



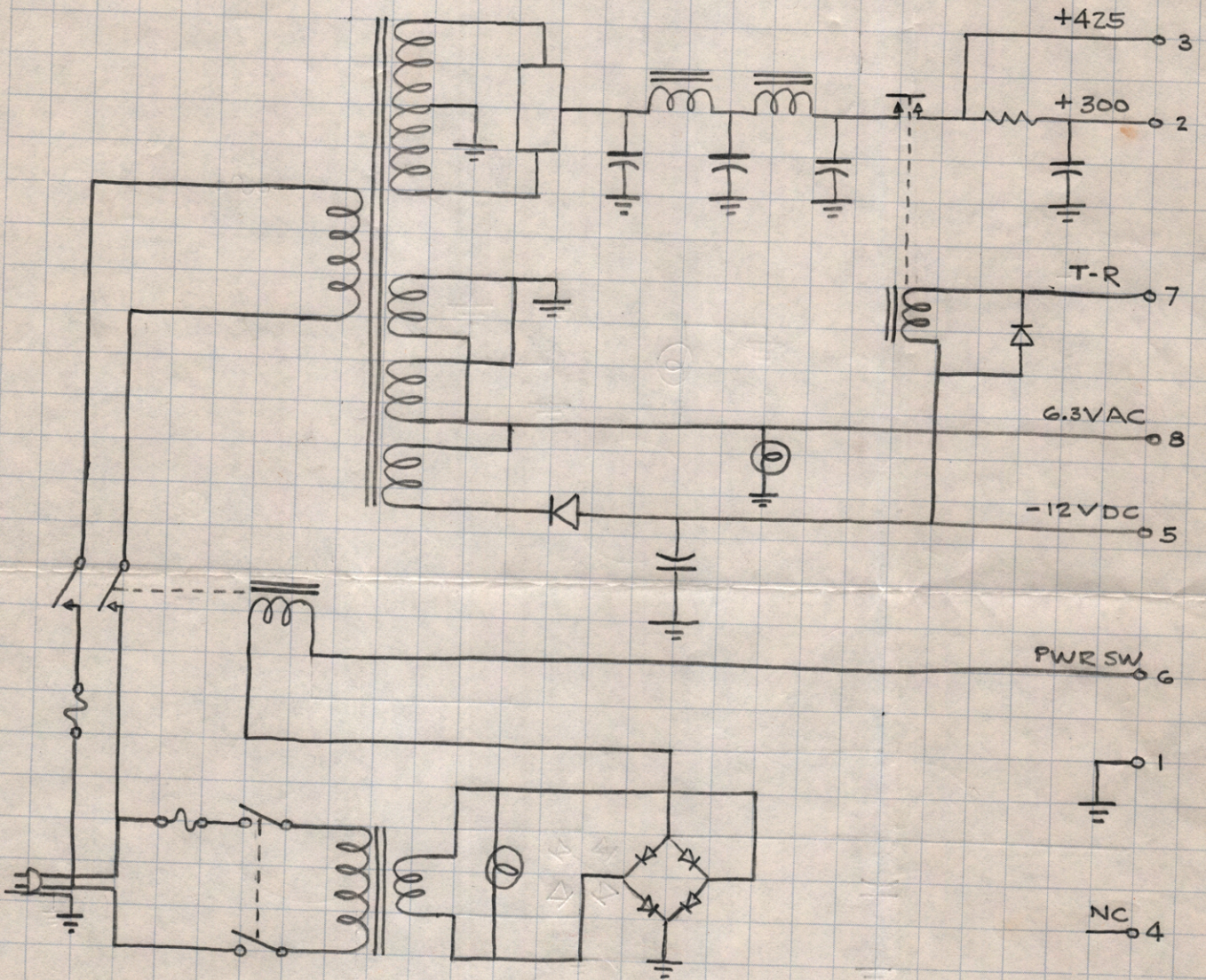
AMERICAN-Standard
INDUSTRIAL DIVISION

KEWANEE

REPRESENTED BY

DOUGHERTY & FERRY ASSOCIATES
110 BALA AVE., BALA CYNWYD, PA.
TELEPHONE TE 9-3363

- BOILERS
- PACKAGED UNITS
- GENERATORS
- SCOTCH
- FIREBOX

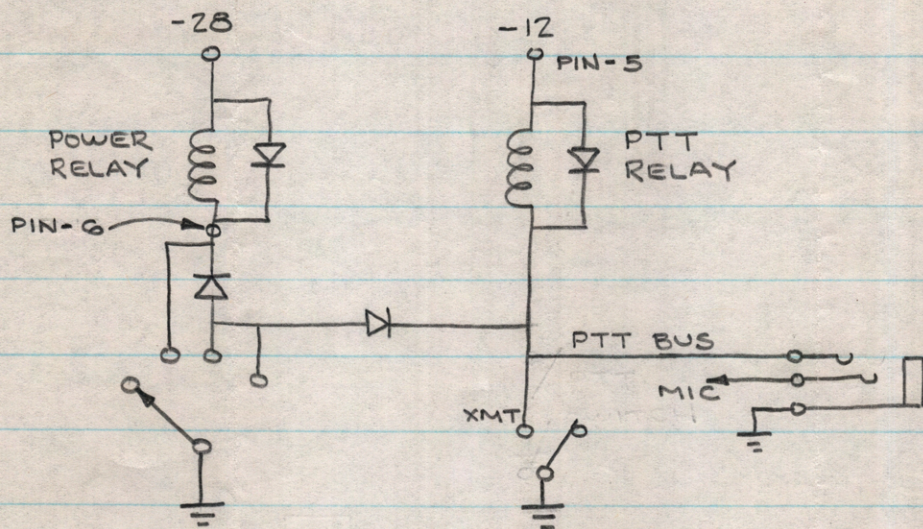


SUBJECT _____

DATE _____

SCALE _____

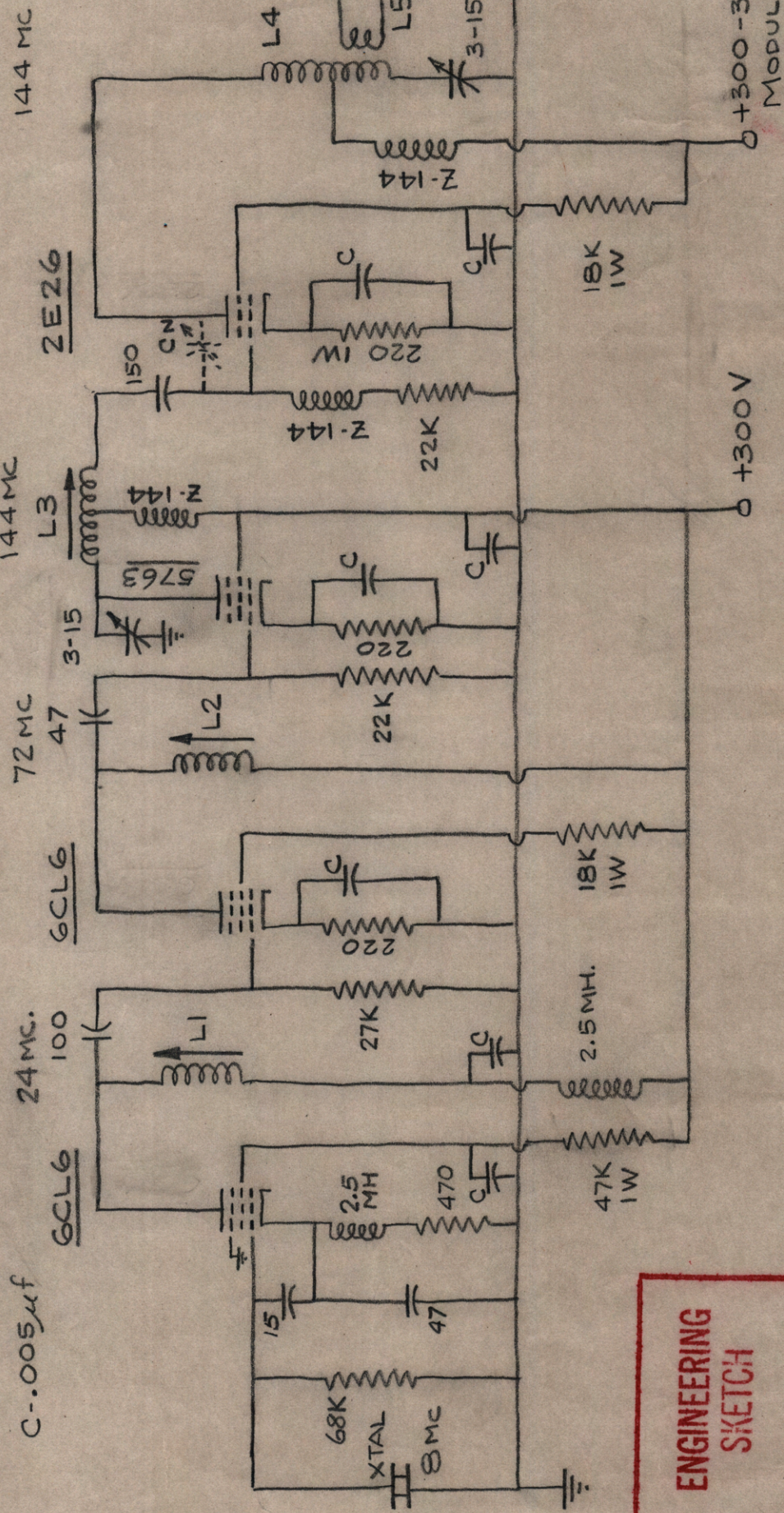
2-6-10-METER SWITCHING CIRCUITS



- L1- 12T. #22 E. 1/2"D (XR-50)
- L2- 6T. #22 E. 1/4"D
- L3- 3 1/4 T. #18 E. 3/8"D.
TAP 1T. FROM GRID
- L4- 5 T. #14 E. 3/8"D
- L5- 1 1/2 T. #14 E. 3/8 D

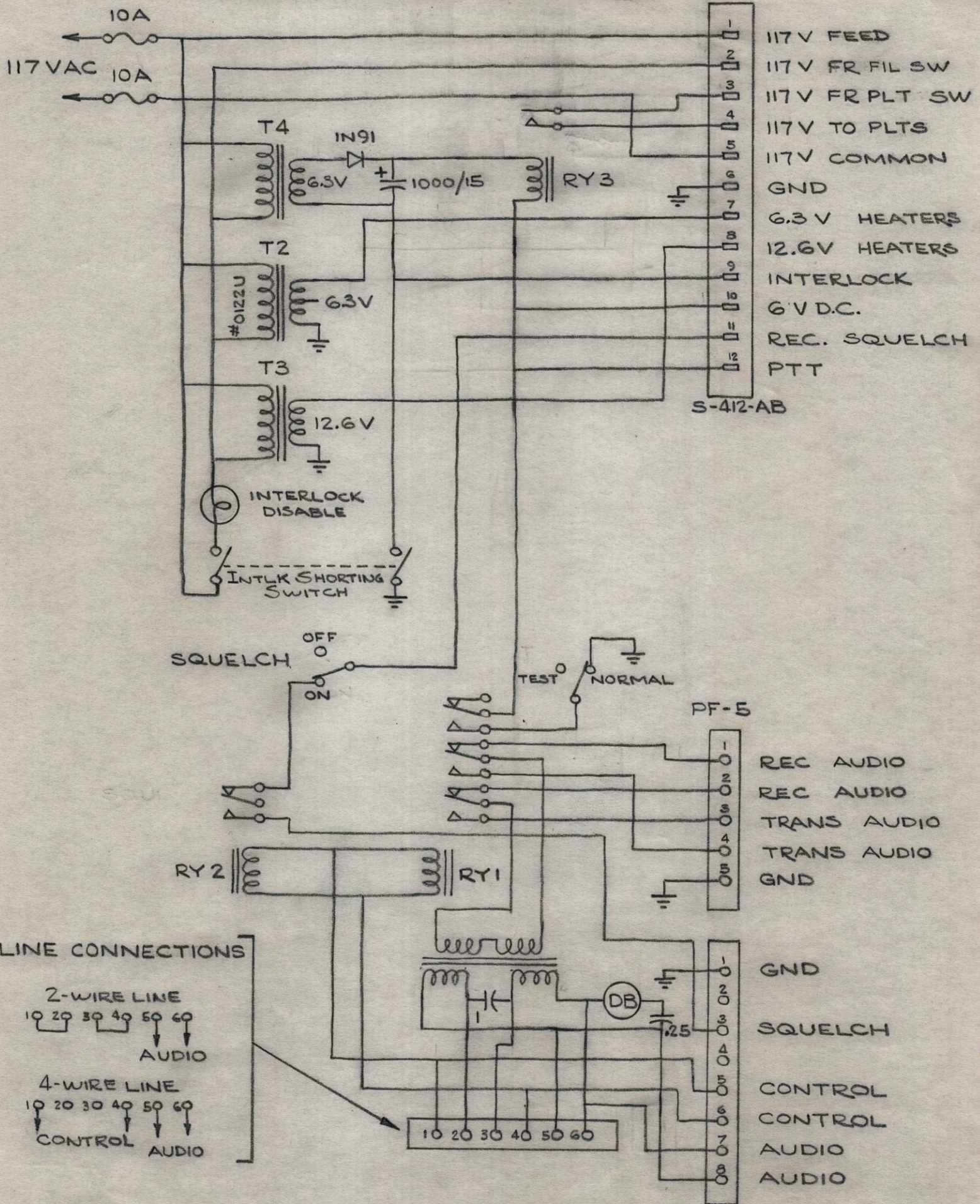
CN- #14 E. CONNECTED TO GRID
AND PROJECTING THRU
CHASSIS IN PROXIMITY OF PLATE.

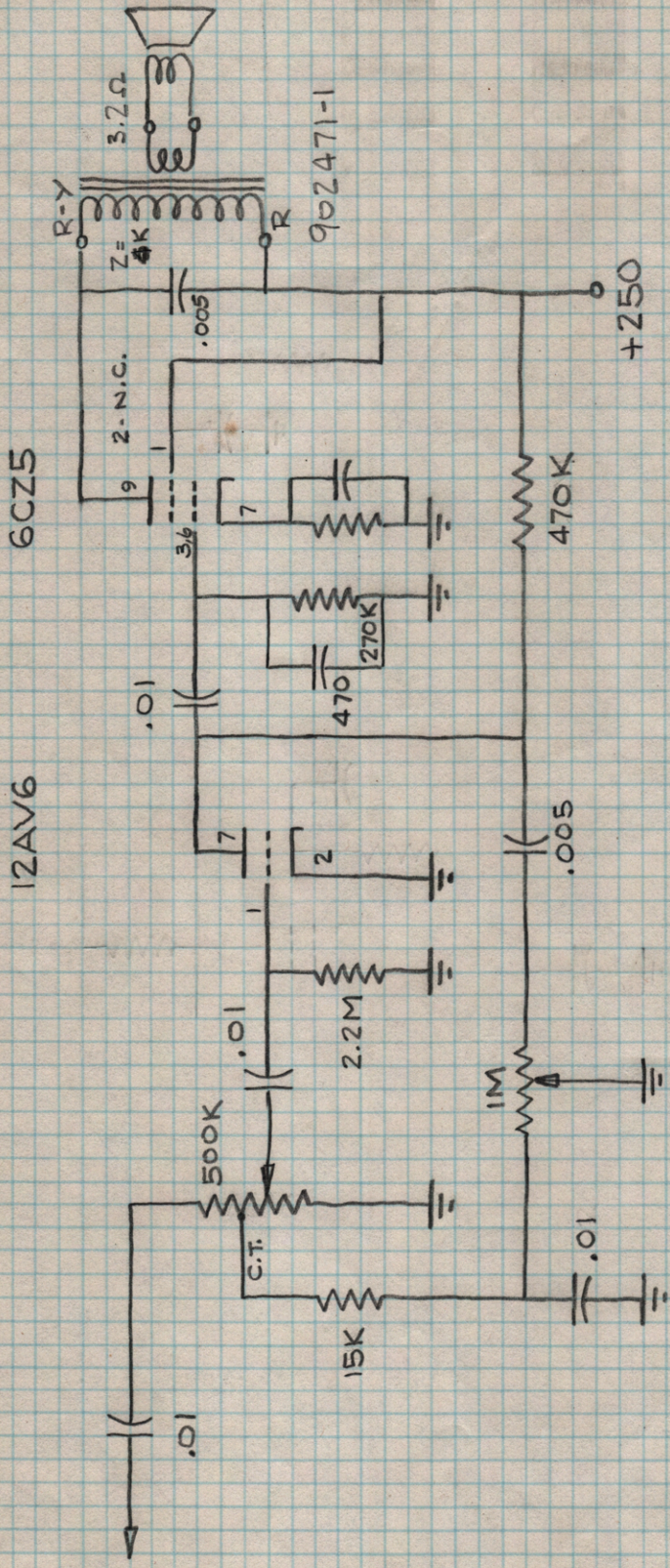
C-.005 μ f 24MC.



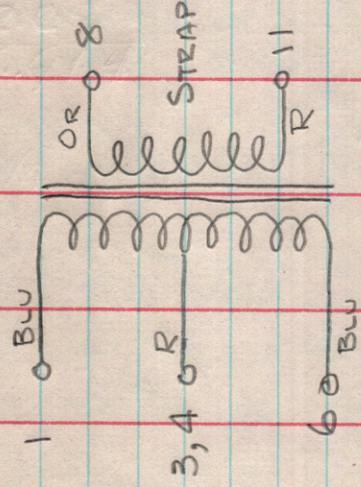
**ENGINEERING
SKETCH**
 NO. RGT102953

LINE TERMINATION CHASSIS





MODULATION TRANS CONNECTIONS



6CZ5
 $R_L = 7500$

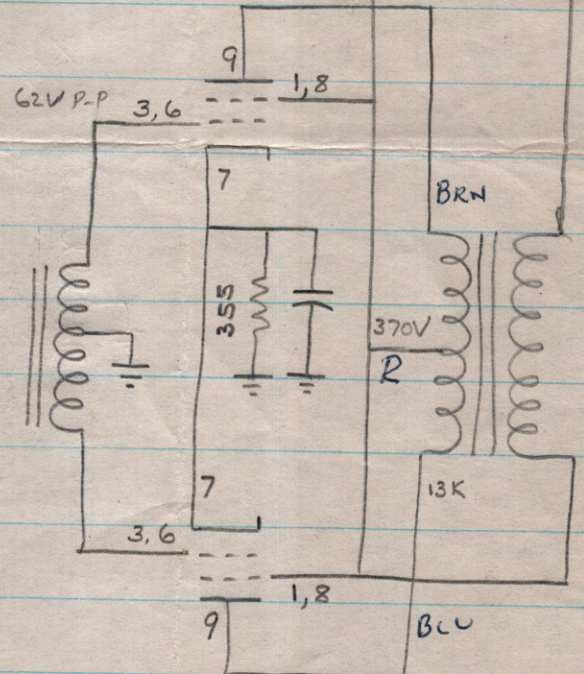
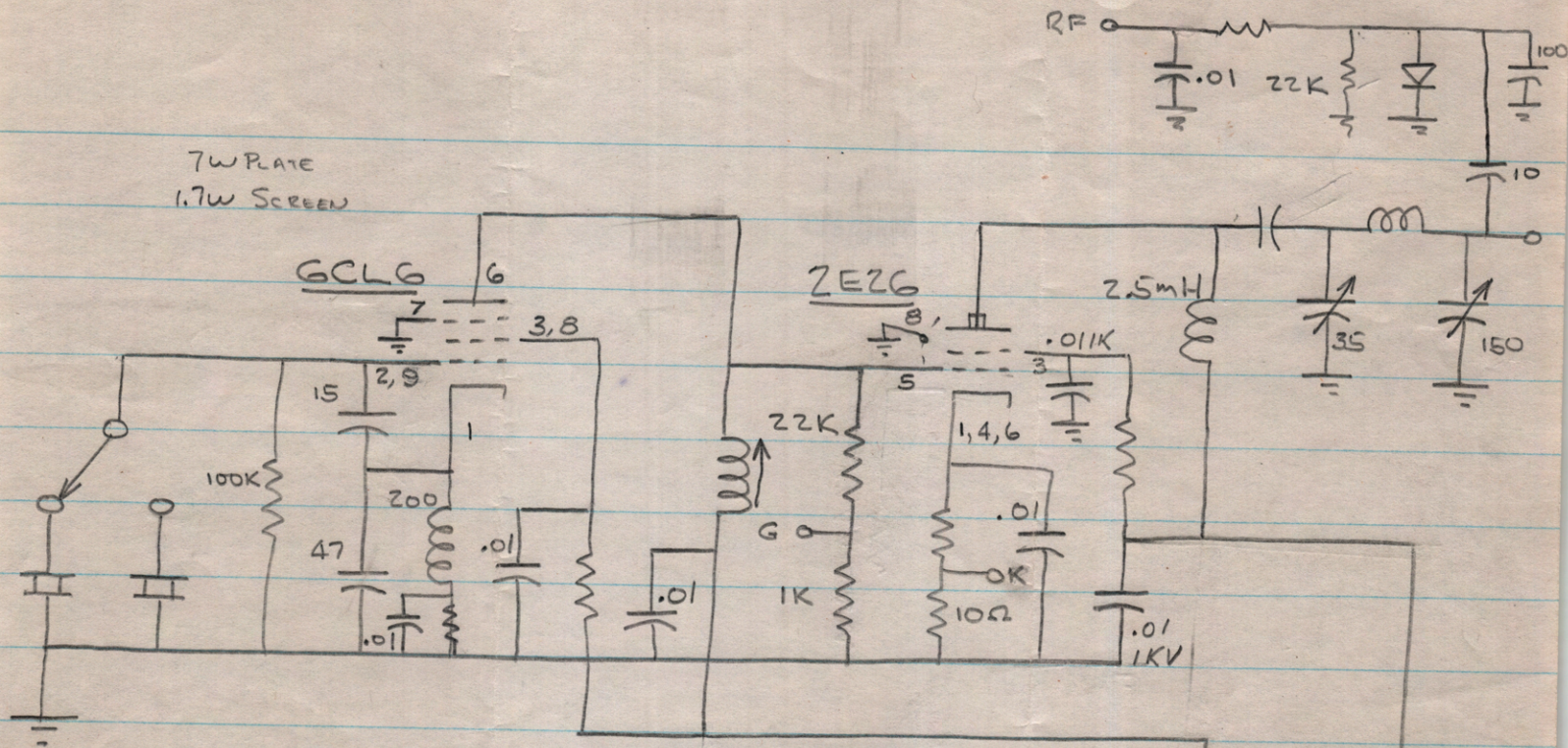
STRAP 9#10

2E26 375V 60MA $I_p + 10MA I_{G2}$

$$\frac{375}{70} = 5400 \Omega$$

- 7000 : 5000
- 8000 : 6000

7W PLATE
1.7W SCREEN



6973 (2)

111

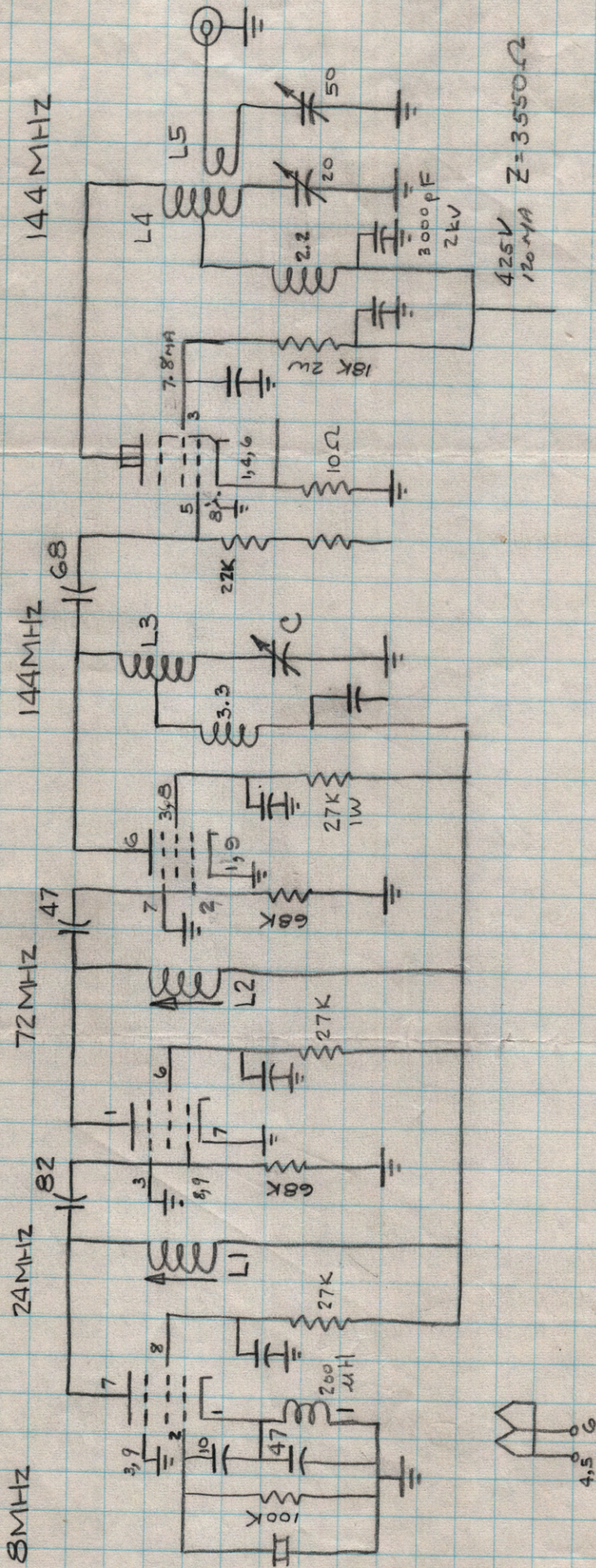
DR

12BY7

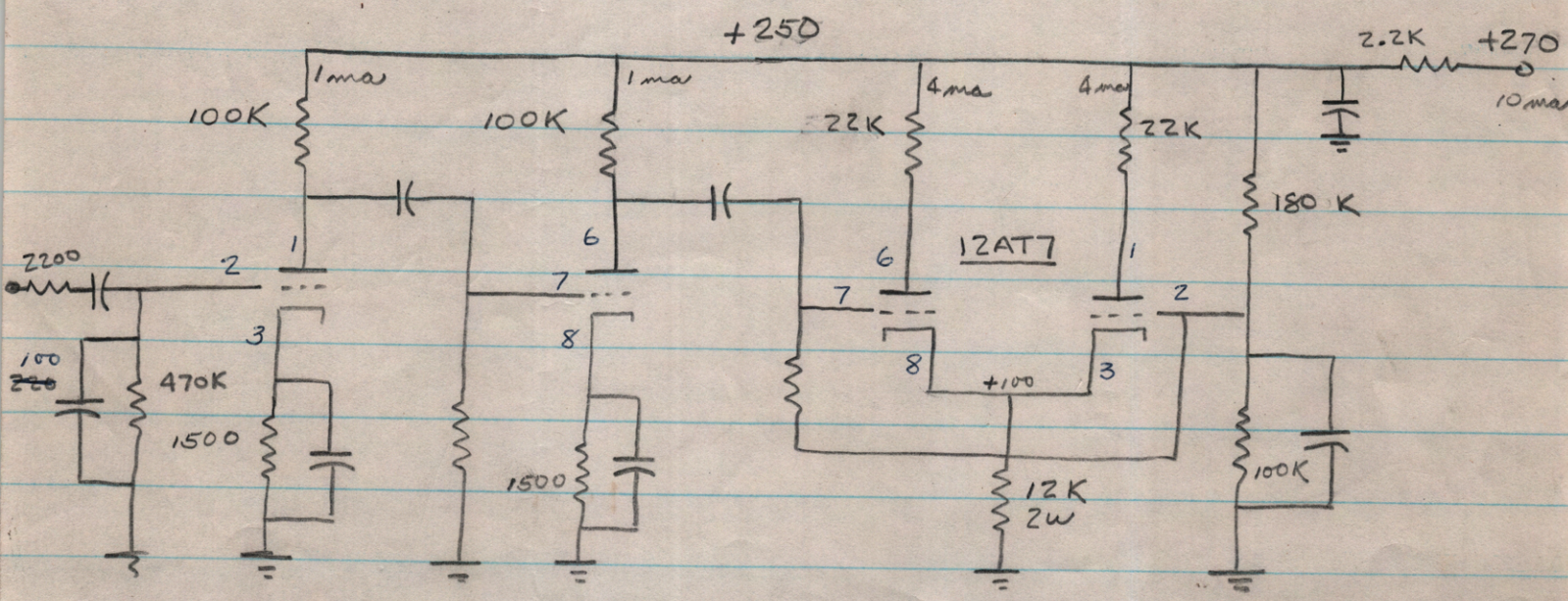
5763

7558

6146



- L1 - 17 T #24 3/8 D RED CORE CLOSE WOUND
- L2 - 4 T #18 3/8 D RED CORE 1/32 SPACING
- L3 - 6 1/2 T #18 3/8 D 3/8 LONG
- L4 - 4 1/2 T #14 1/2 D 3/4 LONG
- L5 - 1 1/2 T
- C - 3 STATOR; 4 ROTOR .090 SPACING JOHNSON 160-110 2.7-19.6



G973

1N2986

E_p 400V

E_{G2} 290V

E_{G1} -25V

I_p 50-107 MA

I_{G2} 2.5-13.7

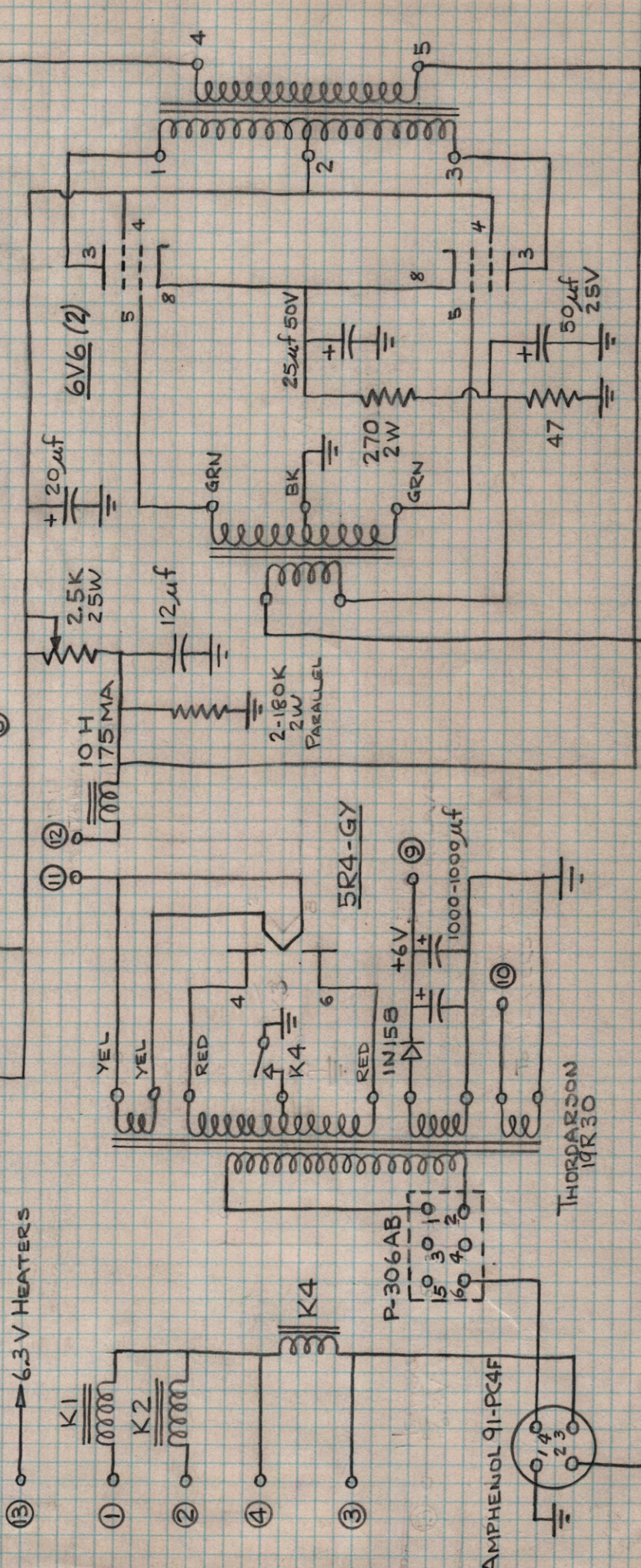
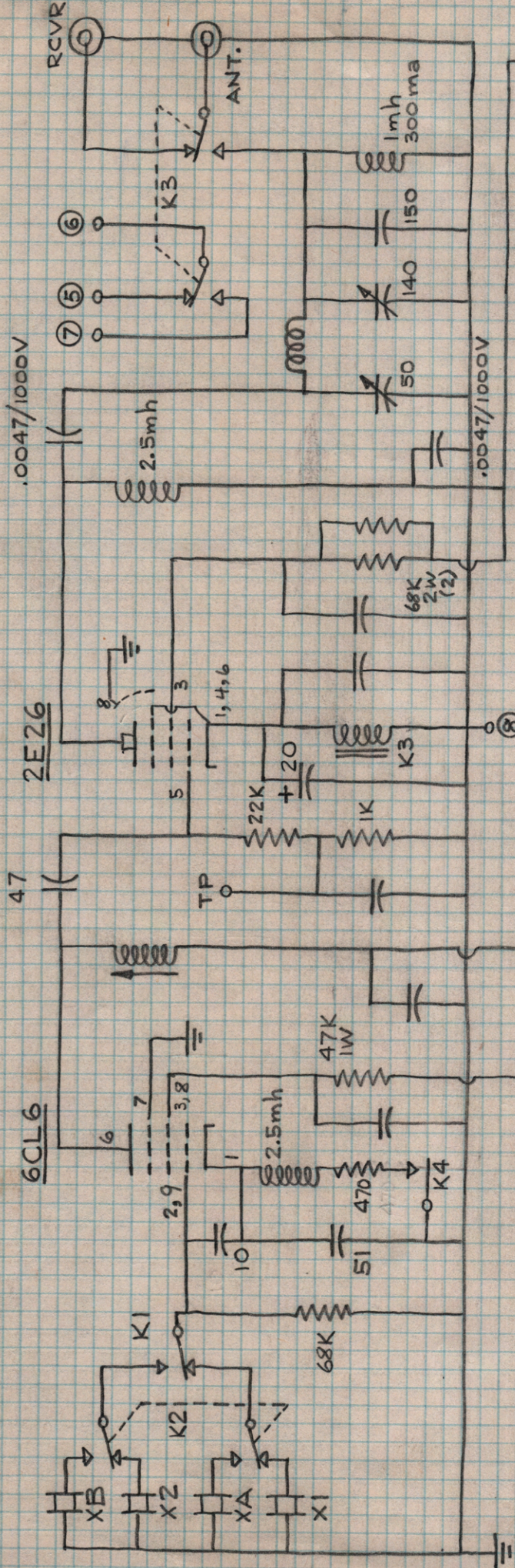
R_L 8000Ω

Dist 2%

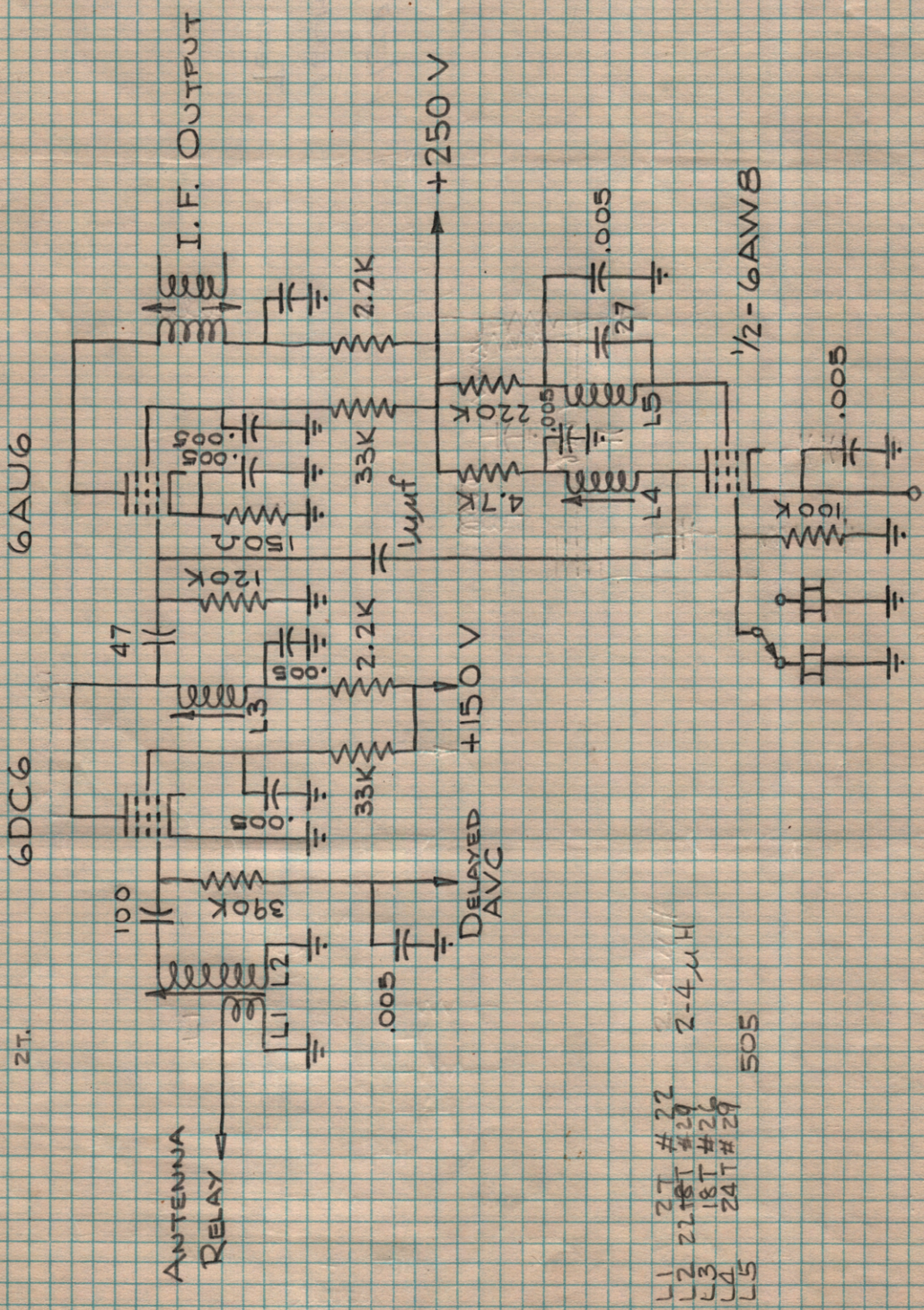
P_o 24W

$P_{P_{MAX}}$ 12W

$P_{G2_{MAX}}$ 2W

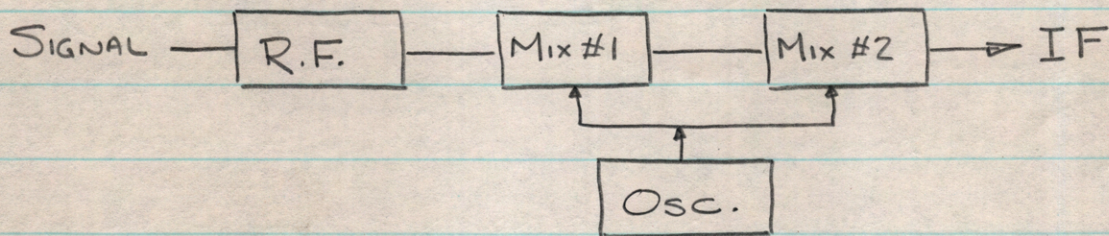


PMRC 10M. INTERCOM TRANSMITTER
 10-23-56



- L1 2T #22
- L2 2T #29
- L3 18T #26
- L4 24T #29
- L5 505

DOUBLE CONVERSION WITH ONE OSCILATOR



$$f_{(sig)} = 2 f_{(osc)} + IF \quad \text{FOR OSC ON LOW SIDE}$$

Ex: $f_{(sig)} = 29.493$

$$f_{IF} = 1415$$

$$\therefore f_{osc} = 13.947$$

MINI INTERCOM RECEIVER SECOND CONVERTER TUNING

$$\begin{array}{r} 1415 \\ 455 \\ \hline \end{array}$$

$$1870$$

$$1860 \rightarrow 1880$$

$$445 \rightarrow 465$$

$$f = \frac{1}{2\pi\sqrt{LC}}$$

$$455 \text{ CTR}$$

$$455 \pm 10 \text{ kHz}$$

$$L = 100 \mu\text{h}$$

$$f^2 = \frac{1}{4\pi^2 LC}$$

$$C = \frac{1}{4\pi^2 f^2 L}$$

$$4\pi^2 = 39.4784$$

$$1.86^2 = 3.4596$$

$$\begin{array}{r} 39.478 \\ 3.46 \\ \hline 236868 \\ 157912 \\ 118434 \\ \hline 136.59388 \end{array}$$

$$\begin{array}{r} 73.2 \\ \hline 136.6 \overline{) 10000.000} \\ \underline{9562} \\ 4380 \\ \underline{4098} \\ 2820 \end{array}$$

$$C = \frac{1}{4 \times 10^6 \times (2 \times 10^6)^2 \times 10^{-43}}$$

$$= \frac{1}{16 \times 10^{12} \times 10^{-3}}$$

$$C = 60 \times 10^{-12}$$

$$1.88^2 = 3.5344$$

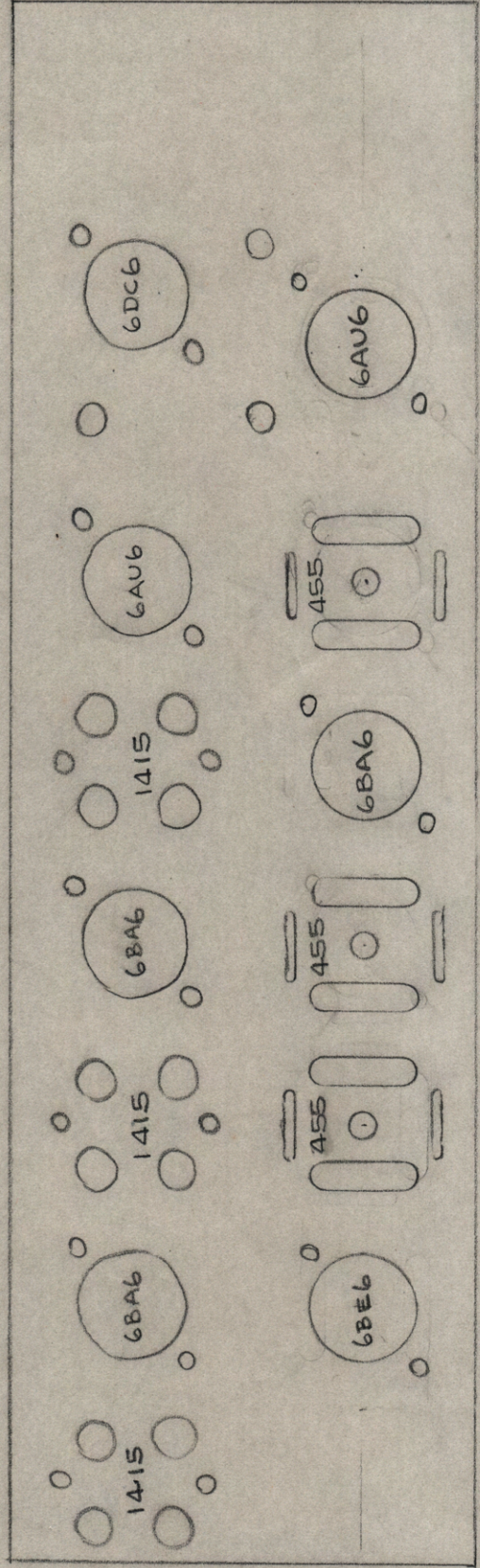
$$\begin{array}{r} 39.478 \\ 3.53 \\ \hline 118434 \\ 197390 \\ 118434 \\ \hline 139.35734 \end{array}$$

$$\begin{array}{r} 71.8 \\ \hline 139.4 \overline{) 10000.000} \\ \underline{9758} \\ 2420 \\ \underline{1394} \\ 10260 \end{array}$$

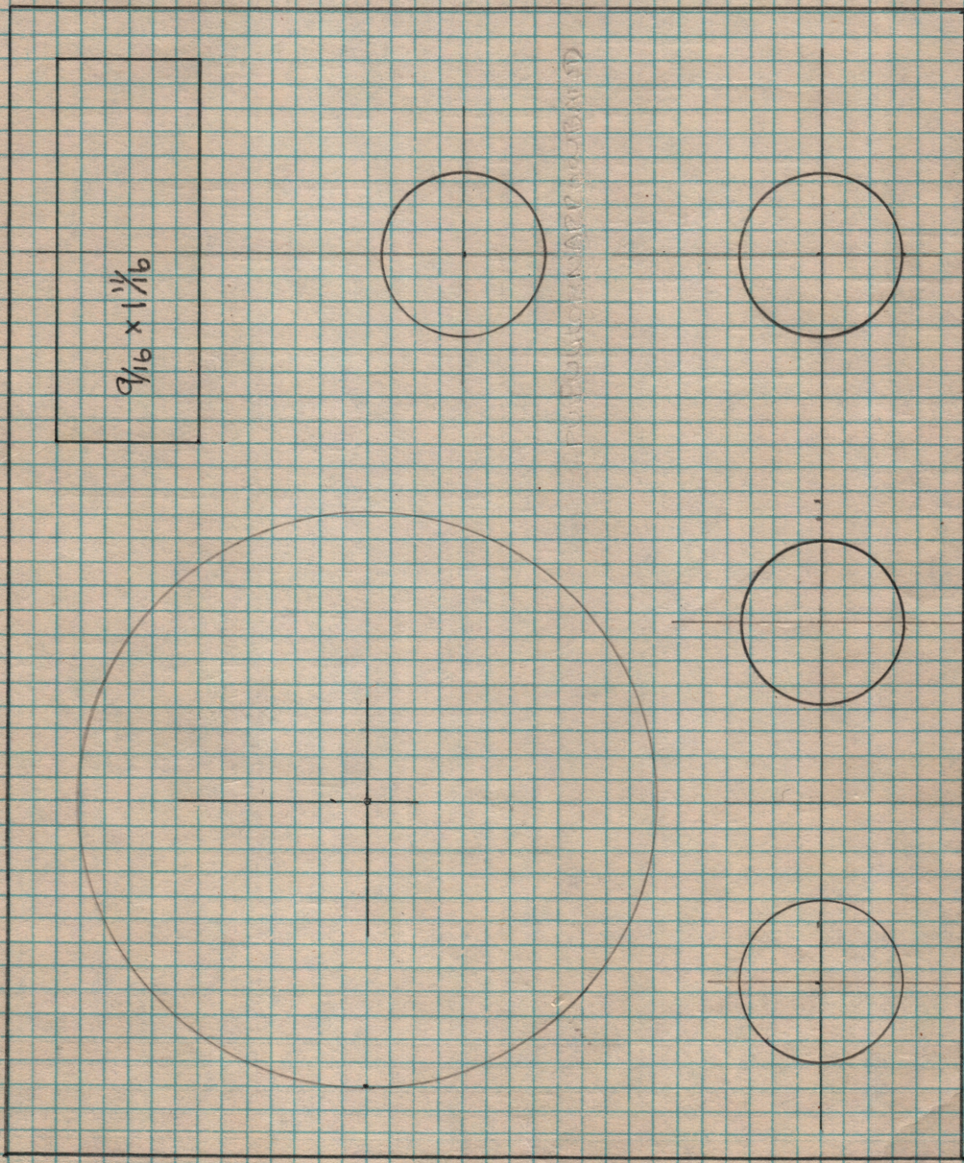
$$\Delta C = \frac{73.2 - 71.8}{1.4} \mu\text{mf}$$

10 METER INTERCOM RECEIVER

R.F./I.F. CHASSIS - BOTTOM VIEW

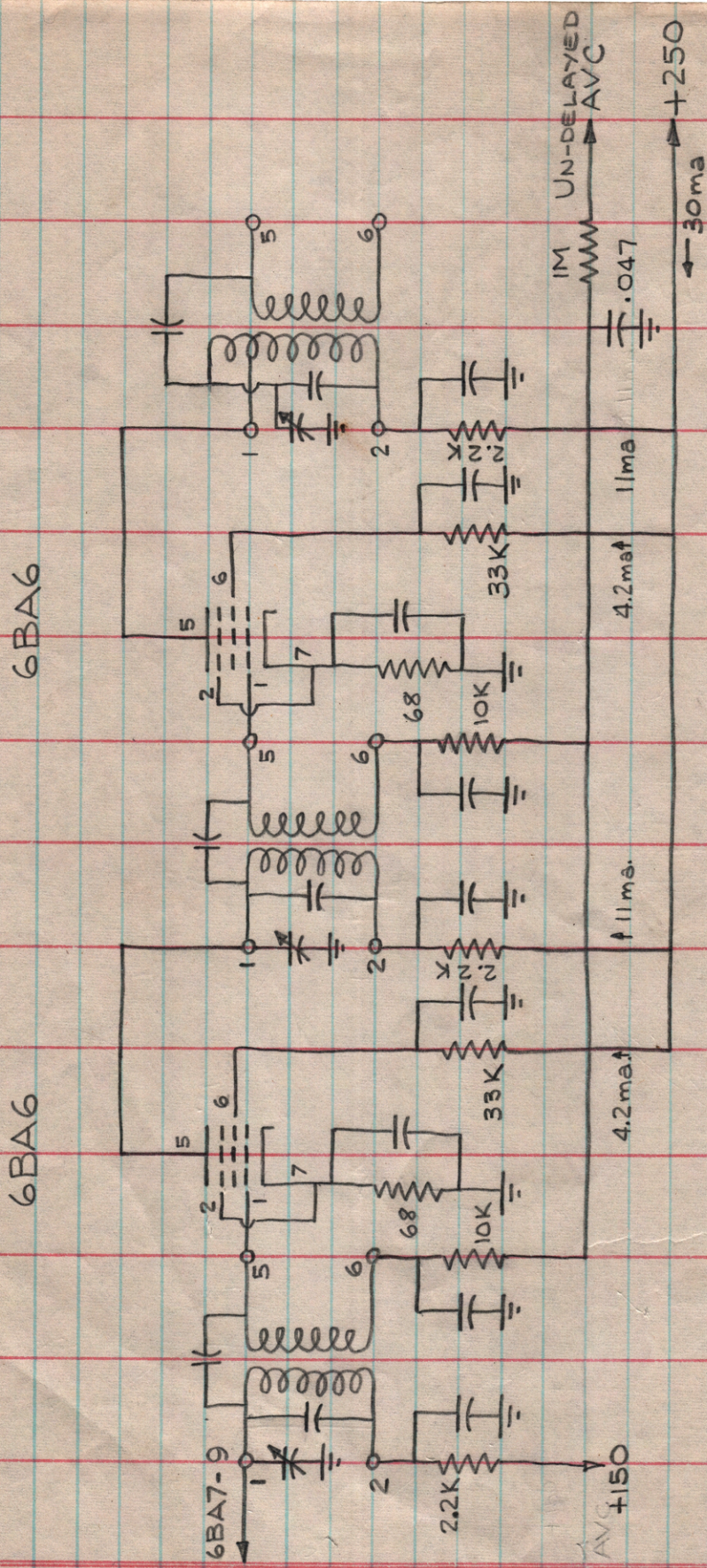


INTERCOM RECEIVER



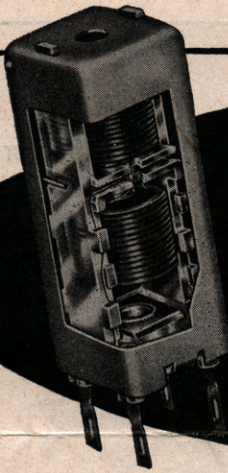
PULL OUT-WIDE - IN SLOT
PUSH IN - NARROW - OUT SLOT

10M INTERCOM RECEIVER IF AMPLIFIER



UNMARKED CAPACITORS - .0047 μ f Disc CERAMIC

Miller



THE FAMOUS K-TRAN*

THE FINEST MINIATURE I.F. TRANSFORMER
EVER MANUFACTURED!

ONLY 2 1/8" HIGH BY 1/4" SQUARE

The Miller K-Tran I.F. Transformers are available for the following frequencies: 262 kc, 455 kc, 1500 kc, 4.5 Mc, 10.7 Mc, 21.25 Mc, and 44 Mc

The 4.5 MC transformers are for use in television receivers having an intercarrier sound channel. 10.7 MC transformers find their main application in FM receivers and tuners.

All transformers are shell core permeability tuned, thus providing a magnetic shielding of the windings and reducing the influence of the aluminum can. Stable silver mica fixed capacitors are enclosed in the low-loss terminal base.

A small non-metallic screwdriver should be used for adjusting the transformers to resonance. Under no circumstances should the adjustment exceed the free travel of the cup cores.

A method of mounting K-Tran Transformers is shown on the reverse page using a spring clip. An alternate method consists of utilizing the adapter plate (furnished with the transformer) and making use of a standard tube socket hole in the chassis.

Data on gain and bandwidth given below is applicable to tube types indicated. The application of I.F. transformers, however, is by no means limited to these tube types. On types 12-H and 12-C (262 KC and 455 KC) reversal of primary terminals (#4 to plate and #3 to B+) will result in somewhat less gain and bandwidth. Similar results on some types of transformers (except 12-H6 and 12-C6) will be obtained when interchanging primary and secondary. Transformers operating at 4.5 MC and 10.7 MC should always be connected as shown in diagrams on the reverse page.

CAT. NO.						LIST PRICE	
12-H1	262 KC	Input Transformer	Gain (with 6BE6, 240 volts plate):	85.	2 x Bandwidth:	9 KC.	\$ 2.60
12-H2	262 KC	Output Transformer	Gain (with 6BA6, 240 volts plate):	192.	2 x Bandwidth:	10 KC.	2.60
12-H6	262 KC	Output Transformers	with two 125 mmf diode filter capacitors				2.75
			Gain and bandwidth same as 12-H2				
12-C1	455 KC	Input Transformer	Gain (with 6BE6, 240 volts plate):	72.	2 x Bandwidth:	16 KC.	2.30
12-C2	455 KC	Output Transformer	Gain (with 6BA6, 240 volts plate):	181.	2 x Bandwidth:	21 KC.	2.30
12-C6	455 KC	Output Transformer	with two 125 mmf diode filter capacitors				2.45
			Gain and bandwidth same as 12-C2				
12-C7	455 KC	Input Transformer for Battery Radios	Gain (with 1R5, 90 volts on plate):	24.	2 x Bandwidth:	19 KC.	2.30
12-C8	455 KC	Output Transformer for Battery Radios	Gain (with 1T4, 90 volts plate):	80.	2 x Bandwidth:	21 KC.	2.30
12-C9	455 KC	Input Transformer for AC-DC Radios	Gain (with 12BE6, 100 volts plate):	65.	2 x Bandwidth:	16 KC.	2.30
12-C10	455 KC	Output Transformer for AC-DC Radios	Gain (with 12BA6, 100 volts plate):	186.	2 x Bandwidth:	21 KC.	2.30
13-W1	1500 KC	Input and Interstage Transformer	Gain (with 6BJ6, 100 volts plate):	53.	2 x Bandwidth:	51 KC.	2.50
13-W2	1500 KC	Output Transformer	Gain (with 6BE6, 100 volts plate):	26.	2 x Bandwidth:	62 KC.	2.50
6203	4.5 MC	Input or Interstage Transformer	Gain (with 6AU6, 125 volts plate):	32.	2 x Bandwidth:	150 KC.	2.85
6204	4.5 MC	Discriminator Trans.	Peak separation: 140 KC		Linearity:	70 KC.	3.40
6205	4.5 MC	Ratio Detector Trans.	Peak separation: 180 KC		Linearity:	100 KC.	3.40
1463	10.7 MC	Input or Interstage Transformer	Gain (with 6BA6, 240 volts plate):	41.	2 x Bandwidth:	260 KC.	2.85
1464	10.7 MC	Discriminator Trans.	Peak separation: 385 KC		Linearity:	240 KC.	3.40
1464-WB	10.7 MC	Discriminator	900 KC Peak to Peak				3.40
1465	10.7 MC	Ratio Detector	Peak separation: 320 KC		Linearity:	170 KC.	3.40
1465-WB	10.7 MC	Ratio Detector	800 KC Peak to Peak				3.40
Items #1464-WB and #1465-WB feature wide peak to peak bandwidth and are used in High Fidelity equipment where bandwidths up to 2 MC are claimed.							
6230	44 MC	TV Converter I.F. Trans.					2.50
6231	44 MC	TV First I.F. Trans.					2.50
6232	42.5 MC	TV Second I.F. Trans. with trap	41.25 MC				2.10
6233	45.5 MC	TV Third I.F. Trans. with trap	47.25 MC				2.50
6234	44 MC	TV Fourth I.F. Trans.					1.85
6261	21.25 MC	Discriminator Trans.	Peak separation: 440 KC		Linearity:	300 KC.	3.40
6262	21.25 MC	Ratio Detector Trans.	Peak separation: 400 KC		Linearity:	200 KC.	3.40

*Manufactured under K-TRAN patents of and by Automatic Manufacturing Corp.

(K-TRAN is a registered trade-mark.) 12—HI FED. 50M 9-58

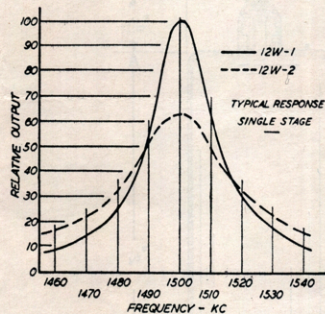
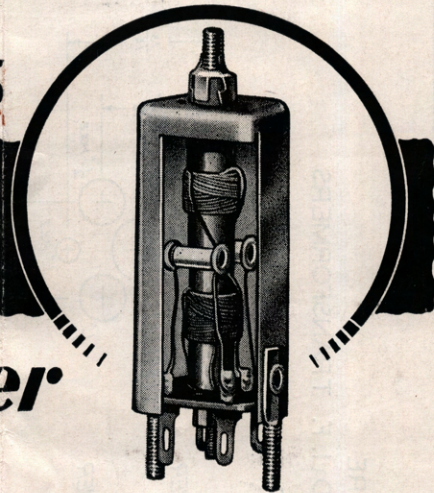
(Available Through Your Local Distributor)

J. W. MILLER COMPANY

5917 South Main Street

Los Angeles 3, California

Miniature 1500 KC I.F. Transformer



PERMEABILITY-TUNED

These new miniature i.f. transformers combine small size with relatively high gain, good selectivity and excellent stability. Only highest quality parts and workmanship have been used in their construction. Useful for double-conversion communication receivers or converters. Convenient also for experimental use or other applications

requiring a minimum-size transformer for operation in the 1500-kc range. Tuning cores adjustable from top and bottom of the aluminum shield. All connections made to solder lugs projecting from bottom. Convenient #4-40 spade bolt mounting.

Dimensions: $\frac{3}{4}$ " by $\frac{3}{4}$ " by 2" high.

Cat. No.	Description	Range	List Price
12W-1	Input or interstage	1400-1600 kc	\$2.60
12W-2	Halfwave output	1400-1600 kc	\$2.60

Form 12W-1—FED.—2M—8-57

(Available through your local distributor)

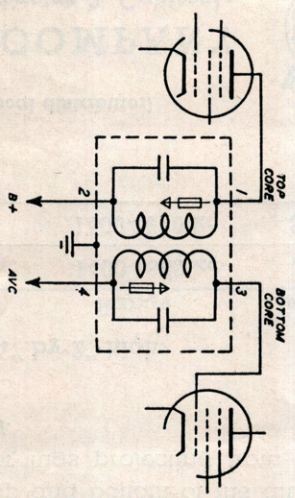


J. W. MILLER COMPANY
5917 S. Main Street, Los Angeles 3, California

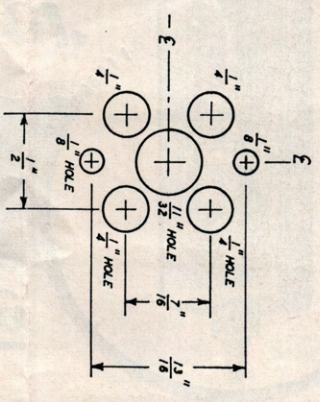


DWG. NO. 12W1-2

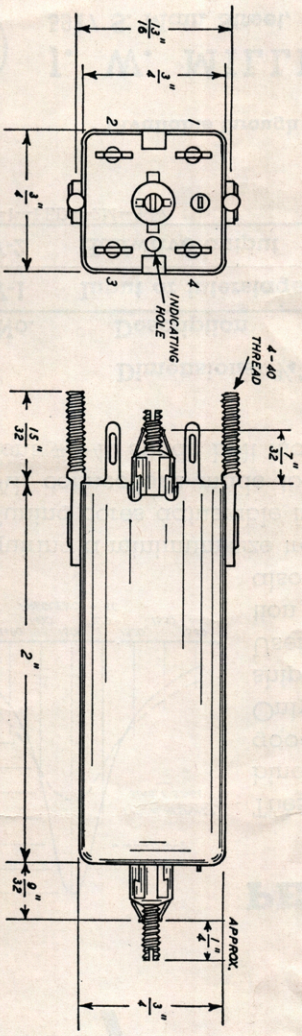
MINIATURE
PERMEABILITY - TUNED I. F. TRANSFORMERS



CAT. NO. 12W-1
1500 KC INPUT I.F. TRANSFORMER
CAT. NO. 12W-2
1500 KC OUTPUT I.F. TRANSFORMER



CHASSIS HOLE LAYOUT
USE AS TEMPLATE



ITEM	DESCRIPTION	PART NO.
SERIES NO. 12		
MINIATURE 1500 KC I.F. TRANSFORMERS		
ISSUE	USED ON:	DESCR BY: WHITE
	DWG. BY: LOVEJOY	DATE: 4/29/50
	APP. BY: WHITE	DATE: 4/29/50
J. W. MILLER CO.		
8817 SO. MAIN		
LOS ANGELES, CALIF.		
SCALE: FULL	DWG. NO. 12W1-2	