THE PREZ SEZ

It was encouraging to see so many Pack Rats at the September meeting. Pete Putman's (KT2B) program on backpacking to mountain top locations was excellent. Pete put some rare grids on this summer and helped quite a few hams with needed grids for VUCC awards. Although most of us are not going to run out and buy backpacks, his ideas for portable rigs and antennas have a lot of applications for the Pack Rat summer contest activities. Thanks for a great presentation Pete.

Next month the program will be on Satellite Communications by John Pearce (WB2MNF). With all the new amateur satellites up in the last year this should be an informative program.

At the last meeting we took time to discuss the items on the agenda of the VHF/UHF Advisory Committee. We covered four or five items and will be working on comments for the next few meetings. Many of the items on the agenda directly affect everyone in this Club, so take some time and bring your ideas to the October meeting.

Rick Connor (WC2K) has an excellent program for the Conference on Saturday and from all the talk I have been hearing at hamfests lately, it looks like HAMARAMA chairman Pat Cawthorne, (WB3DNI), will have an excellent turnout for the big event on Sunday.

I'll see you at the Conference and the HAMARAMA.

73

Bob, N2SB

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MEMBERSHIP MEETING: THE THIRD THURSDAY  
OF THE MONTH. SWAP SHOP ITEMS - NO CHARGE

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MONDAY NIGHT NETS

7:30 PM - 50.125 MHz  
8:00 PM - 144.150 MHz  
8:30 PM - 220.125 MHz  
8:30 PM - 224.58 MHz  
9:00 PM - 432.110 MHz  
9:30 PM - 1296.1 MHz

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\* \* \*



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CALENDAR OF COMING EVENTS-OCTOBER 1988

By Harry Brown, W3IIT

OCTOBER

- 1 12th Annual Mid-Atlantic VHF Conference will be held at the Warrington Motor Lodge, Warminster, Rte 611 and Street Rd., Warminster, Pa.
- 2 17th Annual Pack Rat Hamarama will be held at the Bucks County Drive-In Theater at Rte 611 and Street Rd., Warminster, Pa.
- 2 Columbia ARA Hamfest will be held at the Howard Co. Fairgrounds in Columbia, Md. Talk-in on 147.735/135 and 146.52.
- 3 First Annual Canadian Radio Relay League Fall VHF/UHF Sprints. 144 MHz session will be any 4 hour period from 1800 to 0300 "local" time. Standard CRRL Contest rules apply. Exchange is grid square and call. Score is total contacts times grid count. Full rules in Aug VHF/UHF and Above, page 3. Send logs to VE3DSS by December 1.
- 6 Board of Directors meeting for the Mt. Airy VHF Radio Club will be held at the QTH of Ron Whitsel, WA3AXV at 8:00 P.M. All interested parties welcome. Call (215) 355-5730 for directions.
- 8-9 National Capital DXPO 88 Convention will be held at the Best Western Inn at the corner of Arlington Blvd (US Rte 50) and Annandale Rd. in Falls Church, Va. Talk-in on 146.42.
- 8-9 Pennsylvania QSO Party sponsored by the Nittany ARC. See Sept. QST, page 95 for rules.
- 9 Predicted peak of the Draconids meteor shower at 0900 UTC.
- 9 Hall of Science ARC Hamfest at the New York Hall of Science parking lot in Flushing Meadow Park. Talk-in on 144.3/223.6R/445.225.
- 11 CRRL 220 Sprint. Same rules as for 144 MHz.
- 13 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. You need not be a member.
- 15 33rd Annual Syracuse Hamfest at the Arts and Home Center of the NY State Fairgrounds. Talk-in on 146.31/91 and 147.90/30.
- 16 Shore ARA Hamfest will be held at the Wall Township Intermediate School on Allaire Rd. and Bailey's Corner in Wall, N.J. Talk-in on 145.485, 146.91, 145.11, and .52.
- 19 CRRL 432 Sprint. Same rules as for 144 MHz.
- 20 Predicted peak of the Orionids meteor shower at 1400 UTC.
- 22-23 ARRL International EME Contest. Covers all bands above 50 MHz. Second weekend Nov. 26-27. See Sept. QST, page 96 for rules.
- 27 CRRL 902 MHz Sprint. Same rules as for 144 MHz.

CALENDAR OF COMING EVENTS-OCTOBER 1988

(cont.)

29 CRRL 50 MHz Sprint. Operate a maximum of 24 hours from 1000 UTC, Sat., October 29 to 0300 UTC Monday, October 31.

3 NOV CRRL 1296 MHz Sprint.

PROPAGATION REPORT

by Paul Drxler, WB3JYO

Many of the noteworthy tropo and ducting openings have occurred during the late Summer/early Fall season. Although most of this month has been rather boring as far as propagation, Mother Nature seemed to be saving it all up for the weekend of the September Contest (September 10-12).

Six meters was without any significant enhancement to this part of the country. There was very little to be worked, and no real Es was noted. Activity too, was rather sparse.

The higher frequencies however, produced most of the excitement during the weekend. On the 11th around 0100-0300 GMT propagation on the 903/1296/2304 bands seemed better than usual. A slight Aurora was present Sunday morning of 2 around 1100 GMT. Many stations to the South were easily worked. WA4SBC (FM16), running only 45W, had a good signal on 432. K2UOP (FM17) was 59+ on 144 at 1230 GMT.

Starting at 2100 GMT on the 11th, an Aurora was heard on several stations on 6 and then on 2. Shortly thereafter both 6 and 2 came alive with new grids on 6 and grids FN03, FN24, FN25, FN54, FN55, EM79, EN51, EN52, EN82, and EN93 on 2, within the 3 hour period that Aurora was present. It was interesting to note that very few of the MI boys were workable during the opening. WQ4V (EM86) was worked on 2 and 220 just before the Aurora, and WC2K reports working WQ4V on 2, 220, 432, and 1296! Signals on the higher bands remained above average throughout the remainder of the contest.

On the Monday evening nets following the contest, conditions were excellent on all VHF nets. The tropo allowed a number of 'DX' stations to check into the 2, 220, 432, and 1296 nets with good signals. Among others, W3IP (FM18) was 59+20 on 432, and N2CJP (FM16) checked in on 432. Our own KP6AJ, running 10W and normally S2-S3 on 1296 checked in Monday evening with an S9 signal from FN31! Steve reports that we should be seeing him on the nets more often!

CU on the bands!

APPLICATION FOR REINSTATEMENT TO MEMBERSHIP

KP6KD - Greg Adams  
326 Browning Lane  
Cherry Hill, NJ 08003  
609-354-1288

VISITORS - SEPTEMBER 15, 1988 MEETING

KA3QYH, Ron Wenig, Bensalem, PA  
KT2B, Pete Putman, Buckingham, PA  
XYL WA3JUF, Barbara Mascaro, Ottsville, PA  
Harmonic WA3JUF, Ryan Mascaro, Ottsville, PA

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Phone: 215-635-1078

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CONTACT: CHUCK STEER, WA3IAC  
Phone: 215-335-0637

WANTED: Cushcraft 2 Mtr Big Wheel antennas  
(Model ABW-144) and a 2-bay or 4-bay stacking  
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CONTACT: HARRY SCHOOLS, KA3B  
Phone: 215-468-1512

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amplifiers, 13.8 VDC: 1296 MHz, 8W in 35W out \$305, 1W in 20W out \$255.  
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xtal, 700-800 MHz LO kit \$48. Xtals available. Write for complete catalog:  
DOWN EAST MICROWAVE, Bill Olson, W3HQT, Box 2310 R.R. 1 Troy, ME 04907  
207-948-3741.

TID BITS

- We sadly report that Jack Yates, W3IOU, an old friend of the Pack Rats, became  
a silent key on September 12, 1988.
- Condolences to Jay Miller, KS2T and family on the recent passing of his mother.
- There was a good turn-out of members and visitors at the September 15, 1988  
meeting. The WB3JYO letter did some good!
- Our own Dave Mascaro, WA3JUF had the lead story in the August QST, showing how  
to build linear amps for 144 and 220 MHz. (TNX KC3LM Newsletter).
- Congratulations to Jo Kilgore, W2EIF who celebrated his 80th birthday on Sept.  
9th, 1988.
- Congrats also to Ron Whitsel, WA3AXV, whose birthday was on September 9th also,  
or was it September 8th!
- Condolences to Janice Connor (XYL WC2K) and family on the recent passing of her  
father.

APPLICATION FOR MEMBERSHIP

KA3QYH, Ron Wenig - XYL, Teresa  
3046 Essington  
Bensalem, PA 19020  
215-638-9257

\* \* \*

Penn Wirless Association wishes maximum publicity be given their Buck Award,  
which goes annually to the year's outstanding amateur of the Delaware Valley.  
Written nominations should go to "Buck Award", Box L-734, Langhorne PA 19047.  
Since the award is presented in October, nominations for this year should be  
submitted immediately. (TNX DELAWARE VALLEY COUNCIL of Amateur Radio Clubs  
Bulletin.)

# BIPOLAR TRANSISTOR BASE BIAS SUPPLY WITH THERMAL COMPENSATION

By: WA3IWT Richard Prim 215-355-1192

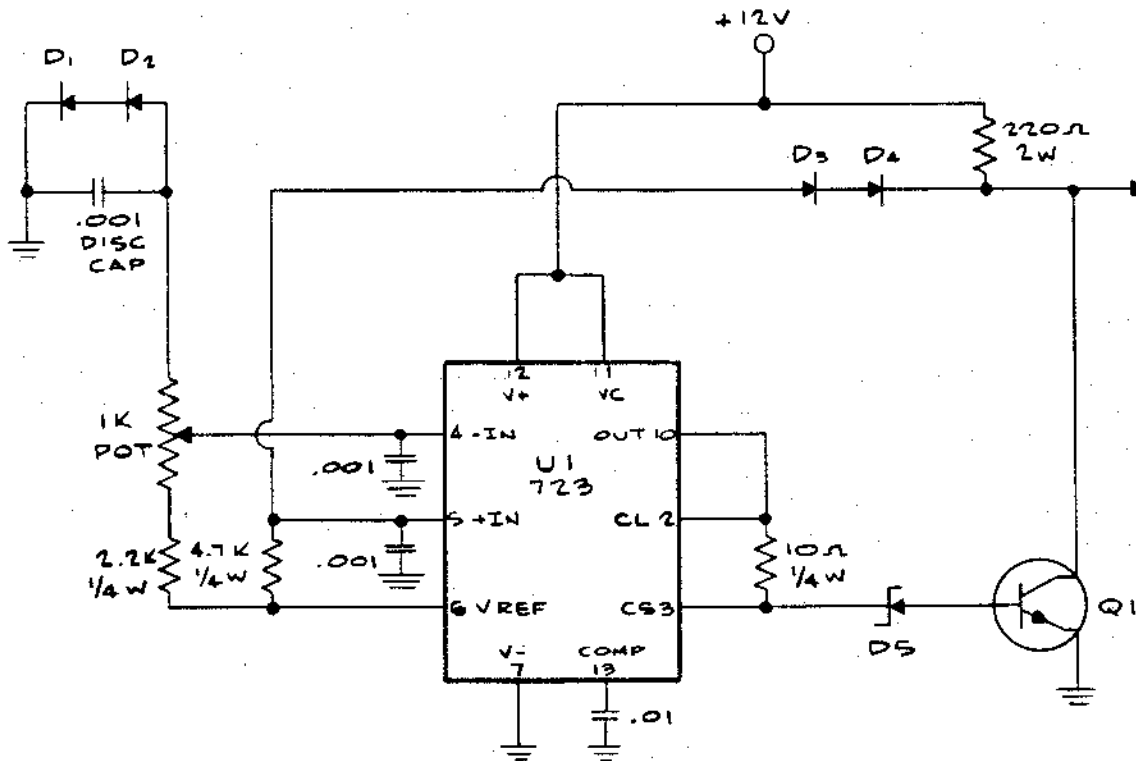
While working on a D.C. dummy load for a power supply at work, I found a way to make the 723 regulator chip work down to .3 volts.

I use the voltage drop of D3 and D4 to make the amplifier in the chip function, it requires at least .7 volts above its V- terminal to function. D1 and D2 are used to compensate for Collector current drift as the transistor heats up. D5 is used to allow the chip to function about 1/2 power supply voltage.

If thermal compensation is too great, i.e. collector current falls as it heats up, remove D2, if it is not enough, add a third diode to D1/D2 combination. If you add a third diode to D1/D2 add an additional diode to D3/D4.

The 723 is sensitive to R.F. so try to keep it away from the R.F. ckts.

MOUNT D<sub>1</sub>, D<sub>2</sub> ON AMP HEAT SINK



- D<sub>1</sub> - D<sub>4</sub> = IN4005
- D<sub>5</sub> = 5.1V 1W ZENER
- U1 = 723 VOLTAGE REG CHIP (14 PIN DIP PACKAGE)
- Q1 RS 276-2020 (TO220-2N3055)

BIPOLAR BASE BIAS SUPPLY WITH THERMAL COMPENSATION  
WA3IWT 8/23/88

ARRL FILES PETITION, MOTION WITH FCC  
From W5YI Report

The American Radio Relay League filed a Petition for Rule Making on September 7th seeking authorization for amateurs to operate automatically-controlled beacon stations between 144.275-144.300, 220.275-220.300 and 432.300-432.400 MHz. These frequencies would be substituted for those presently specified for automatically-controlled beacon operation in Section 97.87(e) of the Rules, (i.e.: 144.05-144.06, 220.05-220.06, 222.05-222.06 and 432.07-432.08 MHz.) The League wants the beacon frequencies moved so that they will not fall "squarely within the portions of each band used for weak-signal amateur communications." (Since the FCC has reallocated the 220-222 MHz band, however, it is not possible for the 220.275-220.300 MHz portion to be approved.)

On July 25th, the ARRL filed a Motion to Extend the time for filing comments on the "Rewrite and Deregulation of Part 97 of the Rules Governing the Amateur Radio Services." The League said they needed an additional 90 days for its ad hoc committee to complete the review of the proposed rewrite. The League's request was approved on August 22nd by Ralph Haller/N4RH, Chief, Private Radio Bureau. The new Part 97 rewrite comment cut-off date is now November 29, 1988.. reply comments must be filed by January 31, 1989.

FROM THE ARRL EXECUTIVE COMMITTEE MINUTES  
Meeting #431-August 27, 1988

...The group then discussed the unfavorable decision of the Federal Communications Commission in Docket 87-14. On August 4, 1988, the Commission adopted an order reallocating 220-222 MHz from the Amateur Service to the Land Mobile Service despite overwhelming public opposition to the FCC proposal. It was moved by Mr. Nathanson that the League should immediately hire trial counsel and seek an injunction in Federal Court. But there was no second, so the motion was lost. On motion of Mr. Grauer, the following statement was adopted:

The ARRL strongly affirms its outrage at the FCC decision. The League will continue to pursue every available administrative, judicial and legislative remedy to insure that Radio Amateurs retain access to the spectrum they need to serve the public. Judicial initiatives will include protecting our options to file in the United States Court of Appeals for the District of Columbia Circuit.

The group was in recess from 11:05 to 11:15 AM, after which Messrs. Wilson, Mendelsohn, Quiat and Rinaldo departed from the Executive Committee meeting to resume their tasks as the Working Group on Rewrite of Part 97.

MORE TID BITS

- You say "Whatever happened to the Fall Sprints?" - They're back! However this time, they're being sponsored by the Canadian Radio Relay League, and the results will be published in QST! This sequence of contests will carry some really neat operating times and rules. See page 107 October QST.
- One of the last frontiers of the Amateur Microwave Spectrum has been crossed. On 27 August, 1988, two groups which had been working hard for a long time finally had a QSO using EME on the 10 GHz amateur band. WA5VJB and KF5N both of Dallas/Ft. Worth, TX, successfully QSO'ed WA7CJO, who had the help of KY7B, both of Phoenix, AZ, at 0935Z on that date. Many have said this might never occur, but once again, Amateur ingenuity triumphs! (TNX KD5RO and "VHF/UHF and Above Information Exchange".)

PACK RAT MEMBERS - PLEASE NOTE:

Dave, WA3JUF, has developed a database for amateur license expiration dates of members. The following Pack Rats hold licenses which, according to our records, have or will expire unless renewed:

<u>CALL</u>	<u>EXP. DATE</u>	<u>CALL</u>	<u>EXP. DATE</u>
N2AQJ	10/88	K3VYG	08/88
W3CJU	03/88	WB2BJH	--/88
K3EOD	--/88	K3DMA	--/88
WB2GEZ	07/88	K3ESJ	04/88
WB3HHO	--/88	WA3IAC	--/88
WB3IGR	11/88	WA3IWT	--/88
N3NXH	--/88	K3KTY	11/88
KB3QM	--/88	K3VEQ	--/88
AC3T	--/88	WB2VLA	--/88
W3VIR	--/88		

Please check the expiration date on your license. If you need a renewal form, call or write Harry, W3CL. If your 1988 month does not appear in the above list, please supply info to Dave, WA3JUF.

We are missing the entire license expiration date for the following members:

N3AHI	KF6AJ
W3FGQ	WA3FOF
W3HQT	WIHDQ
WALKIR	WB3HHP
KA2KSD	K1PXE
WB2YEH	W3RZU
KC7ZK	WA3YDZ
WB8ZAR	K3ZPN

Will the above listed Pack Rats please forward their license expiration dates to Harry, W3CL or Dave, WA3JUF. It's easy to forget when the ticket runs out these days...especially with the 10-year license period. Please let us help your memory of this important detail.

FCC REALLOCATES 220-222 MHZ

The ARRL has called it "Black Thursday", August 4, 1988. On this day, the FCC made the disturbing announcement that despite all of the opposition received from amateurs, broadcasters, U.S. Military, and U.S. Government, the lower end of our 220 band would be reallocated to land mobile service. FCC sez:

"Amateur stations may continue to use the 220-222 MHz band until private land mobile and government users are allowed access. Amateur operators are cautioned, however, to refrain from making any investment in equipment that would only be suitable for operation in this band. Amateurs should begin an orderly transition of ongoing operations in the 220-222 MHz band to other amateur service frequency bands so that an abrupt termination of such activities will not be necessary."

That was just one of a number of summary conclusions from the text of the Report and Order on General Radio Docket 87-14, which, among other things, orders the transfer of 220-222 MHz over to use by land mobile. The 10 page document held little in the way of surprises for the amateur radio community



when it was issued last week. It closely paralleled the FCC press release made public when the action to reallocate the lower two megahertz took place August 4. As part of the same statement, the Report and Order does hint that the FCC is aware of the hardship the reallocation will cause to current 1 1/4 meter amateur operations, and indicates that spreading the discomfort further may be the only way to placate those displaced: "Additionally, the amateur community may wish to address any changes to the amateur rules it finds desirable in preparation of the removal of the 220-222 MHz band, yet beyond the scope of this proceeding. For example, the lifting of the prohibition on auxiliary link operation on some of the longer wave-length bands and the placing of a prohibition on repeater operation in a portion of the 222-225 MHz band are two matters the amateur community may wish to consider and petition for amendment." TNX Westlink Report.

#### PETITIONS FOR RECONSIDERATION

Numerous Petitions for Reconsideration of the reallocation from amateurs have already been received at the FCC, and the ARRL will submit its petition within thirty days after release of the R&O. FCC rules provide that the agency will only grant a Petition for Reconsideration of an action if the petition meets certain criteria. For example, it may favorably consider the petition if it relates to facts or events that have occurred or circumstances that have changed since the last opportunity to present them to the Commission.

Another criterion is that the facts relied on were unknown to the petitioner until after the last opportunity to present them to the FCC, and could not through the exercise of ordinary diligence have been learned before that opportunity. The FCC can always decide in any event that consideration of the facts relied on is "required in the public interest."

The FCC has been given considerable leeway to decide frequency allocation issues, and expectations are not high that the Petitions for Reconsideration will be granted. Great tension exists between the land mobile and broadcasting industries as they compete for spectrum allocations...tension that puts much pressure on the FCC. This grant of two megahertz at 220 to land mobile is not expected to satisfy land mobile completely in its quest for more spectrum, but it functions as a valve to relieve some of the pressure created by this conflict between powerful interests. The FCC may not wish to close a valve it finds useful. A court appeal by the ARRL is virtually certain. TNX W5YI Report.

What's really the "Big Deal" with all of this? Very simply, here in the Northeast, the 221.0 to 225.0 MHz portion of the band is crammed full of active repeater links, packet links, packet simplex, voice repeaters, and voice simplex operations. The packet and link boys are moving now to claim ground above 222...right above 222. We who pursue weak signal SSB and CW will have no place to relocate. If the 222.0 to 222.1 spot is not already occupied when we move, we still will face the unsurmountable problem of working up against adjacent active wide band (NBFM) signals. It ain't gonna work! Unfortunately, in many other areas of the US where 220 weak signal buffs are active, a crowded upper band does not exist. Therefore, there aren't many screams from those areas. Hopefully, those fortunate fellows will realize that they may no longer have us East Coast guys to work.

And what do we do? (1) First, carefully read October QST pages 45 & 46. The instructions from the ARRL will formulate the final shot we have at saving the low end. (2) Attend the Pack Rat meetings where considerable attention will be given to this issue in the next months. (3) Talk about the issue at our Conference and on the bands. Rally the support of out-of-the area VHF/UHFers as well as your HF friends. (4) Populate the band, check into the club net and encourage others to do so during band openings. Don't give up...there could be more to lose than just 220!



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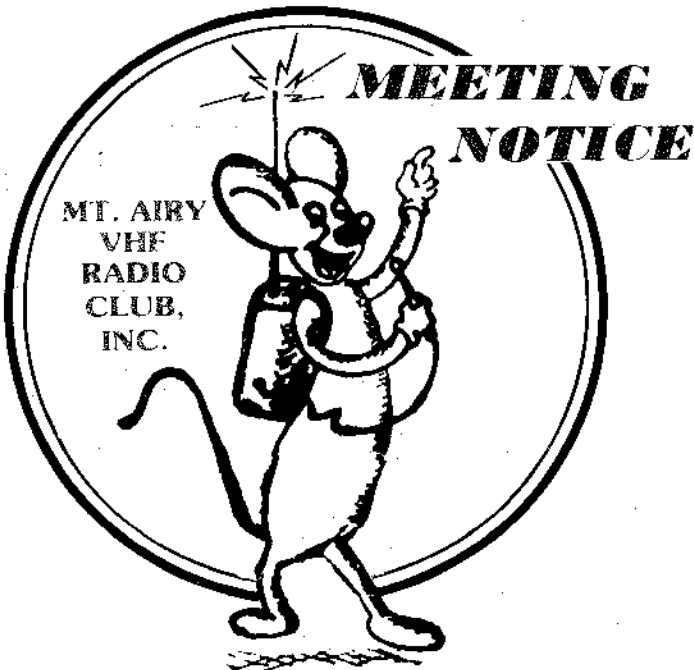
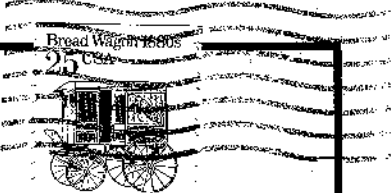
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