

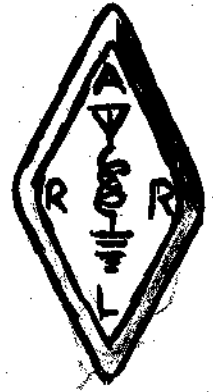
2AYU

4 x 150 AMP/L  
FOR 682

# PACK RATS'



# CHEESE BITS



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

VOLUME IV

APRIL 1970

NUMBER 4

## OUR PREZ SEZ

### You Got Troubles?

Well now Bunky, who doesn't?

If they're the ham radio type you've come to the right place.

But let's be perfectly frank.

Don't expect someone to come rushing out to fix and maintain your rig. It is expected that you will do your utmost to help yourself. A poor connection, a bad tube or other basic fault should be obvious to you.

The gang in this club have the experience and background. There are many specialists in antennas, xmtrs, rcvrs, power supplies, propagation, etc. Talk to these people about your gear. Exchange experiences. Others likely had similar problems. Learn from them. If you've solved a tough one (or a small one) tell us.

But start by asking questions, at the meetings, on the air.

Mutual help is one of the reasons for having a club.

**DAVE-W3MYF  
DIED APRIL 2**

W3KKN, Ernie Kenas

P.S. New By-Law! - Everybody must ghost write!

DEADLINE FOR ARTICLES IS THE GENERAL MEMBERSHIP MEETING.

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#5 SUNNYBROOK COURT  
STRATFORD, N. J. 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 - 9:30 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  
TREASURER: W3MVF, DAVE BLOCH

DIRECTORS:

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.

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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.

\* \* \* \* \*

WHAZZIT ITEM #1

Clue #1: It is fitting to start with a piece of club property. Its location is usually with a prominent club member. Unlike most items, its value increases with time. With luck it will multiply.

Clue #2: Its message is transmitted widely. It has no tubes. Its power is self contained. It needs no mike, key, camera, or keyboard. Yes, it is expensive.

Clue #3: We can anticipate its growth. Lead time to increase its size and value is substantial. We will attempt to pay for its growth this month. The treasury will not suffer.

Clue #4: We have submitted our price to make it grow. We know not if it is enough. Perhaps the cost has risen and it will not obtain any growth this time. Its value will still increase.

Clue #5: It came into being in 1961. 1970 will make its contents 10. One each year. Make it 10 in '70.

\* \* \* \* \*

A woman's idea of keeping a secret is to not reveal who first told it to her.

A 50 AND 144 MHZ LINEAR AMPLIFIER  
Jack Power, W2AXU

The so called "all band amplifier" has been a boon to the low band amateur radio operator. It affords him high power output on the 3.5 through 28 mhz amateur bands. This type of amplifier operates over a 26.5 mhz frequency range. To obtain a five amateur band frequency coverage at the VHF frequencies would mean a frequency coverage of 1250 mhz. However, we can obtain a frequency coverage of 98 mhz and two amateur bands with the same ease as our DC band friends, that is, 50 and 144 mhz. The following is a description of such an amplifier.

Referring to the schematic, the principle of operation is rather simple and basic. The input RF is link coupled to L1 by two links, one for 50 mhz and 144 mhz. L1 and C1 tunes 50 mhz. L2 at 50 mhz is just an interconnecting lead to the grid of the tube. Drive is coupled into the tank at the bottom of L1. Now, 144 mhz is tuned by L2 and C1 as a series circuit. At this frequency, L1 is a high impedance and has no effect but offers a convenient means for coupling the 144 mhz drive into the circuit. The coupling coil is placed at the top of L1. The two tank circuits are loaded for stability's sake by the 4.7k resistor. Capacitor C is a special capacitor and is described in the notes.

The plate tank output circuits are basically a series tuned circuit for 144 mhz. L3 and C2 are the tuning elements. The antenna is coupled from the tank via the link and coupling adjusted by the capacitor in series to ground. The 50 mhz tank circuit consists of C2, L4 and C3 and is a pi-network tank. L3 is just an interconnecting lead at this frequency connecting the capacitor, the coil and the plate together.

Plate voltage is fed to the amplifier through the 250 RF choke and DC is blocked from the antenna by the .001 MF5KV blocking capacitor. Screen voltage is fed in through the 10 ohm metering resistor and a 47 ohm resistor to the screen grid. The 47 ohm resistor is again for the sake of stable operation. Bias, is applied to the grid through a 18k resistor for the purpose of producing automatic grid bias when grid current is drawn, a 1k metering resistor and a 100 ohm resistor used in place of an RF choke. RF voltage is detected and metered by the 1 pf capacitors, the IN34A and associated resistors.

Metering the parameters of the amplifier during operation is accomplished in a similar manner as was described for the 6146 50 mhz linear amplifier. Any grid current produced by over-drive will produce a voltage drop across the 1k resistor in the bias circuit. This voltage will be indicated on the 1 milliamper meter. For example, assume 1 ma of grid current flows. This will produce a 1 volt drop and produces a full scale reading on the meter. The 1k resistor in series is the multiplying resistor. ( $E = IR = .001 \times 1000$  therefore  $E = 1$  volt.) The screen current is monitored in a similar manner. In this case, the meter scale is multiplied by 100 and reads 100 milliamperes full scale. The 10 ohm resistor is the metering resistor and the 1k in series is the multiplying resistor. The meter again is reading 1 volt full scale. ( $E = IR = .02 \times 10$  therefore  $E = .2$  volt and the meter reads 0.2 milliamperes.) The plate current is metered by the 10 ohm resistor between the negative of the power supply and ground. (The voltage regulators must be connected to the power supply negative and not to ground as their current will be metered.) Any current drawn from the power supply to ground will produce a voltage drop across the 10 ohm resistor. In this case the meter scale is multiplied by 400 and the meter will read 400 milliamperes full scale. At this current, a 4 volt drop is produced across the 10 ohm resistor. The meter is multiplied by the 4k resistor.

Continued on Page 4

A 50 AND 144 MHZ LINEAR AMPLIFIER (Continued)

The amplifier is constructed on a 7 in. by 7 in. by 2 in. deep chassis. The plate circuit is housed in a compartment bent from aluminum 1/16 in. thick. Its outside dimensions are 7 in. by 7 in. by 4 in. by 3 in. high. The 7034 tube socket is mounted to the right rear of the chassis so there is about 1 in. of clearance from the plate of the tube to the sides of the shield partitions. The tuning capacitor, C2, is mounted on the front shield partition approximately  $2 \frac{17}{32}$  in. from the right side of the chassis. The 50 mhz blocking capacitor is mounted on the same partition approximately  $1 \frac{1}{32}$  in. from the left side. The 144 mhz coil is mounted from the blocking capacitor to C2. The blocking capacitor is mounted on the plate coupling ring toward the rear. The 50 mhz coil mounts from the center top of the 144 mhz coil to the loading capacitor. The 144 mhz output link mounts into the center of L3. The output connectors and the 144 mhz loading capacitor are mounted on the rear partition. The plate RF choke mounts in the right rear corner from the plate coupling to a feed through insulator. Good VHF wiring techniques are used, L3 and L4 are adjusted with a grid dip meter and the tube in the socket so that for 50 mhz, C2 tunes with about maximum capacity and for 144 mhz with about minimum capacity. The 144 mhz tank circuit shall not resonate to 100 mhz when tuned for 50 mhz.

The grid circuit is not critical and if the specifications are followed as given in the notes, all should be well. A grid dip oscillator is a must. The grid by-pass capacitor is mounted from the tube socket toward the front of the chassis with the lip of the brass plate at the front. The grid tuning capacitor is mounted on a piece of aluminum and mounted on the chassis. The capacitor is insulated by insulating washers, one with a lip, the other flat. Dimension it to fit. L1 is mounted between C1 and the lip of the by-pass capacitor by its leads. L2 mounts between C1 and the grid connection on the tube socket. The output connectors are mounted on the back of the chassis as is a 6 conductor Jones connector. The H.V. is fed in via a H.V. connector. The blower is also mounted on the back of the chassis so its inlet is at the tube socket. The blower I used is a surplus D.C. blower and operates at 5 to 24 volts, depending on how much air is needed. Sufficient air should be used so that the air flowing from the top of the tube is not too hot. This will depend upon how much voltage is used and the tubes plate dissipation.

The operation of the amplifier is straight forward. With the power supply shown for use with the 6146 linear amplifier in an earlier article, the bias should be adjusted for 50 volts. Connect the power supply and amplifier together and turn on the filaments and let the tube warm up for a few minutes. Check the bias voltage again. Apply enough 50 mhz drive to produce a small amount of grid current (0.1 ma.) when the grid is resonated. Drive requirements will be 1 watt or less to drive the amplifier to full output. If more drive is available, it must be attenuated by some means. (Maybe we'll talk about that at some later date.) Take the drive off and apply plate and screen voltages. Look at the static plate current and adjust the bias so that it reads about 55 ma. A dummy load should be connected to the output connector. Turn the plate and grid tuning capacitors through their range and note that the grid meter does not move or flicker. If it does your amplifier is unstable and you must find the cause and correct it. Okay, now apply a small amount of drive and adjust the tuning and loading capacitors for some output. An external output indicator will be handy here because for further loading the screen current must be monitored. Increase the drive and continue adjusting the loading and tuning controls until you have maximum output with 20 to 22 ma. of screen current. Screen current is the more important parameter to load with in tetrodes than the plate current. The plate current will take care of itself when all is right. 144 mhz is adjusted and loaded in the same manner.

A 50 AND 144 MHZ LINEAR AMPLIFIER (Continued)

In no case in operation of a Class AB, amplifier shall there be more than a flicker of grid current. Your driver must operate at its full capabilities and any excess drive must be dissipated into a load.

Plate voltages as high as 2000 volts may be used if consideration is given in the construction of the amplifier to the H.V. carrying components. The following parameters are listed for your consideration for a 7034 tube.

1. Filament Voltage	-	6.0	Volts			
2. Filament Current	-	2.6	Ampures			
3. Plate Voltage	-	800	1000	1500	2000	V
4. Zero Signal IP	-	52	42	28	21	MA
5. Max Signal IP	-	211	223	228	235	MA
6. Max Signal ISG	-	20	13	11	9	MA
7. Screen Voltage	-	300	300	300	300	V
8. Control Grid Bias	-	-40	-43	-50	-50	V

These are approximate values for operation in Class AB up to 150 mhz. Refer to the tube manual for the characteristics of other tubes such as a 4CX250B, etc.

A cover of 1/16 in. aluminum was bent to finish off the amplifier. The meter was mounted in the top center of a 1/16 aluminum front panel and the metering switch in the front left. A bottom plate is used and the chassis made as air tight as possible by sealing all the openings so the air from the blower will flow through the tube.

The plate tank circuit has been used by Ed Clegg, W2LOY, in his Zeus transmitter and the grid circuit is similar to that used by E. F. Johnson in the 6N2 Thunderbolt amplifier.

W2AXU, John B. Power

\*\*\*\*\*

220 ACTIVITY  
K3GAS, Doc Cutler

The club intercom frequency of 221.4 mhz is the most active frequency for members during the entire year. During the past few months, the following stations were heard:

- W3AJF, W2AXU, WA3BIV, K3BPP, WA3CAG, W3CJU, W3CL, W3CXU, K3DLS, W2EIF,
- K3EOD, WA3ERQ, K3GAS, W3GEW, K3GQJ, W3HFY, W3HK, K3HSS, K3IGX, K3IPM,
- K3IUV, K3JJZ, W3KKN, K3KTY, W3ZD, W3MFY, W3MVF, K3MXM, W3NSI, K3OBY,
- W3SAO, WB2SZK, K3UJD, K3WGK, WA2KOI

Imagine working these 35 stations in January and increasing your contacts by an easy 35.

Other stations calling into our 221.4 net Monday evenings at 9:30 are: K3LOM, Ambler; K3ZSG, Norristown; W2BAX, S. N.J.; K3EGQ, Holland, Pa.; WB2YEH, Palmyra; WA3NVO, NE Philadelphia.

Those of us concerned with club business usually have the rigs on while in the shack and one would be surprised at all of the business that can be accomplished on 221.4. Check with any of the above listed stations to find out how you can get on 221.4.

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

MOTOROLA COLOR TV SERVICE MANUAL (Tab Books #509) by Forest H. Belt  
160 pages plus 36 page schematic foldout section. 8 1/2" x 11". 13 Chapters.  
Profusely illustrated. \$7.95 hardbound; \$4.95 paperbound.

This brand-new servicing/schematic manual covers all Motorola models using the TS-907 through TS-924 chassis, including the all-transistor TS-915/919 chassis. Helps the reader become a Motorola Color TV expert! Here's all the information needed - in one convenient manual - everything to know - setup, alignment, trouble shooting - slanted to unique Motorola characteristics.

No longer is a manual needed for each individual chassis or model - it's all here, right at the reader's fingertips, presented in a concise, logical manner that enables him to find precisely what is wanted in short order. In addition to general data in the first several chapters, there's specific information on each chassis - from the TS-907 through the TS-924 - detailing special features, test-point locations, individual alignment procedures, setup kinks unique to each chassis, CRT replacement instructions, troubleshooting tips and modifications, etc. Also, there's a foldout section with complete schematics covering all the six basic chassis, with differences and modifications fully explained in the chapters relating to each one.

The first five chapters concentrate on the basics - monochrome adjustments, purity, gray-scale tracking, static and dynamic convergence, a thorough discussion on alignment, servicing VHF and UHF tuners, and remote control operation and repair. The remaining chapters are devoted to a complete analysis of each chassis, with a section by section comparison.

Contents: Color TV Refresher - Getting Acquainted With Adjustments - Making Sense Out of Alignment - Tuner Service and Alignment - Remote Control Functions and Repair - Service Notes: TS-907, TS-908, TS-912, TS-914, TS-918, TS-915/919, TS-921 and TS-924.

\* Amateur Radio Editors Association

\*\*\*\*\*

NEW PRODUCTS OF INTEREST TO HAMS  
W3NSI, Lyn Rowland

1. Low Temperature Cabinets - California Chassis Co., 5445 E. Century Blvd., Lynwood, California

These cabinets are formed of perforated steel, with 3/32" holes on 5/32" centers. The front panels are aluminum, and the steel rear panel has a rectangular hole to allow access to connectors on aluminum chassis which comes with the cabinet. The LTC units are used on many of the Editor and Engineer Handbook projects. Six types are now available ranging in size from 4 1/2 high by 7 1/4 wide by 9 1/4 deep, up to 12 high by 17 1/4 wide by 12 1/4 deep. Prices start at \$10.24 and go up to \$22.21 for single pcs. All cabinets are gray hammertone. Ask for literature on LTC 463, 464, 469, 470, 472, 474, from above address.

NEW PRODUCTS OF INTEREST TO HAMS (Continued)

## 2. Latching Relay - Guardian Type IR 640L C 120

This item should find use in send/receive switching applications. The contacts are rated at 5 amps and are SPDT. Coil operates on 115 Vac 60 Hz. A push button to control this relay could be hit once to go to transmit, hit again to go back to receive. The latching relay could in turn control any other relays used for S/R switching. Unit price \$4.75 (avail. H & R).

A very similar relay which operates on 6 or 12 v DC is available now from American Zettler, Inc., 697 Randolph Ave., Costa Mesa, California 92626. This item could be used in mobile sets so that the mic control button would not have to be held down once the transmitter was on. To go back to receive, just hit the mic button again.

## 3. Solid State Power Controls - Ohmite Co.

Units like this could put variac companies out of business. The model PCA 1000 takes regular line input voltage and has an output varied by a small knob of 0-120 Vac at 8 amps. It is less than 2" sq. and has a depth of about 1" behind a panel. Besides being more compact than a variac, it weighs about 10% as much, and results in a saving of several dollars. Cost \$17. (Page 248 Newark Ind. 1970.)

W3NSI, Lyn Rowland

\* \* \* \* \*

PLANS FOR THE ANNUAL JUNE VHF QSO PARTY

Want to be in on some fun and gung-ho contest operating? Then plan now to join the gang at the fine site at Hilltown, Pa. on June 13 and 14, for the weekend (or at least part of it).

We have RED HOT plans afoot to go all out this year, to win and have a ball doing it. Where else can most of us get away from the usual weekend chores for the chance to operate the very best equipment available - hi power rigs on AM, CW and SSB; hot converters with low cross-mod characteristics; big antennas with real gain and directivity; plus telephone dial system between stations, filters on transmitters and converters to reduce inter-station interference and overloading, etc. The "etc." is a large part of the deal - every item required, plus spares for rigs, tubes, tools, and also provision for inclement weather. If you'd like to see how the top Pack Rats operate, log for them during busy periods and operate yourself - just think how much fun it would be! While you're all charged up for the idea - call your friendly Team Captain and let him know you want in - now, while the plans are being made. The Captains are:

<u>50 MHZ:</u>	Carl Barish, WA3BIV	-	CH 7-1071
<u>144 MHZ:</u>	Dave Zimmerman, W3ZD	-	675-4539
<u>220 MHZ:</u>	Joe Kilgore, W2EIF	-	1-609-783-9478
<u>432 MHZ:</u>	Don Hampton, W3CJU	-	1-348-8969
<u>1296 MHZ:</u>	Bert Soltoff, K3IUU	-	947-4483
<u>2300 MHZ:</u>	Mario Fontana, K3UJD	-	675-3984

Continued on Page 8

PLANS FOR THE ANNUAL JUNE VHF QSO PARTY (Continued)

Remember, we need all kinds of specialists - the chin-hinge flappers for the busy operating times, the dx-section snoopers, the graveyard band-milkers, the one band specialists who know when and where to grab em, the electricians, antenna tower creators, et al, (Friday p.m.) - there's fun (and work) for everyone. Don't miss it!

Sincerely,  
W3CXU, Johnnie Allen  
W3SAO, Frankie Brick

\*\*\*\*\*

OUR FIRST LADIES NITE

At the Board of Directors Meeting held on November 8, 1956 at the QTH of President W3FSC we decided to have a Ladies Nite.

The date was November 14, 1956 at the Cheltenham Hills Recreation Center, Lober and Upsal Streets, Mt. Airy, Pa. All YLs and XYLs to be invited.

The Ladies Nite meeting of November 14, 1956 was called to order at 8:15 p.m. by President W3FSC. He stated that the XYLs would take charge of the meeting.

The XYLs appointed temporary officers as follows:

- President: XYL of W3FSC, Sylvia
- Vice President: XYL of W3NKD
- Treasurer: XYL of W3CPT, Sophie
- Secretary: XYL of W3SAO, Helen

The ladies proceeded with the reading of the minutes and announcements. They adjourned the business meeting at 9 p.m. and turned it back to the OMs.

A sports film on ice skating was shown. Also, films of the August picnic were shown (taken by K3CIV, Ralph Hersh).

The refreshments were provided by the XYLs. They baked cakes or cookies.

The officers and members of the club thanked each YL and XYL for their cooperation in making our first Ladies Nite a success.

W3SAO, Francis D. Brick  
Club Historian

D.S. Cost of first Ladies Nite = \$00.00.

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AIR FORCE AND HAMS SET MESSAGE RECORD

From Communications News  
Submitted by W3HKZ, Ed Kushner

The United States Air Force Military Affiliate Radio System (MARS) operators set a record last year in helping American servicemen overseas contact their families and friends in the United States.



AIR FORCE AND HAMS SET MESSAGE RECORD (Continued)

During 1969, MARS facilities operated by the Air Force Communications Service handled 447,963 telephone patches and telegraph messages from all over the world. By comparison, 363,122 calls and messages were made in 1968.

More than half of last year's total - 268,512 transmissions - originated from American servicemen serving in the Republic of Vietnam and Thailand. AFCS operates 13 MARS stations in Vietnam and 10 in Thailand. According to officials, there were 172,838 calls and 26,570 messages from armed forces personnel in Vietnam alone - a daily average of about 475 calls and 75 messages handled by AFCS operators.

Although its primary mission is to supplement normal military communications and serve as a backup in domestic emergency situations, MARS has proven invaluable as a medium for transmitting personal morale-type communications.

In addition to the 500 AFCS-operated USAF MARS stations, there are 9,000 civilian members of MARS. They operate their personal HAM equipment on a voluntary basis, mostly from their homes, and help in channeling messages and calls throughout the continental USA MARS network.

There is no charge for a transmission over the MARS system from overseas bases to the states. Charges are incurred for the use of long distance commercial lines for the "patching" of a MARS call from the point of entry in the states to the home of the person being contacted.

\* \* \* \* \*

ARRL BULLETINS

NR 259, February 5, 1970

Western Union is offering surplus facsimile equipment for distribution among amateurs under the same conditions as are now set up through ARRL for distribution of surplus teletype equipment. Pending determination of the degree of amateur interest, the same clubs now distributing teletype gear will be asked to handle facsimile as it is released by Western Union. Most units are desk type and will need modification prior to use by amateurs but arrangements are being made for publication of details. Currently needed are volunteer clubs in the Seattle and Spokane Washington areas since none is currently authorized. Further inquiries are invited to Frank C. White, W3PYW, who is coordinating the program for ARRL at 2706 Harmon Road, Silver Spring, Maryland 20902 AR

NR 262, February 26, 1970

The Federal Communications Commission has issued a notice of proposed rulemaking, Docket 18,802, to raise application and license fees so that its entire budget will be covered by revenues from licensees. League Lines in November 1969 QST gave advance warning of the possibility. Under the proposals, amateur application fees would go to nine dollars for new, renewed or upgraded licenses, four dollars for modified licenses and 25 dollars for special call signs. Citizens radio service application fees would rise to 19 dollars along with taxicabs, etc. but commercial radio operator fees would stay where they are now. A new television station license could, however, cost as much as 50,000 dollars. Comment deadline is April 20 and reply deadline May 11, 1970. ARRL members wishing to express a view on the docket should be in touch immediately with their respective directors as listed on page 8 of QST. Further information will appear in the April issue AR

ARRL BULLETINS (Continued)

NR 263, March 5, 1970

FCC has issued a notice of proposed rulemaking governing amateur repeaters above 50 MHz. Key features include relaxed logging of day and time period, technical and operating conditions; automatic identification at intervals of 3 minutes or less; whistle-on or other coded access; 600 watt input; no cross band, chain repeaters or multiple outputs; licensee must monitor and control repeater directly or by radio. Proposed channels, subject to change after comments by interested amateurs, are inputs 52.5-52.7, 146.3-146.6, 223.1-223.3, 447.7-448.9, and outputs 53.0-53.2, 146.9-147.1, 224.1-224.3, 449.1-449.3 and above 1215 MHz. Comment deadline is May 15. More information will appear in April QST AR

\*\*\*\*\*

MEMBERSHIP

NEW MEMBERS

Student

WA3NFV, Dan Mitten  
997 Holland Road  
Holland, Pa. 18966  
355-5269

W3ELX, Mario Deluca, Sr.  
422 Kansas Road  
Warrington, Pa. 18976  
DI 3-6816

WA3NGK, Harry Brown  
3012 Potshop Road  
Norristown, Pa. 19401  
584-4846

APPLIED FOR MEMBERSHIP

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

K3ZSG, William Murphy  
206 Hancock Avenue  
Norristown, Pa. 19401  
272-0323

REINSTATED

W3FQD, Dick Hunsiger  
130 Fairhill Drive  
Churchville, Pa. 18966  
EL 7-2960

\*\*\*\*\*

DID YOU KNOW!

W3CXU, John Allen, and WA3SAO, Frankie Brick are committee chairmen for the June QSO Party. Volunteers step forward!!!

K3MXM, Lee Cohen, announces the first transmitter hunt of the season, Sunday, April 12, at 1 p.m. 50.25 khz and 145.2 khz.

\*\*\*\*\*

VISITORS AT LAST MEETING

March 14, 1970

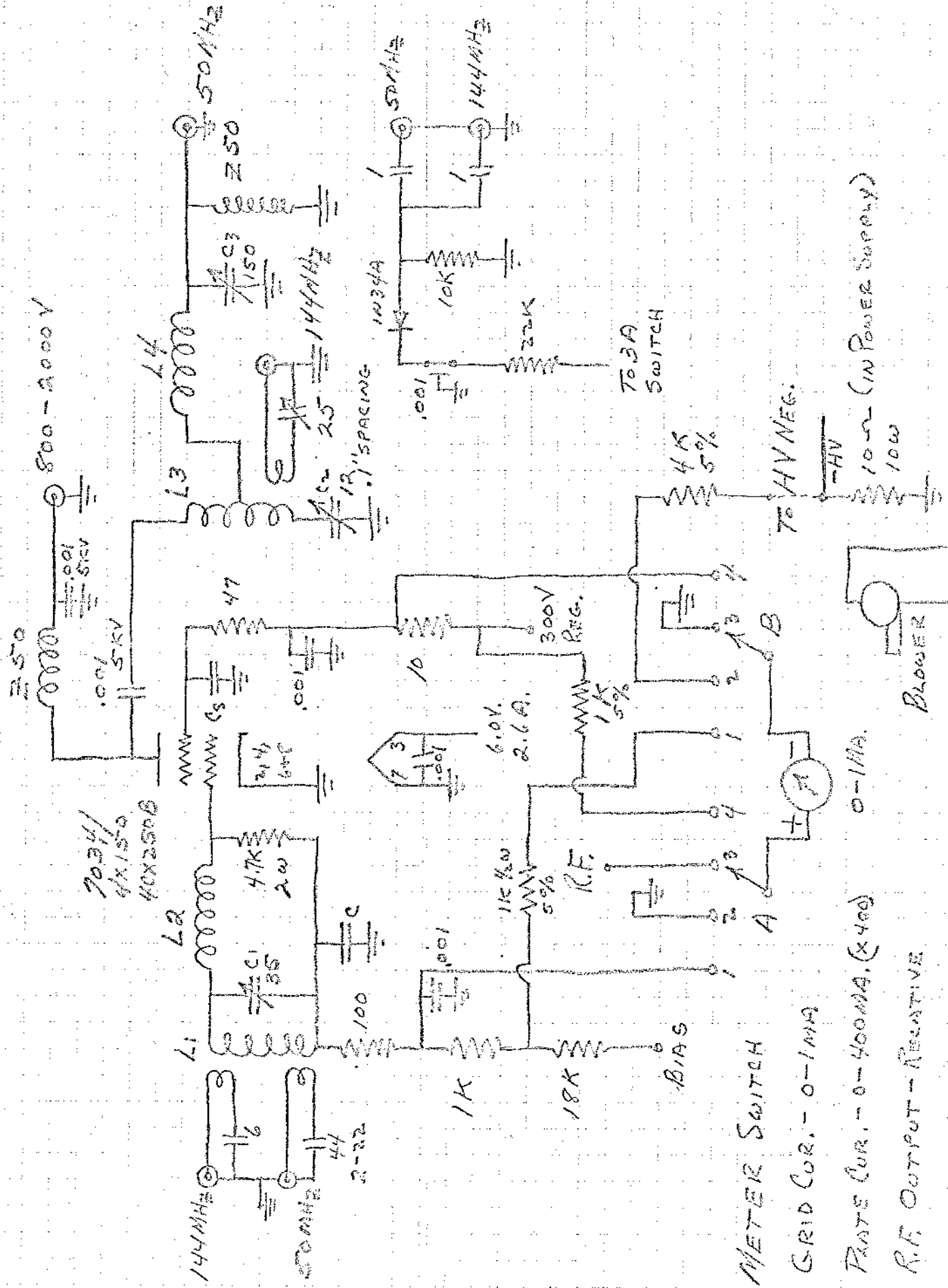
W3YXF, Joe, Doylestown, Pa.  
WA3IDQ, Walt, Philadelphia, Pa.

K3OPC, John, Philadelphia, Pa.  
W3FQD, Dick, Churchville, Pa.

\*\*\*\*\*

Sincere sympathy to WA3HIT, Paul Rilling, on the death of his father Dr. Carl Rilling.

# 50 AND 144 MHz LINEAR AMPLIFIER



METER SWITCH

1. GRID CUR. - 0-1MA
2. PLATE CUR. - 0-400MA. (X400)
3. R.F. OUTPUT - RELATIVE
4. SCREEN CUR. - 0-100MA. (X100)

ORIG-4-19-69 JBP  
REV 1-15-74 JBP

VOLTAGE  
FOR BLOWER

AND NOTES

W2AXU

1/15/77

L1 - 5 1/2 T #16 ON 1/2" DIA FORM - LUCITE ROB - SPACED 7/8"

6M LINK - 2T INSULATED #18 AT COLD END OF L1

2M LINK - 1T INSULATED #18 AT TOP OF L1

L2 - 3T 1/2" DIA 1/4" X .020" COPPER STRAP

ADJUST THESE TWO COILS TO RESONATE WITH APPROXIMATE  
2/3 CAP.

L3 - 4T 7/8" TO 1" ID 3/16" COPPER TUBING 1 1/2" LONG C.T.

LINK 1T #16 SOLID INSULATED - IN CENTER L3

L4 - 4T 1/4" ID #12 BARE COPPER WIRE

C1 - PLATE SPACING - 800 TO 1500 VOLTS = 0.05 IN. 2000 VOLTS = 0.07  
TO 0.125 IN.

C2 - SPACING OF PLATES NOT CRITICAL, MAY BE ANY SMALL 150 -  
200 P.F. VARIABLE CAPACITOR

NOTES:

1. L1 AND L2 ADJUSTED TO RESONATE WITH APPROX. 2/3 CAP.
2. L3 ADJUSTED TO RESONATE AT 146-148 MHz WITH MIN. C2
3. L4 ADJUSTED TO RESONATE AT 49 MHz WITH MAX. C2
4. L3 MUST NOT RESONATE AT 100 MHz WITH C2 TUNED  
FOR 50 MHz OPERATION
5. C - BRASS PLATE 0.30 IN T X 2 3/4 IN X 1 3/16 IN WITH 1/2 IN  
LIP ACROSS 2 3/4" DIMENSION, LIP USED FOR CONNECTION  
INSULATED FROM CHASSIS BY 0.10 IN TEFLON OR  
GOOD PLASTIC SHEET. PLATE FASTENED TO CHASSIS  
BY NYLON MACHINE SCREWS, MEASURED CAP = 320 P.F.
6. Cs - SCREEN BY-PASS CAP BUILT INTO SOCKET.

SWAP SHOP

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- R-48
- Gonset Communicator IV for 220 mcs.

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CONTACT: K3WEU, Paul R. Behrmann  
5101 Wynnefield Avenue  
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215 - 877-0562

WANTED

- All band converter for Interceptor  
CONTACT: K3BPK, Dave Ginden  
676-5571

WANTED

- Good 2M converter 7-11 or 14-18 MC  
IF. 110 volt power supply similar  
to Ameco N-144 or CB-2  
CONTACT: WA3HVR, Dave Eisenbeal  
907 Summit Lane  
Oreland, Pa. 19075  
VE 6-7918

\*\*\*\*\*

MEETING NOTICES


The next DIRECTORS' MEETING will be held on Wednesday, April 8, at the QTH of W2AXU, Jack Power, 25 VanDuy Drive, Trenton, N.J. 08618 at 8 p.m. (609 - 882-1040).

The next REGULAR MEETING will be held on Wednesday, April 15, at the West Oak Lane Jewish Community Center, Sedgewick and Thouron Streets, Philadelphia, Pa. at 8 p.m. TOPIC: Antennas - Their Design and Measurement.

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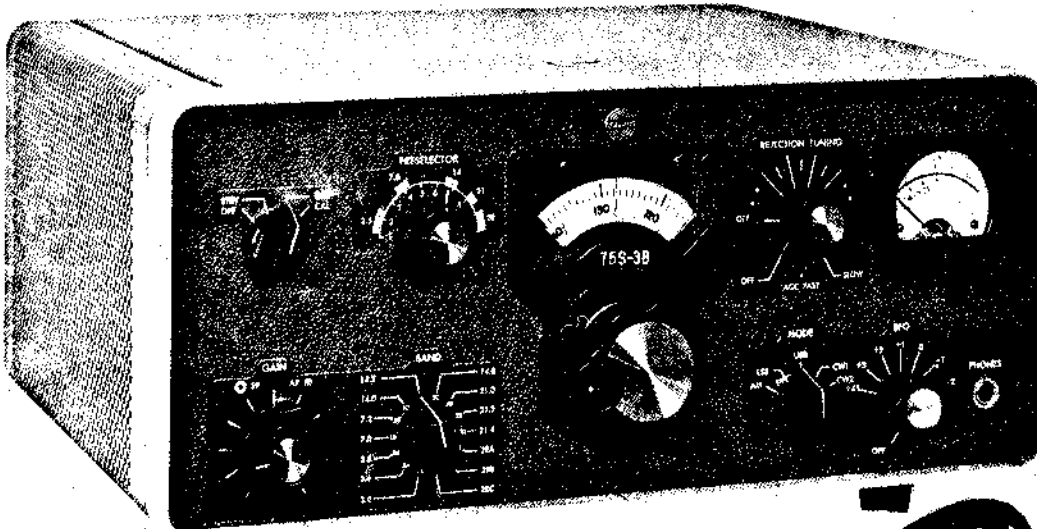
**MEETING NOTICE**

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MON. 9.30	TUES. 9.30	WED. 9.30
FRI. TO	TO	TO
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