

PACK RATS'

CHEESE

BITS



PACK RATS

CLUB CALL: W3CCX

MT. AIRY VHF RADIO CLUB, INC.

MT. AIRY V.H.F. RADIO CLUB, INC., PHILA., PA.
(50.2, 145.2, 221.4, 432.03 & 1296.3 MC)

AFFILIATED CLUB: AMERICAN RADIO RELAY LEAGUE

MEETINGS: THIRD WEDNESDAY OF EACH MONTH AT 8:00 P.M.

VOLUME V

APRIL 1972

NUMBER 4

THE PREZ SEZ

I have always believed that the backbone of our Club meetings has been the excellent programs that we have had through the years. Again, this past March meeting, we had our own K3ZKO, Ron, the TV kid giving us his amateur TV demonstration. Seeing is believing, and Ron shows it and explains it in the most fascinating way. To hear of Amateur TV is one thing, but to see it in operation is another. The Club thanks you Ron, also WA3AXV, Ron, for operating your station at home for the live demonstration.

May I take this opportunity in print to welcome our two new Pack Rats, WA3MIX, Lou and WA3PIR, Steve. Both of them enter our Club as Student Members and join a very select group. Although, our bylaws have an age limit of 21, we do have the Student Member clause which reads "a deserving teen age male, at least sixteen years of age, meeting all the requirements for membership except for age." Talking about Student Members, look at our old ones: K3BPP, Walt; K3EOD, Al; WB2SZK, Randy; WA3NFV, Dan; K3AUH, Al; and K3IPM, Stan, to name a few, who are now full members.

The Mt. Airy V.H.F. Radio Club is always interested in hearing from active VHFer's in our area and our meetings are always open to visitors. See you at the May Meeting.

W3CJU, Don

DEADLINE FOR ARTICLES IS THE GENERAL MEMBERSHIP MEETING.

EDITOR:

K3JJZ, Elliott Weisman, ARNS
8533 Algon Avenue
Philadelphia, Pa. 19152
215 - PI 2-3525

TRUSTEE OF CLUB CALL: W3CCX

W3SAO, Francis Brick
821 W. Lindley Avenue
Philadelphia, Pa. 19141
215 - DA 4-7524

PUBLISHER AND SUBSCRIPTION MANAGER:

K3GAS, Doc Cutler
7815 New Second Street
Elkins Park, Pa. 19117
215 - ME 5-1078

PRINTER:

WA2KOI, Lloyd Schoenig
207 Woodlawn Avenue
Collings Lake, New Jersey 08094

AWARDS CHAIRMAN:

W2EIF, Joseph Kilgore
#5 Sunnybrook Court
Stratford, New Jersey 08084

DIRECTORS' MEETINGS ARE HELD ON THE SECOND WEDNESDAY OF EACH MONTH AT DESIGNATED LOCATIONS.

MONDAY NIGHT NETS:

145.2 - 7:30 P.M.
50.2 - 8:30 P.M.
221.4 - 9:00 P.M.
432.03 - 9:30 P.M.
1296.1 - 10:00 P.M.

OFFICERS:

1971 - 1972

PRESIDENT: W3CJU, Don Hampton
VICE-PRES.: K3BPP, Walt Bohlman
TREASURER: K3GAS, Doc Cutler
CORRES. SEC.: W3SAO, Francis Brick
REC. SEC.: WA3BIV, Carl Barish

DIRECTORS:

K3JJZ, Elliott Weisman
WA3AXV, Ron Whitsel
W3FQD, Dick Huntzinger
WA3LNH, Charles Benavides
K3UJD, Mario Fontana
K3CIV, Ralph Hersh
(Ex-Officio)

* * * * *

PACK RATS' CHEESE BITS is a Publication of the Mt. Airy VHF Radio Club., Inc., Phila., Pa., and is published monthly.

10 ¢ per copy \$1.00 per year

We operate on an exchange basis with other publications and anything that is printed in CHEESE BITS may be reprinted, unless so stated, as long as the proper credit is given.

* * * * *

DO YOU BELIEVE IT???

With the publication of this issue, CHEESE BITS is 14 years old. HAPPY BIRTHDAY! In this issue is reprinted Vol. 1 Number 1, as originally typed, edited, printed, and published by Helen Brick, XYL of W3SAO (Alias MOTHER RAT)

K3JJZ, E1

* * * * *

PACK RAT ATV NET
Friday Nights 7:00 - 10:00 P.M.
on 439.25 MHZ. K3ZD/WA3AXV, Ron "squared" share net control honors.

CALANDER OF COMING EVENTS

Syllabus by Lee, K3MXM

APRIL

- 9 Greater Baltimore Hamboree - Calvert Hall-Townson, Md. Directions in last issue of Cheese Bits.
- 12 General Club Meeting - West Oak Lane Jewish Community Center, Thouron and Sedgwick Sts. 8:00 P.M.
TOPIC: FM and FM Repeaters - Ed Kushner, K3HKZ
Slides, Equipment, demonstration and open discussion
A very interesting program and subject as many of the local amateurs are adding this equipment to their mdiles. Learn about the national hook-up and local facilities. Learn the various frequencies and types of operation.
A 15 minute auction of better grade equipment will be sold as well as Doc's silent auction and Mario's famous auction.
Members, guests and friends are cordially invited.
COFFEE and REFRESHMENTS.

MAY

- 6 LADIES NITE - Buck Hotel, Feasterville, Pa.
Mr. John Tate - K3KTY, in charge.
- 10 Board of Directors Meeting.
- 17 General Club Meeting - ARRL NITE. We are hoping to have Mr. Ed Tilton, W1HDQ, as our visitor from headquarters for the evening. More details in next issue of CHEESE BITS.

JUNE

- 10-11 June QSO Party, Hilltown, Pa., WA3LNH, Chuck Benavides.

AUGUST

- 13 Pack Rat Picnic, Ft. Washington State Park, Flourtown, Pa.
W3YXF, Joe Rushton

OCTOBER

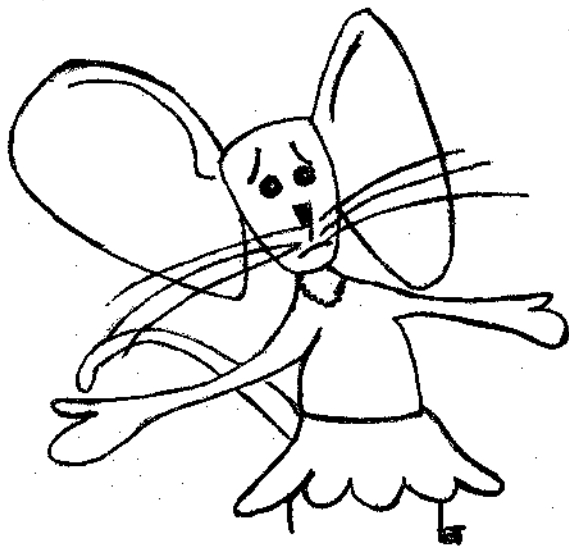
- 1 First Pack Rat Flea Market - "Hamarama", Jamison, Pa. More details committees and news in future issues. W3ZD, Dave Zimmerman
- 22 Gaithersburg Hamfest.

INTERESTING ADDENDUM

Look for an article by W2AXU, Jack Power, to appear in the new VHF Handbook. Look for an article by K3ZKO, Ron Cohen, to appear in 73 Magazine. The club is not growing hams, we are spouting authors, congratulations to all! Don't forget your one and one. One item once a year as a donation to Mario's auction. You will be helping yourself clean-up that mess called a shack and you will be helping the Club.

. ONE AND ONE. ONE ITEM ONCE A YEAR . . .

Disappointed last year?!



The 16th annual Ladies Night of the Mt. Airy VHF Radio Club will be held May 6th at the Buck Hotel, Feasterville, Pa. Time: 6:00 PM. DINNER of Prime Ribs of Beef. A special program promises to be very interesting. Dancing as usual. Don't be like the lady rat above. Bug your O.M. to make RESERVATIONS NOW. Send \$8.00 per person to K3KTY, John Tate 520 Larkspur Street, Phila. Pa. 19116.

2 METER REPORT

Joe, W2EIF

The Two Meter band activity has been fairly consistant during February. Nitely contacts can be had on SSB at the low end of the band and quite a number of stations are also active on AM particularly above 145 MHZ. The activity on 2 meters has been consistantly better than on six meters since the contest. The operations at W2EIF have been curtailed slightly due to the fact that his 432 beams blew down and a good deal of effort has been expended on 4 new beams for 432 MHZ. Also, Murphy's law has applied itself in that the 2 meter AM rig blew up just at the right time -- before the 2 meter net.

Joe, W2EIF

DE O.W.H.N.

Recently, W3CL had a VFO that was not operating. Before he isolated the problem to the VFO, he tore the transmitter apart looking for the problem. Finally, he realized that the problem was in the VFO. In the VFO are two oscillators, one mixer and one output stage. After hours of work he found that the two oscillators were OK. Several hours later the mixer proved out OK. Finally, he instigated a search into the output stage and after some time replaced a defective (6) CL (6).

O.W.H.N.

THE PACK RATS CONGRATULATE

It gives us great pleasure to congratulate Honorary Pack Rat, Edward P. Tilton, W1HDQ, as noted from an excerpt from the minutes of the 1972 annual meeting of the Board of Directors of the ARRL, January 20-21, 1972. . . .

"On Motion of Mr. Chapman, seconded by Mr. Haller, the following resolution was unanimously ADOPTED:

Whereas, Edward P. Tilton, W1HDQ, has for more than 25 years been VHF Editor of QST; and whereas, he has served the League with foresight, intelligence, and fidelity; and whereas, he has provided, through his travels, a valuable interface with the members, adding thereby to the stature of the League;

NOW THEREFORE BE IT RESOLVED, by the Board of Directors of the American Radio Relay League, that it does hereby commend Edward P. Tilton for his devotion to the league and amateur radio."

Submitted by W3CL

FROM ARRL DIRECTORS LETTER OF JAN. 18, 1972

220 MHz

The EIA proposal to assign 2 MHz of the 5 MHz of this band is under active consideration. The Commission has been subjected to considerable pressure from supporters of the proposal. One of the considerations is that the Government has first priority of use in the band. It is suggested that comments in opposition to the EIA proposal be withheld until a Notice of Proposed Rule-Making is issued, if one ever is issued.

FROM ARRL DIRECTORS LETTER DATED JANUARY 27, 1972

Various CB-oriented magazines are trumpeting that the Office of Telecommunications Planning has endorsed the EIA proposal to divert part of the 220-MHz band to Citizens use. It is my understanding their true position is neither strong approval nor opposition, but rather the raising of certain questions as to the extent government operations in the band might be affected -- concluding that if the action is to be taken, 223-225 would be more suitable than 220-222.

FROM ARRL BOARD MEETING JANUARY 20-21, 1972

On motion of Mr. McConaghy, seconded by Mr. Thurston, unanimously VOTED that in recognition of outstanding studies and contributions to the advancement and knowledge of "E" layer propagation in the VHF range as reported in December 1970 and March 1971 QST, the League presents the 1971 Technical Merit Award to Melvin S. Wilson, W2BOC/W1DEI, Pittsford, N.Y.

Moved by Mr. Gmelin, seconded by Mr. Cotterell, that the ARRL legal counsel is instructed to petition FCC on behalf of the ARRL to change the rules and regulations for amateur radio so that Technician, Conditional, and General Class licenses will be allowed to work A-1 operation in the 50.05- to 50.1 MHz segment of the 6-meter band, as well as Advanced and Extra Class as at present. The 6-meter band for cw would then be: 50 to 50.1 MHz - Advanced and Extra Class A-1; 50.05 to 50.1 MHz - Technician, Conditional, and General Class A-1. After discussion, on motion of Mr. Shima, seconded by Mr. Albright, VOTED (Mr. Eaton abstaining) to amend the motion to provide Technician and higher class operation in 50-50.1 MHz. The question then being on the original motion as amended, the same was unanimously (Mr. Eaton again abstaining) ADOPTED.

Moved, by Mr. Griggs, seconded by Mr. Thurston, that the General Counsel is hereby instructed to file a petition with the Federal Communications Commission requesting that a change be made in Rule 97.71 of the Amateur service Regulations, so as to require adequately filtered power supplies on all transmitters, regardless of frequency. After extended discussion, on motion of Mr. Gmelin, seconded by Mr. McConaghy, unanimously VOTED to call for a decision on the question. Whereupon Mr. Griggs' motion was ADOPTED, 12 votes in favor to 3 opposed, Mr. Eaton abstaining; Mr. Chapman requested to be recorded as voting opposed.

* * * * *

NEW PRODUCTS OF INTEREST TO HAMS

By Lyn, W3NSI

1. Tempo CT 220 TR

This all solid state transmitter receiver unit measures just 7 1/2 x 7 1/2 x 3 inches, yet it will provide an output of 1 1/2 watts on AM and 4 watts on FM. The receiver will detect both modes. Rated at 1 watt audio output, the receiver section is double conversion (10.7 & 445 Kc), and may be tuned over the 220-225 band or crystal controlled.

NEW PRODUCTS OF INTEREST TO HAMS CONTINUED

The transmitter has 5 crystal positions and may also be used with an accessory VFO. Price \$180. Henry Radio, 11240 W. Olympic Blvd. Los Angeles, California 90064 (unit is mfg. by CT Power-California)

2. Clegg FM 27A

Following the move to Lititz Pa. several clegg products have been changed or modified to a considerable degree. The FM 27A now has a receiver section, which like the original unit, uses a crystiplexer frequency control. However, the new unit can receive any frequency between 146-148 Mc. (10 Kc chan spacings) The former transmitter section used a 10 position crystal switch. However, the new system uses the crystiplexer to provide any frequency between 146-147 Mc. Size and weight remain the same. Price \$450. Box 388, Rd. 3, Lititz, Pa. 17543

3. Clegg 22er Mark 3 AM T/R

Like the unit above, the AM 22er has gone through redesign. The receiver front end is crystal controlled and the IF is tuned over 30-32 Mc. The transmitter VFO is now a heterodyne type for increased stability. A crystal controlled receiver channel is also provided. Price, \$350.

YE OLE CHEESE BITS II

I was going over my file of official ARRL appointees to look at 1971 in review. You know what, only six pack rats hold appointments. They are W3CL, W3PST, W3ZRR, WA3BIV, WA3HIT, and W3HK. Out of 90 members, that isn't too good a showing. So what say, all VHFers can apply for OVS appointment. This will put you on mailing list for VHF info, etc. Only requirements are membership in ARRL and send a post card report each month to SCM. If you have any info on propagation or experimental info you send it to SCM and it will go to headquarters for possible use in QST. If not, it might be a piece of info to fill in a gap in total VHF picture. There are also ORS, OPS and OO appointments for HFers. These are for traffickers and usually low frequency bands. The OO is in 4 classes depending on your equipment for measuring frequency. All appointees receive a nice certificate to add to your wall collection. How about giving it some thought and pick up an application next meeting night.

73, George, W3HK

CHANNEL 13 3/4

BY PAUL J. RILLING, WA3HIT

1. TV NET

As you know by now, the club sponsors AN ATV NET each Friday Night on 439.25 MHZ. Time: 7 - 10 P.M. Net control is Ron (Captain Vidio), K3ZKO. Alternate is Ron, WA3AXV (Ron Squared). This is an excellent chance to try out your TV equipment. The frequencies of 50.2 MHZ (AM) 51.3 MHZ (AM) and

146.58 MHZ (FM), are monitored for those who can receive TV but can't transmit on 439.25 MHZ (Channel 13 3/4). I use a color receiver in order to copy those who wish to transmit in color. So far the net has been going quite well. I couldn't participate the first night (January 28, 1972) because of tube trouble in my converter. That night, I had a visitor in my shack (Roger, WB8GIW). It seems that Murphy's Law caught up to me. However, I am again in business. This is not a typical kind of net. At 7:00 P.M. Ron calls "CQ NET." If nobody comes back to Ron, he won't continue to transmit. Usually WA3AXV comes back and the Ron Squared (ZKO-AXV) go at it for 30 minutes or longer. Other stations who have participated in the net are WA3AAD, WA2RIH, K3GAS, K3TUF, K3WJB and WA3NYZ. (Sometimes, W3AEH, K3KFL). One of the main purposes of the net is to try out and test TV equipment. WA3AXV, uses the pack rat cartoon as a test pattern. (In 1928, W3XK, Washington, D.C. used felex the cat as his test pattern - Felex was a standard fixture as a TP until 1946). At last the rat beat out a cat. That's progress. The pack rat has become a major part of the net. Everyone who participates has a good time. You will too when you get on TV. CU on 439.

2. TV DIRECTORY

The next TV directory, put out by K3ZKO, should be out by the time you are reading this. It will cost 25¢, and will list all ATV stations by call, name, address, city state, zip. Send your quarters to Ron and he will send you the directory.

3. NEW STATIONS ON TV

Since the last publication of this column, three new ham TV stations have begun operations on 439.25 MHZ. They are, K3GAS, TV (Doc), and WA3NYZ, TV (Rich) of Philadelphia, and WA3AAD, TV (Steve) of Narberth, Pa. By the way, I should be on soon, since I just purchased a T-44 from K3TUF (Phil).

4. TV REPEATER

A TV repeater which will connect all TV stations in Pennsylvania, New York, New Jersey, and Delaware is planned to be constructed near Easton, Pa. It will operate on the same principle as the FM repeaters now in operation in the U.S. and Canada. Hope to have more information in my next column.

5. REMEMBER

Send all information about ATV for this column to Paul J. Rilling, WA3HIT, 5750 Rising Sun Avenue, Philadelphia, Pa. 19120 or call 215-722-4411. Hope to hear from you.

SUMMARY OF DIRECTOR'S MEETING MINUTES
MARCH 8, 1972

The Board voted to renew memberships in AMSAT and ARNS. There are two applications for student membership that have been approved by the Board. WA3MIX and WA3PIR.

SUMMARY OF DIRECTOR'S MEETING MINUTES
CONTINUED

K1SFF's article on the 220 gamma match will be reprinted in the Hints and Kinks column of QST.

The April issue of Cheese Bits will mark the 14th Anniversary of that fine publication.

The official name for our hamfest on October 1, 1972, is the Pack Rat's Hamarama.

K3MXM, the picnic chairman, announced that the Pack Rat Banner will be unfurled at the picnic, August 13, 1972.

The Board has voted that with the permission of W3FQD, the Club will copy-write and print a special technical manual. The manual contains a wealth of information useful to all amateurs.

WA3LNH has a project to build Swan antennas for members. Those interested should contact him prior to the next Director's Meeting.

The Board voted to reimburse the host of the Director's Meeting each month \$10.00 to cover costs.

WA3BIV

AN EASY-TO-BUILD SSB MIXER FOR 220 MEGAHERTZ

Use your existing 6 meter stations on 1 1/4

Written by Carl Barish, WA3BIV, 7948 Thouron Ave., Phila., Pa. 19150

Increased attention to the one and one quarter meter band lately has encouraged new circuits to help interested hams get on this band to offset the movement to give it to the C.B.ers. This article will help the SSB man use his six meter transmitter on 220 MHZ. The 50 MHZ input is not limited to SSB, however, and any mode commonly used on six meters will be reproduced on 1 1/4 meters. This unit will satisfactorily drive an amplifier of the 4CX150 or 4CX250 class of tubes, or can be used by itself for 18 or 20 watts P.E.P. input.

CIRCUIT DESCRIPTION

Following the schematic, a 6EA8 operates as a triode oscillator and tetrode buffer at 56.6667 MHZ. The crystal is a third overtone type available for as little as \$3.95 from International Crystal (their type EX). The second tube, a 6CL6, is a tripler to 170 MHZ. This stage provides sufficient drive to a 6939 mixer which produces 220 MHZ. when coupled with a 50 MHZ. signal of approximately 2 watts. The 170 MHZ is coupled to the grids and the 50 MHZ drive to the cathode. Finally, a 6360 operates as a straight through amplifier at 220 MHZ. Other tubes were considered for the mixer but the layout of the 6939 was deemed better for this type of circuit. The main reason the layout was more conducive was because the grids and cathode could be easily isolated from the screen and plates. A 6360 was originally tried as the mixer but the 6939 gave more output and this was decided sufficient reason to justify the extra cost of the 6939.

AN EASY-TO-BUILD SSB MIXER FOR 220 MHZ
CONTINUED

CONSTRUCTION NOTES

The three shields used may not be completely necessary. If you intend omitting any do not omit the shield on the 6360 as it would be the most liable to take off.

The large number of feedthrough capacitors are used to bring power leads to the various stages and provide excellent decoupling and bypassing.

OPERATION

First install all the tubes and grid-dip the coils to their operating frequency. Apply filament voltage and allow the tubes to warm up. Couple a wavemeter to the oscillator coil, L1, and apply 150 volts regulated to the oscillator plate and tune L1 for maximum energy at 56.6667 MHZ. Slightly detune L1 for reliable oscillator starting. Couple the wavemeter to L2, apply screen (150 volts regulated) and plate (250 volts) power and tune L2 for maximum on the wavemeter at 56.6667 MHZ. Couple the wavemeter to L3, apply screen and plate power to the 6CL6 and tune C1 for maximum energy at 170 MHZ. Then couple the wavemeter to L5, apply screen and plate voltage to the 6939 and 50 MHZ drive to J1 and tune C2 and C3 for maximum energy at 220 MHZ. After this is done, remove all high voltage and 50 MHZ drive from the unit and apply bias voltage to the 6360. Apply screen and plate voltage to the 6360 and adjust the bias to limit the plate current to 25 ma. This should correspond to -15 volts bias. Apply all power and 50 MHZ drive and tune C4 and C5 for maximum output into a 50 ohm load. If the plate current rises above 100 ma. reduce the amount of 50 MHZ. drive until the plate current is below 100 ma. The unit is now ready for the antenna. In operation, only the last stage need be retuned for small frequency excursions. Finally, check the capacitors to insure that none are completely meshed or unmeshed. If any are, spread or squeeze the coil until the capacitor is not at either extreme. If you set the coils for half capacitor travel at 222.5 MHZ the unit will cover the complete band.

CONCLUSIONS

The average junkie box will provide many of the parts needed. The butterfly capacitors, feedthroughs, and tubes are the most expensive items. On the surplus market the capacitors are available for \$.50 to \$1.00 each, the feedthroughs at 5 for \$1.00 and the 6939 and 6360 tubes at \$2.00 to \$3.00 each. If you frequent the hamfests that feature flea markets the prices could be lower. For the SSB advocate, the sum frequency is used so that an upper sideband input at 50 MHZ results in an upper sideband output.

This unit and a similar one for 144 MHZ have performed well in my shack. My thanks to W3CL, K3GAS, K3UJD, and W2AXU for their help along the way.

See you on 220.

PARTS LIST

RFC 1,2,3 220 MHZ RF choke (Ohmite Z-235 or equivalent)
L 1 10 turns no. 28 enam. close wound on 1/4 inch slug tuned form
L 2 8 turns no. 28 enam, close wound on same form as L 1.

PARTS LIST CONTINUED

- L 3 4 turns no. 18, 1/2 inch diam. 1/2 inch long, center tapped
- L 4 3 turns no. 18, 1/2 inch diam. 1/2 inch long, center tapped
- L 5 2 turns no. 18, 11/16 inch diam. 1/4 inch long, center tapped
- L 6 one turn loop 2 inches long 5/8 inch diam. tapered to 3/8 inch
- L 7 2 1/4 turns no. 18 1/2 inch diam. 1/4 inch long center tapped
- L 8 one turn insulated hookup wire 1/2 inch diam wound around L 7

- C 1,5 20 pf. miniature (E.F. Johnson 160-110)
- C 2,3 10 pf. miniature butterfly (E.F. Johnson 167-210)
- C 4 5 pf. miniature butterfly (E.F. Johnson 160-205)
- J 1,2 BNC Coaxial connector
- M 1 0-100 ma. meter
- Y 1 56.6667 MHZ crystal

RADIO MONITORING ENFORCEMENT (ON CB 11-METER BAND)

As Extracted From FCC Fiscal Year 1970 Annual Report, with comments added by Bill Welsh (W6DDB)

"Class D Citizens Radio Service"

"This service showed no measurable improvement towards greater rule compliance than in previous years. Non-identifying transmissions continued to present serious difficulties for enforcement personnel. In all areas sampled, business use of the Class D channels was comparatively small, and channel-hopping from the seven interstation channels to the other 16 channels (as well as to non-Citizens channels) was frequent, in total disregard of the rules. Because there are 800,000 licenses in the service, the majority of whom violate rules, enforcement is a greater problem in this service than in all other services combined."

"Small teams of monitoring and inspection personnel (who can be moved from one locality to another with their mobile monitoring and direction finding facilities) are able to track down violators while they are still on the air and thereby make positive identification. Because of the large number of violators and their existence in every community, and especially because of their disinclination to comply with the rules, the solution to the monitoring enforcement problem is not in sight."

"The number of official notices in the Citizens Radio Service decreased from about 2,400 last year to 1,409 this year. Non-identifying stations and a forced cutback in mobile monitoring were the major hindrances to issuance of violation notices, but there was no evidence of decreasing violations."

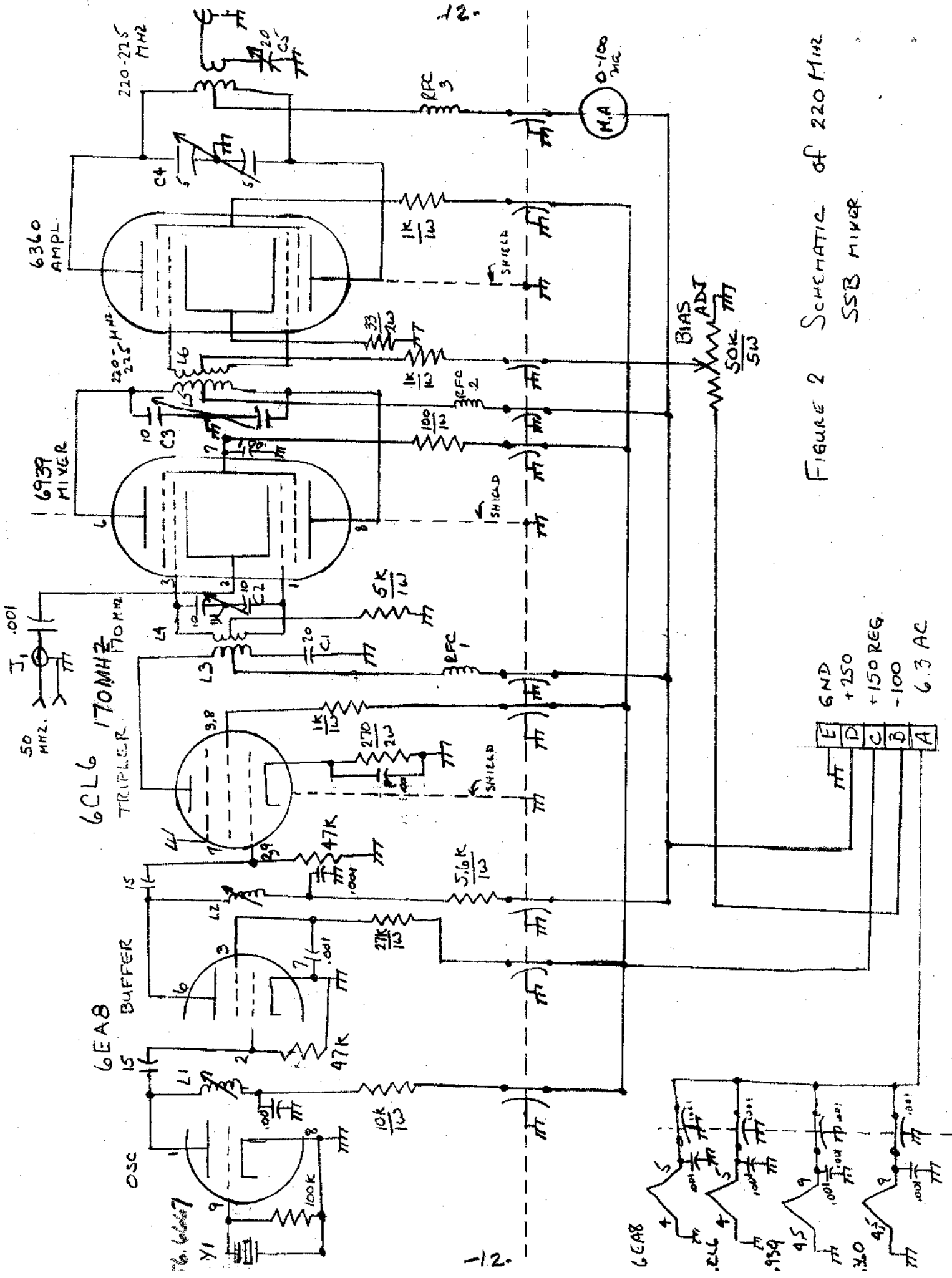


FIGURE 2 SCHEMATIC OF 220 MHz SSB MIXER

E	D	C	B	A
77	77	77	77	77
GND	+250	+150 REG.	-100	6.3 AC

SWAP SHOP

WANTED:

Wood lathe with tools.
Contact: M. Victor
1818 Erlen Rd.
Phila., Pa. 19126
215-635-2595

FOR SALE:

6-10-15 meter
Transmitter built
in VFO and power
supply. 1000 watts
NFM - 650 watts AM
100% Mod. Air
cooled, Dow key
relay - D104 mike
with stand. Spare
finals - rectifiers
plus 300' RG11U
\$150.00

FOR SALE:

Low Loss 1/2 inch foam flex
aluminum jacketed coaxial
cable. 2.3 db/100 ft. at
432 MHZ. 15 ¢ per foot

CONTACT: K1SFF/3
Box 169
Ottsville, Pa. 18942
215-847-5017

CONTACT:

Mel Spiegel, K3DXC
TU 5-5760

MEMBERSHIP

Change in Status:

From Student to Full Member: WB2SZK, Randy Bynum

New Members (Student Grade)

WA3PIR, Steve Klincewicz
1020 Ethel Avenue
Fairview Village, Pa. 19409
539-6515

WA3MIX, Louis J. Kolb
3209 Folk Road
Norristown, Pa. 19403
584-6572

VISITORS AT MARCH MEETING:

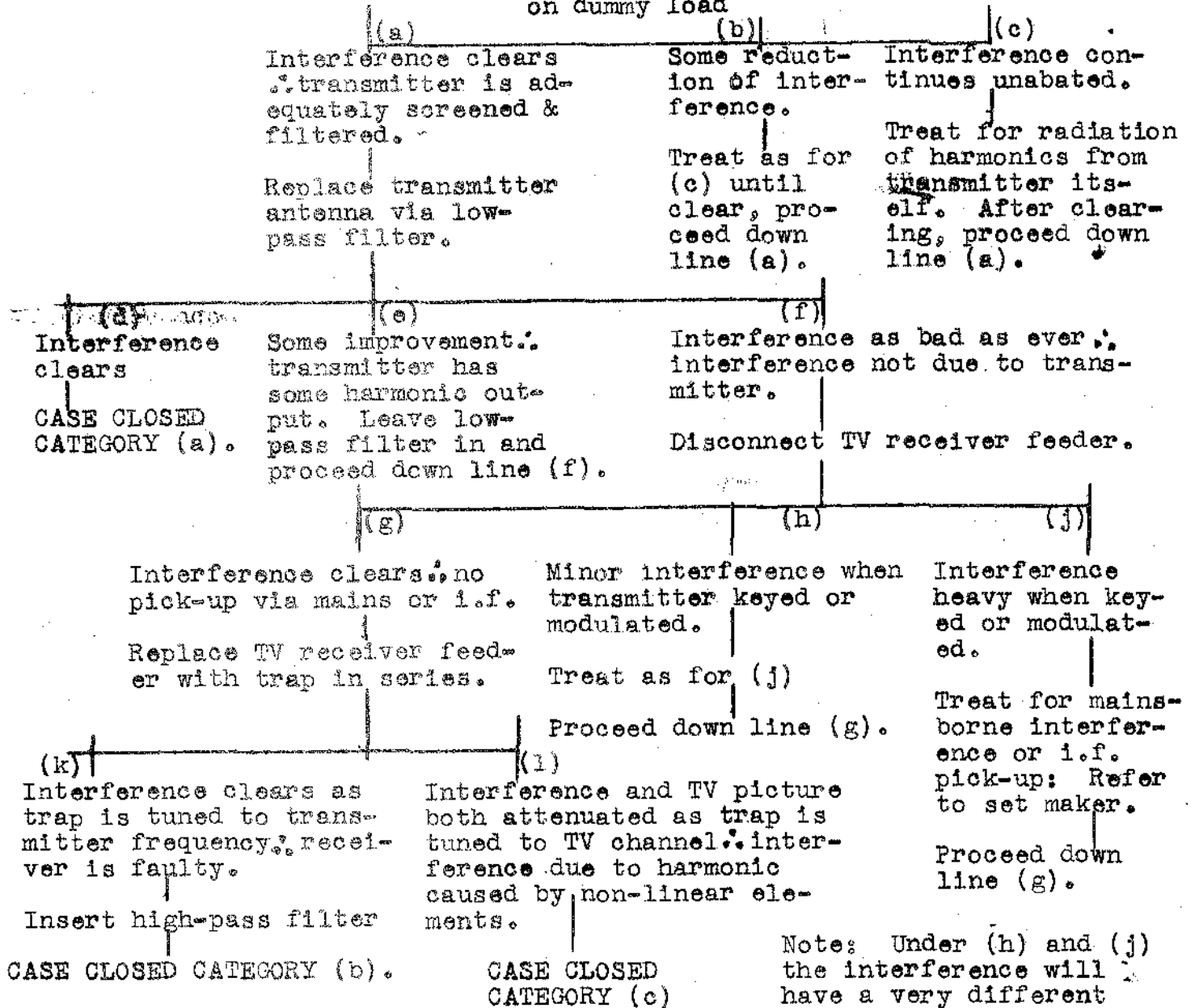
WA3HOW, Bob	Warminster, Pa.	WA3DMS, Tom	Montclare, P
WA3AXH, Tommie	Norristown, Pa.	K3CPG, Tom	Maple Glen,
K3YLX, Jim	Phila., Pa.	WB2DTF, Bob	Phila., Pa.
		Ron Tyahla,	Phila., Pa.

DE READING RADIO CLUB

TVI DIAGNOSIS CHART

Via Bob Plummer, W3ETJ

Put transmitter
on dummy load



CLIP THIS PAGE FOR FUTURE REFERENCE

USA TELEVISION CHANNEL FREQUENCIES

V.H.F.			
CHANNEL	FREQUENCIES	CHANNEL	FREQUENCIES
2	55.25--59.75 MHz	8	181.25--185.75 MHz
3	61.25--65.75 MHz	9	187.25--191.75 MHz
4	67.25--71.25 MHz	10	193.25--197.75 MHz
5	77.25--81.75 MHz	11	199.25--203.75 MHz
6	83.25--87.75 MHz	12	205.25--209.75 MHz
7	175.25--179.75 MHz	13	211.25--215.75 MHz

HOMEBREW NIGHT



**"there was this
traveling
salesman...."**

**W3HK
informs club
WA3BIV records**

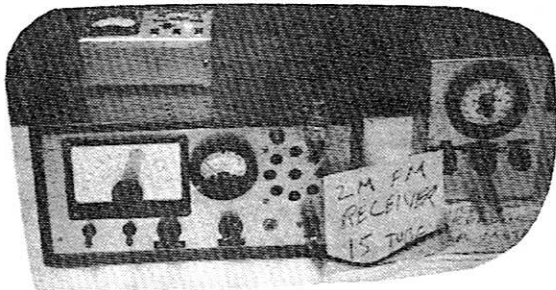


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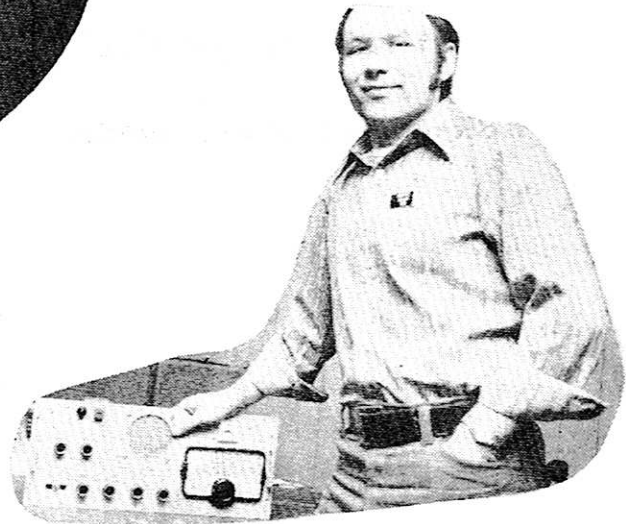
**"tonight's door prize
is Ivyland" - K3UJD**



**W3CL 'reads the
riot act' - VImn, LXV**



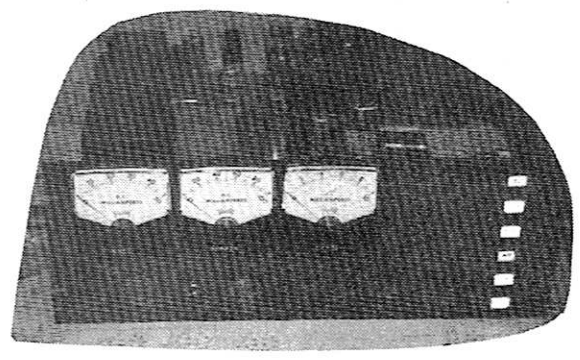
**W3NSI's 2 METER FM
RECEIVER / ALSO DIRECT
READING CAP METER (ON LEFT)**



**WA3AXV with surplus
CONVERSION TUNABLE I.F. STRIP**

HOMEBREW

NIGHT

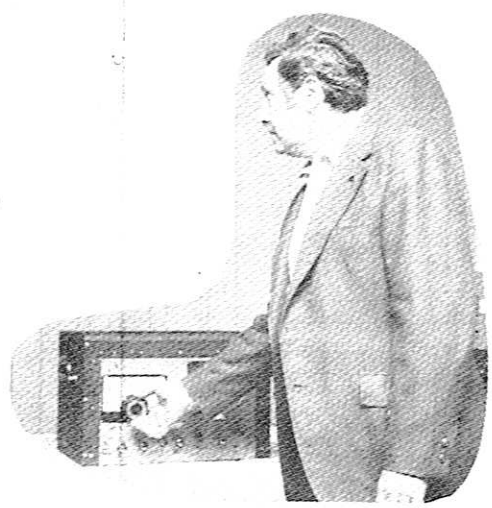


W3ZD with 6/2/432 am/ssb push button control unit



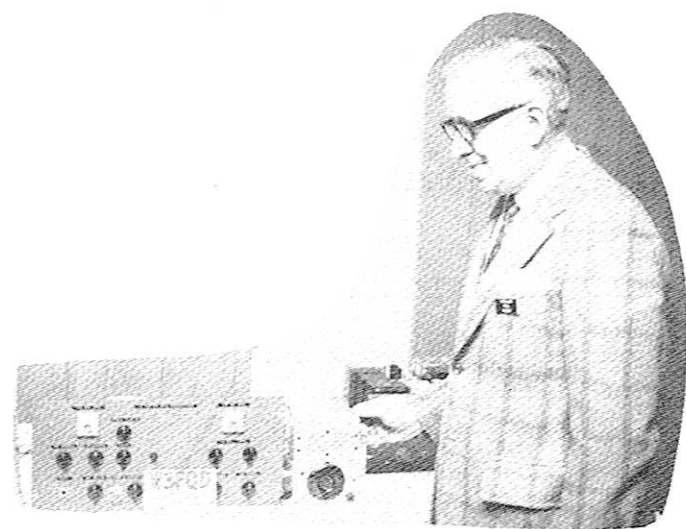
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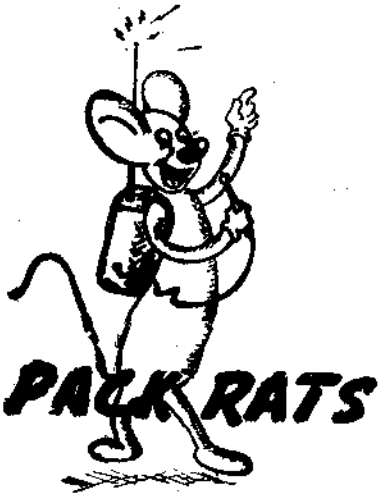
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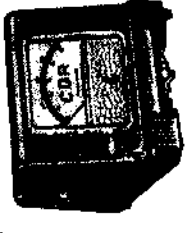
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