

**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, 432.3 & 1296.3 MC)

AFFILIATED CLUB: AMERICAN RADIO RELAY LEAGUE

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

VOLUME IV

MAY 1970

NUMBER 5

## OUR PREZ SEZ

### About Hams and People

Two people, normally strangers, are talking. Perhaps about business or socially, just polite casual talk, giving out with minimal lip service. Then, just by chance, each discovers the other is a Ham. Eyes open, smiles appear and conversation begins. It's like a long lost brothers meeting.

The atmosphere is entirely different. The situation is completely turned around. The very fact that these people are Hams results in mutual respect and intense interest, not only in his Ham activities but in his personal well-being and that of his family as well. Concern is felt to the point where help is given if needed.

This is not only in this country, but in all parts of the world. Surely you've met a foreign ham. Is he really a "foreigner"?

What makes Ham relationship so special? What is this aura of friendship that disregards race, religion and politics?

Wouldn't it be nice if all the people in the world could talk to each other and reach this level of mutual understanding?

Maybe then some of the problems in this world would not exist.

W3KKN, Ernie Kenas

P.S. No dues charged in the Ghost Writers' Union.

DEADLINE FOR ARTICLES IS THE GENERAL MEMBERSHIP MEETING.

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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 - 9:30 P.M.  
432.3 - 10:00 P.M.

OFFICERS - 1969-1970:

PRESIDENT: W3KKN, ERNIE KENAS  
VICE-PRES.: K3JJZ, ELLIOTT WEISMAN  
CORRES. SEC.: W3SAO, FRANCIS BRICK  
REC. SEC.: WA2KOI, LLOYD SCHOENIG

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K3HSS, CHARLES LUSTICK  
K3KTY, JOHN TATE  
W3CJU, DONALD HAMPTON  
W3CXU, JOHN ALLEN  
K3MXM, LEE COHEN  
K3CIV, RALPH HERSH  
(Ex-Officio)

PACK RATS' CHEESE BITS is a publication of the Mt. Airy V.H.F. Radio Club, Inc., Philadelphia, 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.

\* \* \* \* \*

VISITORS AT THE APRIL MEETING

WA8FZW, Len, Birmingham, Michigan  
WA3FVK, Joe, Norristown, Penna.  
K3GOZ, Herm, Philadelphia, Penna.  
W3HNP, Roy, Philadelphia, Penna.  
K3OPC, John, Philadelphia, Penna.  
WA3IDQ, Walt, Philadelphia, Penna.

\* \* \* \* \*

CONTRIBUTORS TO CHEESE BITS  
MAY 1969 THROUGH APRIL 1970

K3HSS, Charlie Lustick                      3  
K3WEU, Paul Behrmann                      10  
WA3BIV, Carl Barish                      3  
W3HKZ, Ed Kuchner                      3  
WA2KOI, Lloyd Schoenig                      2  
K3GAS, Doc Cutler                      5  
W3GEW, Sid Weiner                      1  
W3KKN, Ernie Kenas                      10  
W3HK, George VanDyke                      2  
K3KTY, John Tate                      1  
K3UJD, Mario Fontana                      1  
W3SAO, Frankie Brick                      8  
W2AXU, Jack Power                      3  
K3BPP, Walt Bohlman                      1  
K3MXM, Lee Cohen                      1  
W3CL, Harry Stein                      4  
W3NSI, Lyn Rowland                      2  
W3CXU, John Allen                      1

\* \* \* \* \*

It is hard to believe but less than 200 years ago we went to war to avoid taxation.

OUR SILENT KEY W3MVF, DAVE BLOCH

Dave received his technician license in 1955 in Vineland, New Jersey through the efforts of his XYL, Mickey, who was able to send 15 W.P.M. Shortly thereafter they moved to their present QTH in Northeast Philadelphia.

David joined the Pack Rats on July 16, 1958. His sponsors were John Houser, W3JSD, and Francis Brick, W3SAO. He became a very active member in a short period of time. Dave was elected treasurer in June 1960 and remained in that position until he became a SILENT KEY on April 2, 1970. He was affectionately called "Money Bags" by his fellow members.

Besides his arduous duties as keeper of the till, Dave supported and participated in all club activities. He also helped assemble CHEESE BITS each month at the QTH of K3GAS. He was always ready to lend a hand at any antenna party.

Dave was a good business manager. Whenever we got up on cloud nine over some club endeavor involving a large expenditure, he would tighten up the purse strings. Therefore, he never had to use red ink in his little black book and kept us solvent.

Although no longer with us, Dave will long be remembered by the members of the club as a friend and loyal Pack Rat.

He is survived by his XYL, Mickey, and two sons, Stewart and Ted. Ted has received a scholarship to George Washington University Law School. Stewart is a student at Temple University.

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IT WAS THE GREATEST

Sunday, April 12, 1970, will go down in the annals of the Pack Rat history as one of the greatest transmitter hunts in a long, long time, besides being a record breaker in many departments.

- It was the largest turnout to date. Eleven cars and occupants were counted in the parking area.
- Doc, K3GAS, didn't come in last - a super phenomenal event.
- The weather was perfect.
- The 807's outlasted the contestants. There were two left over. What type of hunter are we breeding?
- The shape and variety of equipment used was to be believed. It ranged from K3IGX's (Dick) mobile iron pile mounting both a 3 ring halo and a full size 6 meter beam on the roof to a micro-mini field strength meter used by both Stan (K3IPM) and Bert (K3IUV).
- I think we are all firmly convinced that 2 meters is now the mode and method to be used in transmitter hunting. The beam is smaller - the lash-up is easier - just a small transistorized super-regen receiver and the most necessary item a very sensitive current meter. Just watch those new antennas sprout at the next antenna measuring contest.

Continued on Page 4

IT WAS THE GREATEST (Continued)

- Special thanks go to WA3CND, Candy; WA3ERQ, John; and K3MXM, Lee and his harmonic Arnold for selecting such a good spot and all their unmeasured efforts that went into making the hunt what it was.
- Welcome aboard to two newcomers WA3JKO, Arnie, and WA3NVO, Paul, who heard our signal way up in Easton, Pennsylvania and came down to see what a transmitter hunt was all about. They are members of the Suburban Radio Club and we welcome representatives of MTK to the fun and pleasures.
- The funniest sight of the afternoon was that of the three intrepid hunters, our PRESIDENT Ernie, W3KKN, George, K3KMN, and of course Carl, WA3BIV, marching down the railroad tracks playing follow the leader - but where was the leader going. We watched the three of them go off into a swampy field and then later saw only two of them come out. There was much concern about the leader and a special transmission was made to inquire of his welfare.
- It was a profitable afternoon for the club's acting treasurer. He collects ones dues and sold a pair of tickets to Ladies Nite to be held on May 2.
- Maybe at some future club meeting Jack, K3GQJ, will further explain that surplus Marine Corps pulse receiver. He had our PRESIDENT's head nodding but we are wondering.
- A warm welcome to the harmonics who came along for the ride - Cheri, Michael and Richard and also to the XYL's Harriett and Janet.

C U on the next one,  
K3MXM, Lee

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MAY CALENDAR OF EVENTS

- May 2 - Ladies Nite, Buck Hotel  
Treat the ole gal for suffering through with you in January.  
Roast Beef, Orchestra, Prizes and Surprise
- May 13 - Board of Directors Meeting - K3MXM, Lee's QTH
- May 17 - QSO Planning at W3CXU, John's
- May 20 - Monthly Meeting, West Oak Lane Jewish Community Center at 8 p.m.
- May 24 - QSO Party Planning at W3CXU, John's

Future Events

- June QSO Party at Hilltown - John, W3CXU is in charge - Let's move up from fifth position!!!

Antenna Measuring Contest

Pack Rats Picnic is the second Sunday in August at Flourtown, Pennsylvania.

Meetings are always open to friends and visiting hams.

FROM THE BOOK RACK  
Paul R. Behrmann, K3WEU/AREA\*

INSTALLING AND SERVICING HOME AUDIO SYSTEMS by Jack Hobbs (Tab Books #505)  
256 pages, over 150 illustrations, 12 chapters. \$7.95 hardbound; \$4.95 paperbound.

Here is an up-to-date "passport" to the lucrative field of audio equipment servicing - including sales and installation.

Now, anyone with a background in electronics can cash in on the ever-increasing rewards waiting to be tapped in the rapidly growing field of home-entertainment equipment servicing and installation. The down-to-earth "brasstacks" information in this brand new book, contains all the techniques and necessary skills employed by those who are eminently successful in home-audio system work.

Included in the content are technical descriptions of the latest audio and hi-fi equipment, accompanied by servicing data in each case. The author thoroughly describes all the various types of units, illustrates the typical circuits used, then tells how to go about looking for trouble. Includes many "tips" based on the author's experience, plus troubleshooting shortcuts.

After a brief introduction to the audio equipment field, and a discussion of the test instruments needed for this type of work, the author gets right into AM and FM tuners (including stereo-multiplex), preamps and amplifiers, tape recorders and players, mobile radios and tape players, and automatic record players. And to round out the presentation for the serious technician, the last chapter is devoted to sales and installations, detailing the sales/service approach successfully employed by many technicians.

Contents: The Audio Business: Opportunity Unlimited - Test Instruments for Audio Servicing - AM Receiver Maintenance - Working with FM Tuners - Servicing FM Stereo Equipment - Audio Preamps and Amplifiers - Combinations and Related Problems - Solid-State Power Supplies - Tape Recorders and Players - Mobile Radios and Tape Players - Servicing Automatic Record Players - Selling and Installing Home Audio Systems. Index.

\* Amateur Radio Editors Association

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ARRL BULLETINS

NR 266, March 26, 1970

A bulletin transmitted in February advised that Western Union facsimile equipment would soon be available through selected affiliated clubs. Late advice from W3PYW who is handling this for ARRL indicates WU is reorganizing surplus disposal channels causing a minor delay. However, both fax and teleprinter gear will again be released in the near future. Meanwhile W3PYW is firming up appropriate arrangements with selected clubs to assure equitable distribution. Please do not write or call ARRL or W3PYW. When arrangements have been completed another bulletin will be issued with further details. It is hoped that an article on conversion of the available desk fax units can be run in an early issue of QST AR

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THE HAM MONITOR

OM, carefully examining his paycheck, "Well, I see that the government got another raise."

NEW PRODUCTS OF INTEREST TO HAMS

- 1. VHF UHF Solid State Equipment - Spectrum International, P.O. Box 87, Topsfield, Massachusetts 01983

Braun of West Germany is importing a line of interesting products for use by U.S. hams. A short rundown follows:

- A. 432 converter - DGTC 1702 - \$69.00 - IF-144-148 Mc.
- B. 144/432 Varactor Tripler - LVV 270 - \$75.00 - Input 30W  
Output 15W
- C. 144/452 Transverter - TTV 1270 - \$47.50 - This item may be used with a 144 Mc. Trans. Rec. unit for operation on 432.12VDC used on Rec. only, varactor tripler used for transmitting. A compact cheap way to do the job of getting on 432 Mc.

Write to address above for more information.

- 2. 12 V Rechargeable Battery - Globe Battery Div. Globe Union Inc., 5757 N. Green Bay Avenue, Milwaukee, Wis. 53201

A line of Gel/Cell batteries have been introduced by Globe, which should find application in portable ham gear. The most interesting items are of course the 6 and 12 V units listed below.

- GC 620 6V 1.8A 1 Lb
- GC 626 6V 2.6A 1.3 Lb
- GC 1215-1 12V 1.5A 1.5 Lb
- GC 1245 12V 4.5A 4.5 Lb

The advantages of this new line are many, but the most important is the gelled electrolyte, rather than the use of a liquid, that could be subject to splashing and spilling. The batteries are completely sealed, and can be considered maintenance free. It can be used or charged in any position and can even be installed upside down if necessary. Each unit is equipped with one way relief valves which release in case of a pressure build up, but automatically reseal. There is no corrosive fume or gas problem, and no possibility of an explosion.

Write for more information to the above address.

W3NSI, Lyn Rowland

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WESCOM  
THE WESTERN TRANSISTORIZED NOISE BLANKER (TNB)  
W2AXU, Jack Power

The VHF-UHF operator is annoyed by all sorts of radio frequency interference (RFI) generated by the public utilities electrical installations or power distribution circuits, electrical appliances, automobile ignition systems, snow and rain static, lightning discharges, radars, etc. These items generate noise pulse of high amplitude and short duration with a fast rise time. The noise pulses contain many harmonics and have a very wide bandwidth. When these noise pulses are fed through a highly selective tuned circuit such as the IF tuned circuits and, in particular, mechanical or crystal filters, only a certain portion of the original frequencies will come through. This

THE WESTCOM TRANSISTORIZED NOISE BLANKER (TNB) (Continued)

has an effect of stretching these pulses or making a low amplitude and a long duration pulse out of what was originally a high amplitude and short duration pulse. The audio noise clipper is useless under these conditions and, in particular, when the receiver is used for SSB or CW reception. To make matters worse, modern receivers have a fast attack - slow recovery AGC system. The AGC will hang-up on the amplified noise pulse - which is now stretched 1000 times or more - causing the gain of the receiver to be reduced. This gain loss will cause even moderate signals to be lost in the noise.

There is only one way to beat this problem. Some modern, expensive receivers incorporate a noise blanker in the receiver following the first mixer. One well known moderate priced receiver includes a noise blanker. Basically, these blankers amplify and rectify these noise pulses and the resulting negative going d.c. pulses are used to cut off the IF amplifier stage for the duration of the pulse. Thus, for the duration of the pulse the receiver is turned off or blanked.

A blanker which will very effectively blank noise before it reaches your receiver IF is sold by the Westcom Engineering Engineering Company. The Westcom Blanker, when connected between your VHF converter output and your receiver input provides a very effective method of noise suppression of the converter output. Removing these noise pulses at this point in the system eliminates the problems discussed above and improves the signal-to-noise ratio of the system.

This blanker is basically a high gain IF amplifier. Typical gain is in the order of 70 to 85 db. This amplified voltage is applied to a pair of fast switching diodes which clip the positive and negative noise pulses but do not effect the signal. The output of the blanker is very loosely coupled to the receiver input and is adjusted so that there is equal gain or a very slight loss in gain to the receiver input. Very explicit directions are given by the manufacturer for this adjustment. To achieve the high gain of the blanker, two stages of cascaded FET transistors are used.

The blanker comes in a choice of 40, 20 and 10 meter IF ranges. Other ranges are available. Several operating voltages are available. The ranges are 12-18V, 100-140V, or 125-170V, all negative ground, drawing a maximum of 15 ma. BNC or RCA type phone connectors are available. The input and output impedance is 50 ohms.

One small disadvantage exists when using a blanker of this type. Since it is a broadband device as is the converter, strong signals in the passband, local or otherwise, that appear on the "S" meter as 30 over S9 signals (as they do on my 75A-4) will drive the diodes into conduction and cause blanking action - cross modulation or complete desensitization of the receiver. The trade-off for this inconvenience is high when one wants maximum suppression of noise when listening for weak signals.

The units are available from Westcom Engineering Company, P. O. Box 1504, San Diego, California 92112 for \$29.95 post paid plus 80¢ for air mail. Specify connector type, voltage and IF range. For those who have the Swan 250-250C transceivers a unit is available for \$32.95.

I consider this blanker a good buy in spite of the one shortcoming and I have one for each of the two IF frequencies I use with my converters. Drop Westcom a line and get their literature.

OUR FIRST JANUARY V.H.F. S.S. CONTEST  
JANUARY 1957

Although the club was only formed in May, we decided to make a noise in this contest.

W3KKN, Ernie Kenas, was our contest chairman. We realized we had no chance to be Number 1, but we let the rest of the clubs know a new club was to be reckoned with in the future.

Yes, there were 27 new contest men to deal with.

Look over the following list of calls in the contest and see how many you remember.

Still with us and still contest minded are the following: W3AJF, W3CL, W3CXU, W3HYO, W3KKN, W3SAO.

W3CCX, Matt Gelardi, was in his first contest. Note: W3CCX has been on ever since the club received the call.

<u>No.</u>	<u>Call</u>	<u>Contacts</u>	<u>Points</u>	<u>Sections</u>	<u>Total</u>	
1	W3AJF	123	225	5	1225	
2	W3ALR	158	316	7	2212	
3	W3CCX	84	168	6	1008	
4	W3CL	86	172	3	516	
5	W3CXU	86	172	5	860	
6	W3CPT	113	226	3	678	
7	W3DHH	112	224	7	1568	
8	W3DRC	38	76	3	228	
9	W3FCZ	91	182	4	738	
10	W3FSC	131	262	6	1572	
11	W3FUL	71	142	2	284	
12	W3HVV	110	220	5	1100	
13	W3HYO	160	320	7	2240	
14	W3IBH	204	408	9	3672	#4
15	W3JAY	83	166	3	498	
16	W3KKN	339	678	12	8136	#1
17	W3NKD	118	236	4	944	
18	W3NXT	37	74	5	370	
19	W3CZP	70	140	5	700	
20	W3RZU	105	210	8	1680	
21	W3SAO	152	304	7	2128	
22	W3TYX	250	500	11	5500	#2
23	W3UKI	219	428	8	3504	#5
24	W3UMI	84	168	6	1008	
25	W3VGN	131	262	5	1310	
26	W3VOC	156	312	9	2808	
27	W3ZEY	205	410	9	3690	#3
					<u>50177</u>	

NOTE: No Sec. X10 Mult back in the year 1957.

W3SAO, Frankie  
Club Historian

P.S. With only 27 logs turned in we came in No. 5 in the contest.



MEMBERSHIP

As order of the Board of Directors  
Lifetime Membership to -

W3IA, Thornley (Tom) Coin  
115 West Rosemar Street  
Philadelphia, Pa. 19120

CORRECTION

W3FQD, Richard S. Huntzinger  
130 Fairhill Drive  
Churchville, Pa. 18966  
EL 7-2960

New Members

K3ZSG, Bill Murphy  
206 Hancock Avenue  
Norristown, Pa. 19401

K3DMA, John D. Taylor  
216 E. Wellens Avenue  
Philadelphia, Pa. 19120  
DA 4-7521

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DID YOU KNOW

- Welcome home to W3GEW, Sid Weiner. Stay out of the hospital.
- Check Page 86 of April QST in the 50 Years Ago column. A referral is made to Lewis M. Clement who is none other than K3AA Papoo.
- Sincere sympathy to K3EPB, Howard Fretz, on the passing of his wife Emily.
- Ladies Night May 2!

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JUNE QSO PARTY

50 MHZ - Team Meeting on April 26 at Ernie's at 1 p.m. Be prompt and have all data.

144 MHZ - Meeting at W3CXU's on May 17.

220/432/1296 MHZ - Meeting at Ernie's at 1 p.m. on May 24. Ernie's QTH is 2823 Old Welsh Road, Willow Grove, Pa.

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PACK RAT FACTS

W3CL and K3GAS were the only two past presidents to serve a two year term.

W2ZD (W3LHF) and W2EIF were the only two past vice-presidents to serve a two year term.

W3SAO and W2EIF have been the only corresponding secretaries.

W3CPT and W3MVF have been the only treasurers.

W3KKN is the only Director to serve three terms, a total of six years.

The recording secretaires have been W3SAO, K3CIV, W3ZRR, W3HAB, K3OBY, K3WEU and K3ZPN.

W3SAO, Frankie  
Club Historian

# POWER SUPPLY DESIGN (SSB)

DUTY CYCLE - MAX POWER OUTPUT/TOTAL ON TIME

FOR SSB SERVICE = 50% OR LESS (CAN BE AS LOW AS 25% OF PEP)

FOR CW SERVICE =  $\approx$  50% OF PEAK POWER OUTPUT.

ALL OR VOICE COMPRESSION RAISES THE DUTY CYCLE.

POWER CAPABILITY OF TRANSFORMER CAN BE JUDGED BY ITS WEIGHT.

IVS RATING DEPENDENT ON DC RESISTANCE OF XFORMER SECONDARY AND WEIGHT OF TRANSFORMER.

FIG. 1 SHOWS RELATIONSHIP OF POWER CAPABILITY TO WEIGHT.

THIS WEIGHT INCLUDES CASE AND MOUNTING FIXTURES. IVS

RATING DIFFICULT TO APPLY TO SMALL XFORMERS AS SHOWN

BY FIG. 1 (MIN. WEIGHT 5 LBS.) EXAMPLE - A 12 LB XFORMER

WOULD HAVE COMMERCIAL SERVICE RATING OF 250 WATTS AND

AN IVS RATING OF 600 WATTS.

CONSIDER CONTINUOUS CURRENT (STAND-BY CURRENT) TAKEN

FROM SUPPLY BY BLEEDERS, IDLING CURRENT, ETC.

CONSIDER BREAK-DOWN VOLTAGE OF XFORMER PARTICULARLY AT CENTER TAP. GROUND XFORMER FRAME.

DIODE CONSIDERATION - USE DIODES WITH AT LEAST 600V

PIV RATING 1A. AVG CURRENT RATING AND 15A OR BETTER

SURGE CURRENT RATING.

FILTER CAPACITOR - USE COMPUTER GRADE CAPACITORS.

SERIES FOR HIGHER VOLTAGE RATING - USING VOLTAGE

EQUALIZING RESISTORS ACROSS EACH - 10K 10W.

PROTECT DIODES FROM INRUSH CAPACITOR CHARGING

CURRENT. USE LIMITING RESISTOR IN PRIMARY OF POWER

XFORMER. CAN BE ELIMINATED FROM CIRCUIT BY MANUAL

SWITCH OR AUTOMATICALLY BY RELAY AND TIME CONSTANT

CIRCUIT. 0.5 SEC OR MORE TIME DELAY REQUIRED.

FULL WAVE VOLTAGE DOUBLER CIRCUIT CAN BE USED. SAVES

XFORMER WEIGHT AND EXPENSE. USE FIG. 1 AND 2 FOR

AIDS. BASIC POWER SUPPLY CIRCUIT SHOWN IN FIG. 3.

D.C. WORKING VOLTAGE OF CAPACITOR STACK =  $1.41 \times \text{RMS V} + 15\%$

A.C. SECONDARY VOLTAGE, RESISTANCE, CIRCUIT REACTANCE AND

IVS CAPABILITY OF A XFORMER WILL DETERMINE A XFORMER'S

EXCELLENCE IN A VOLTAGE DOUBLER.

THESE PARAMETERS LUMPED TOGETHER AND EXPRESSED

EMPIRICALLY BY  $R'$  FACTOR, FIG. 2.

FORMULAE USED FOR THE DESIGN OF AN IVS POWER SUPPLY

$$I_{\text{NO LOAD}} = 2.81 \times C \quad C = \text{RMS SECONDARY VOLTAGE}$$

2.  $E_{LOAD} = E_{NO LOAD} - R'(I \times R)$

R' - FROM FIG. 2  
I - FULL LOAD CURRENT IN AMPERES  
R - SECONDARY RESISTANCE OF THE XFORMER

3. Diode PIV = (2 x  $E_{NO LOAD}$ ) + 100%

4. No. Diode =  $11.2 \times RMS VOLT / DIODE PIV$

EXAMPLE :-

ASSUME - TRANSFORMER WEIGHT - 20 LBS.  
SECONDARY VOLTAGE - 750 V RMS  
SECONDARY D.C. RESISTANCE - 7 OHMS

FROM FIG. 1 IVS RATING = 1.15 KW PEP

NO LOAD DC VOLTAGE =  $E_{NL} = 2.81 \times 750 = 2102.5 V.$

FOR A ONE KW CAPABILITY, 0.500 AMPERES OF CURRENT IS REQUIRED.

$E_{LOAD} = E_{NL} - R'(I \times R) = 2100 - 64(.5 \times 7) = 1876 V.$

POWER SUPPLY WILL DELIVER 1875V AT 500MA. = 937 WATTS IN PUT

No. OF DIODES =  $8300 / 600 = 14$  (ASSUME 600VPIV DIODES)  
14 DIODES REQUIRED - 7 DIODES PER STACK

6 240 MF 450V. COMPUTER GRADE CAPACITORS USED IN FILTER NETWORK

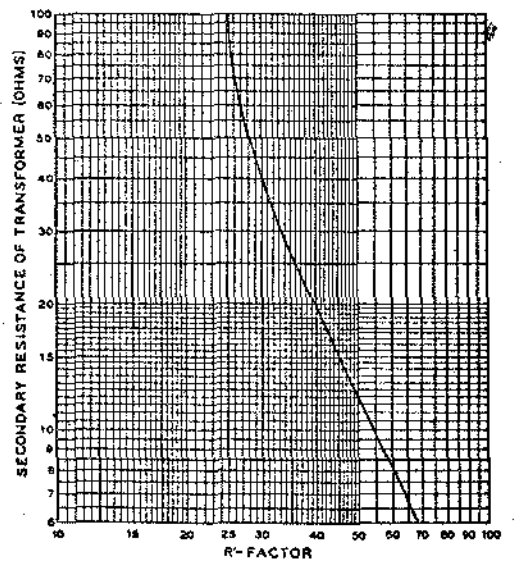
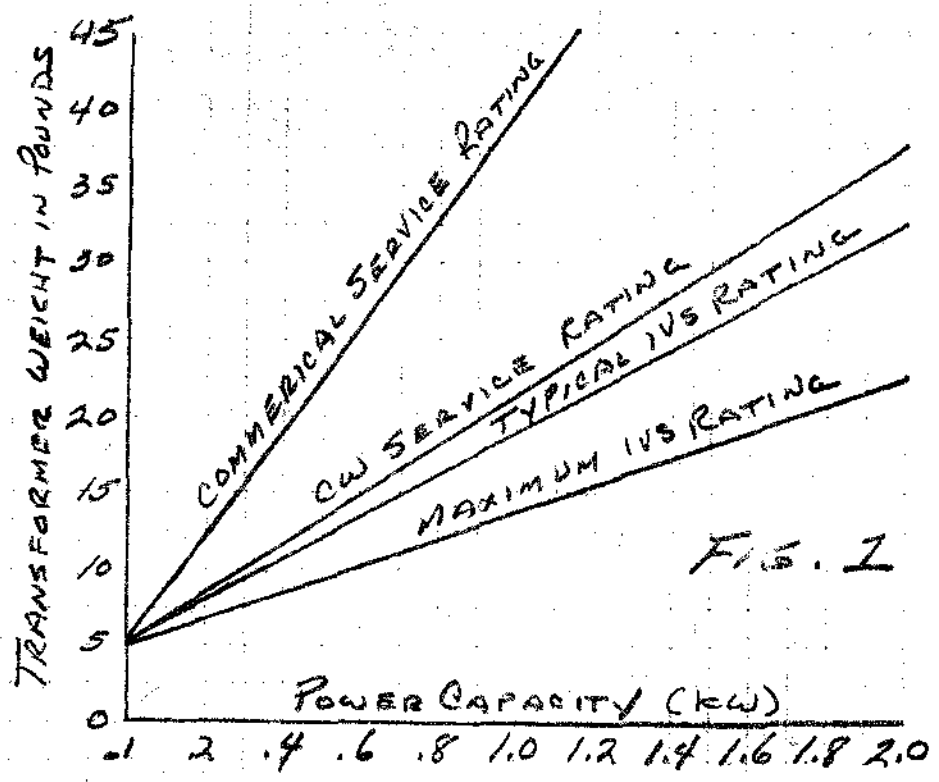
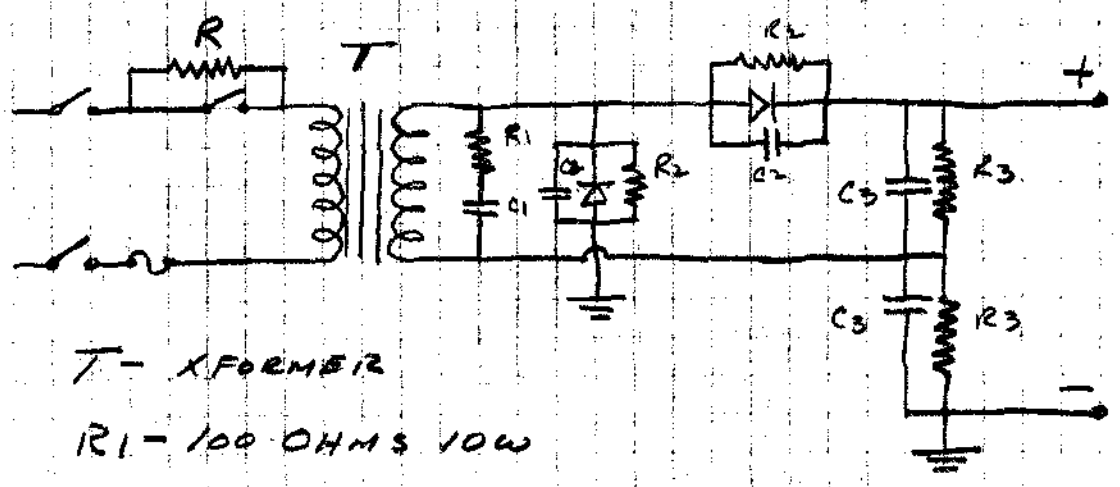


FIG. 2  
R' FACTOR



T - XFORMER

R1 - 100 OHMS 10W

R2 - 470K 1/2W

R3 - 10K 10W

C1 - .02 MF 3KV

C2 - .01 600V CERAMIC

C3 - COMPUTER CAP TYPICALLY 120 - 240 MF AT 450V.

FIG. 3

### IV'S BASIC POWER SUPPLY CIRCUIT

R IS INRUSH LIMITING RESISTOR - CAN BE 60W LAMP OR 100 OHM 100 WATT RESISTOR. SWITCH SHORTS R OUT AFTER CAPACITORS ARE CHARGED. SWITCH CAN BE RELAY WITH AT LEAST 0.5 SEC. TIME CONSTANT.

REFERENCE - RADIO HANDBOOK, 17<sup>TH</sup> EDITION, W. I. ORR, EDITORS AND ENGINEERS, LTD, P 725-728

John B. Power  
W2AXU  
4/4/70

SWAP SHOP

Conducted By: W3ZRK, Ray Whitehead  
7329 Shelborne St.  
Phila., Pa. 19111  
215 - RA 2-4786

- Signal Corps Keyer TG10-J code machine and 14 reels 3/8" tape \$25.00
- R48 - 220 mc rcvr - converted 22.00

CONTACT: K3GAS, Doc Cutler  
7815 New Second Street  
Philadelphia, Pa. 19117  
215 - ME 5-1078

FOR SALE

- 1 Comco Rig 221.4 mc tranceiver complete with power supply, mike and Ameco 220 mhz preamp. \$35.00  
(Will consider trade.)

CONTACT: WA3ERQ, John J. Gallagher  
7122 Gillespie Street  
Philadelphia, Pa. 19135  
215 - MA 4-0843

FOR SALE (From Estate of K3ALK)


- Heath Seneca 6 and 2 xmtr \$90.00
- Clegg 99R - 6 meter xmtr and rcvr; Heath MPID -12V to 110 4 ring halo 100.00
- 6M and 2M converters - in one cabinet with P.S. 25.00
- 6M and 2M antennas with CDR rotor and control box 25.00

\* \* \* \* \*

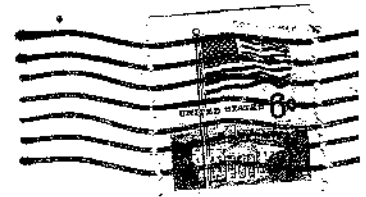
MEETING NOTICES

The next DIRECTORS' MEETING will be held on May 13 at the QTH of K3MXM, Lee Cohen, 8242 Brookside Avenue, Philadelphia. Please call 635-4942 if you cannot attend.

The next REGULAR MEETING will be held on May 20 at the West Oak Lane Jewish Community Center, Sedgewick and Thouron Streets, Philadelphia, Pa. at 8 P.M. Joint meeting with Springfield Radio Club and nomination of officers plus topic to be announced.

<p><b>morton d. mazer</b> WA3EPS REAL ESTATE 1609 E. WADSWORTH AVENUE PHILADELPHIA, PENNA. 19150 (215) CH 8-1682</p>	<p>MECHANICAL ELECTRONIC DEVICES BA6-4646 REPERFORATOR MOD14 w/AUTOMATIC WINDER \$55 RECEIVER MOD ARR-27 465-510K.HZ.....\$35 TRANSMITTER TDG-1 w/MODULATOR .....\$30 COMPUTER TAPE TRANSPORT w/B. CHAN.HEAD \$20 4000V SILICON RECTIFIER 1 AMP.....\$3.95 SILICON BRIDGE UP TO 500V 1 AMP.. 3/4.50 CARBON MIKE w/PUSH TO TALK SWITCH ....\$1 PANEL METERS 3/\$9 MULTIMETERS \$9.50 &amp; \$15 TRANSFORMERS FILAMENT 12V-5A ..... 2/\$5. TEST EQUIP. POWER SUPPLIES, WIRE 1/2c/ft FERTIK'S ELECTRONICS 9TH&amp;TIOGA SAT 9-5PM</p>	<p>K3MXM LEE A. COHEN CLAYTON L. HAY &amp; SON INCORPORATED 4527-31 HEDGE STREET PHILADELPHIA, PA. 19124 JE 3-4660 4661 WIRING RASS POLISHING CLOTHS COTTON &amp; WOOLLEN WASTE</p>
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<p>K3WGK DON COOPER Cooper-Clement Associates 835 Glensida Ave. Wyncote, Pennsylvania Code 215-548-5450</p>	<p>PIONEER 4-2626-27 WA3JSR - BEN. <b>G &amp; G Metal Products</b> STEEL FABRICATION - FORMING AND STAMPING SPOT WELDING - ARC WELDING B. GINSBERG 1709-18 GILLINGHAM STREET PHILADELPHIA 24, PA.</p>	<p> <b>A. G. RADIO PARTS CO.</b> 939 TOWNSHIP LINE, ELKINS PARK, PA. <b>W3BHR</b> STEVE TU 6-8100</p>

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**MEETING NOTICE**

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 FRI. TO TO TO  
 SAT. 5.30 THURS. 1.30 9 PM.

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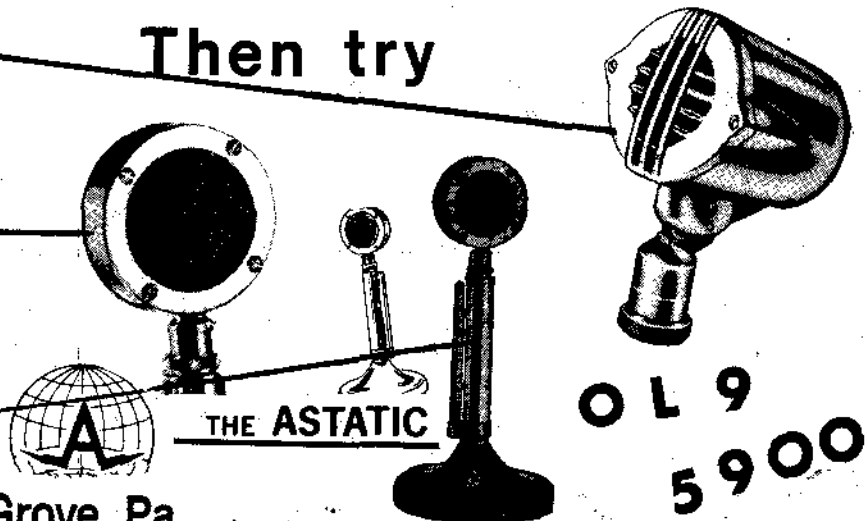
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