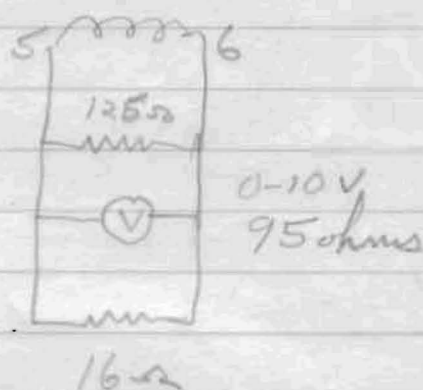
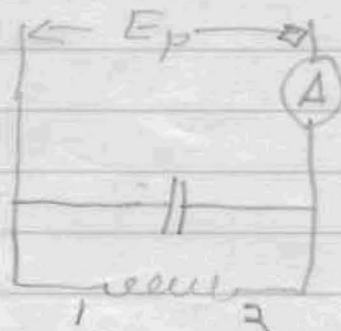


3-16-50

Test of filament transformer "T-2"
from G.R. #715A D.C. Amplifier

E_p	I_p	E_s
90v	.227a	5.75V
95v	.246	5.97
100	.268	6.15
105	.297	6.27
107.5	.310	6.29
110	.333	6.30
112.5	.350	6.31
115	.372	6.30
117.5	.401	6.28
120	.422	6.23
125	.488	6.16



12.35Ω effective load.

With 112.5v on primary.

The minimum primary current is achieved with 7.5 μfd across primary.

Primary current is 0.125amps

Use 3 μfd of capacity.

A tube with 6.3v heater at 0.4amps will operate properly if about 55ohms are shunted across it.

6.4

6.3

6.2

6.1
output Volts

6.0

5.9

5.8

5.7

5.6

90

95

100

105

110

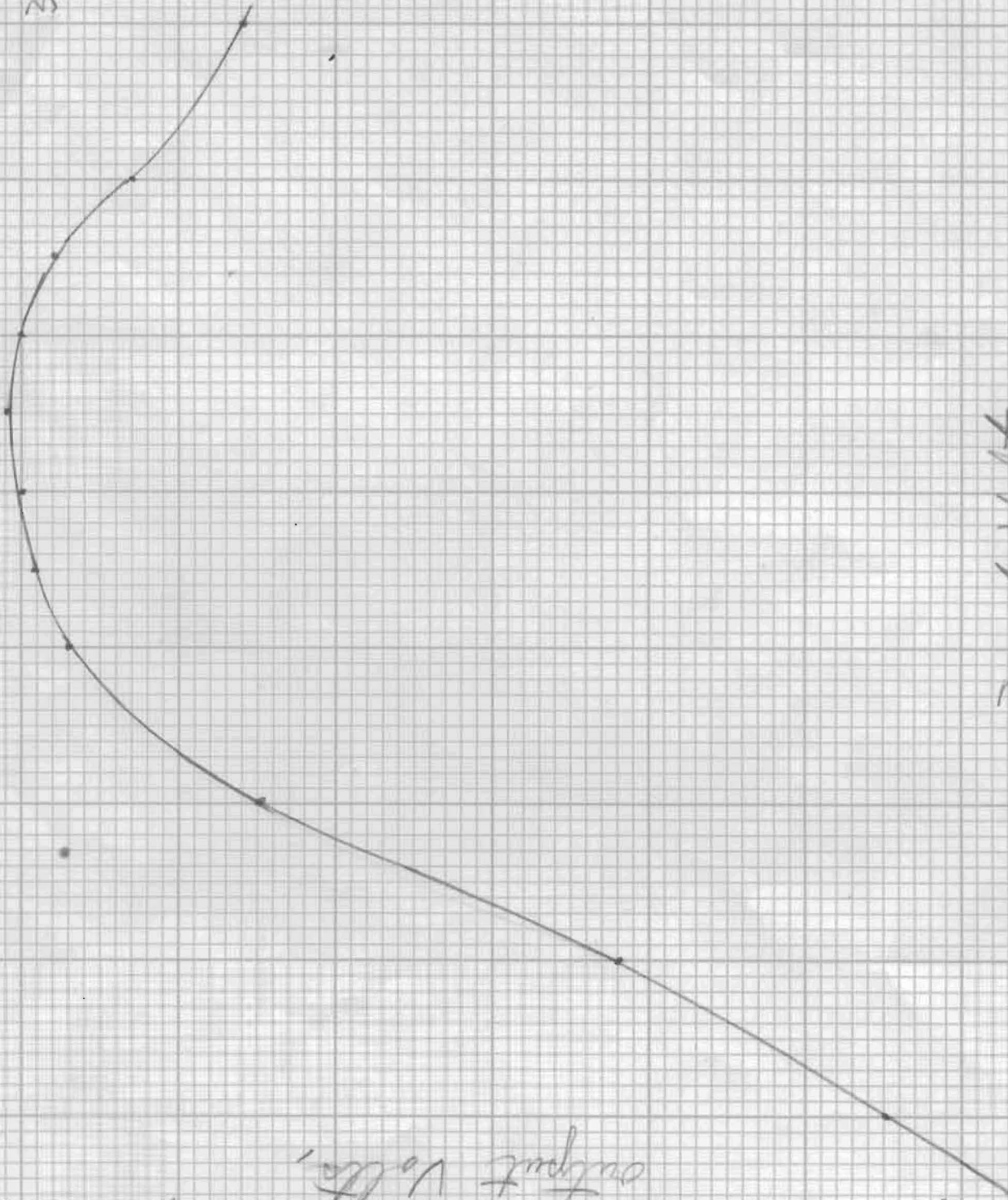
115

120

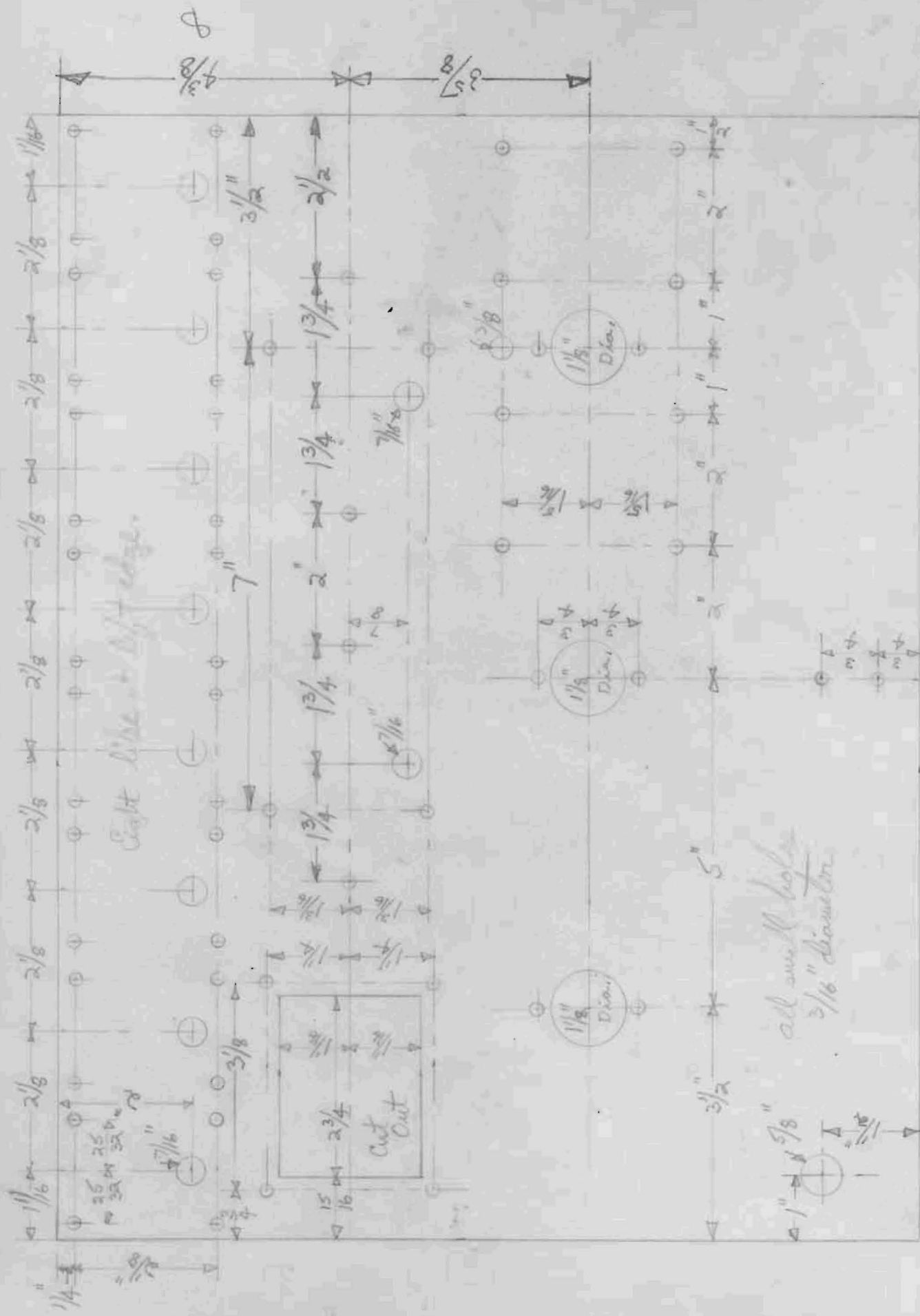
125

Input Volts

3-16-50



Back



Eight lines to left edge.

all small holes
3/16" diameter

Front
Top View of Chassis

Grote Paper
12-7-50

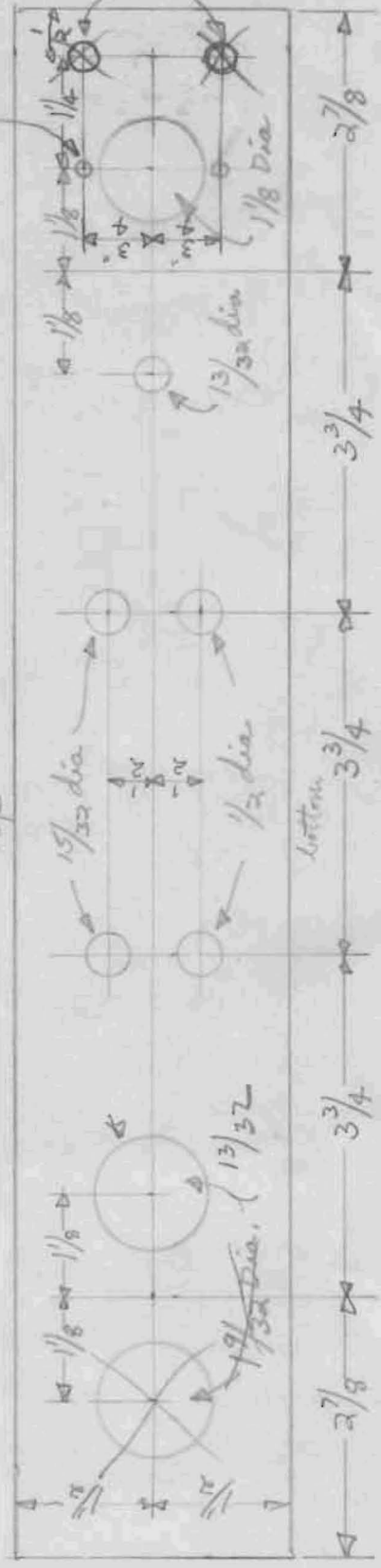
Top



Bottom

Back View

Top



Bottom

Front View

Bracket



Make 20 from brass
 $\frac{1}{16}$ " thick

Grote Rubin

12-8-50

Spacers

Make 38 from brass tubing



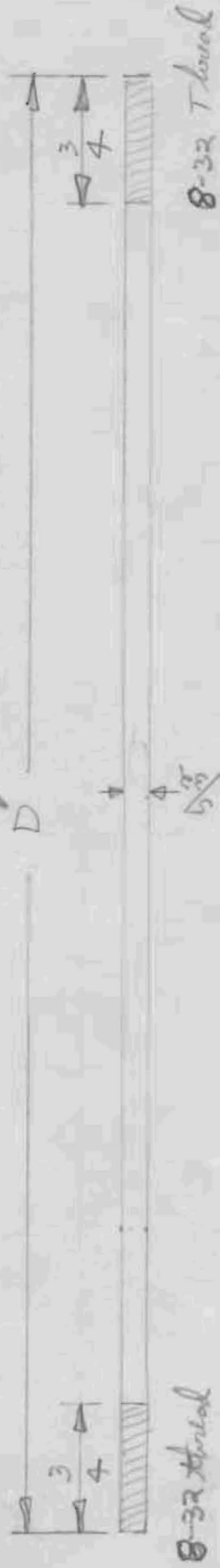
Max. O.D. $\frac{3}{16}$ $\frac{1}{2}$
 Min. I.D. $\frac{5}{32}$



JOB # 14-1-19
 PROJ # 1403

Tie Rods

Make from $10\frac{1}{4}$ " long
 Make two 8" long

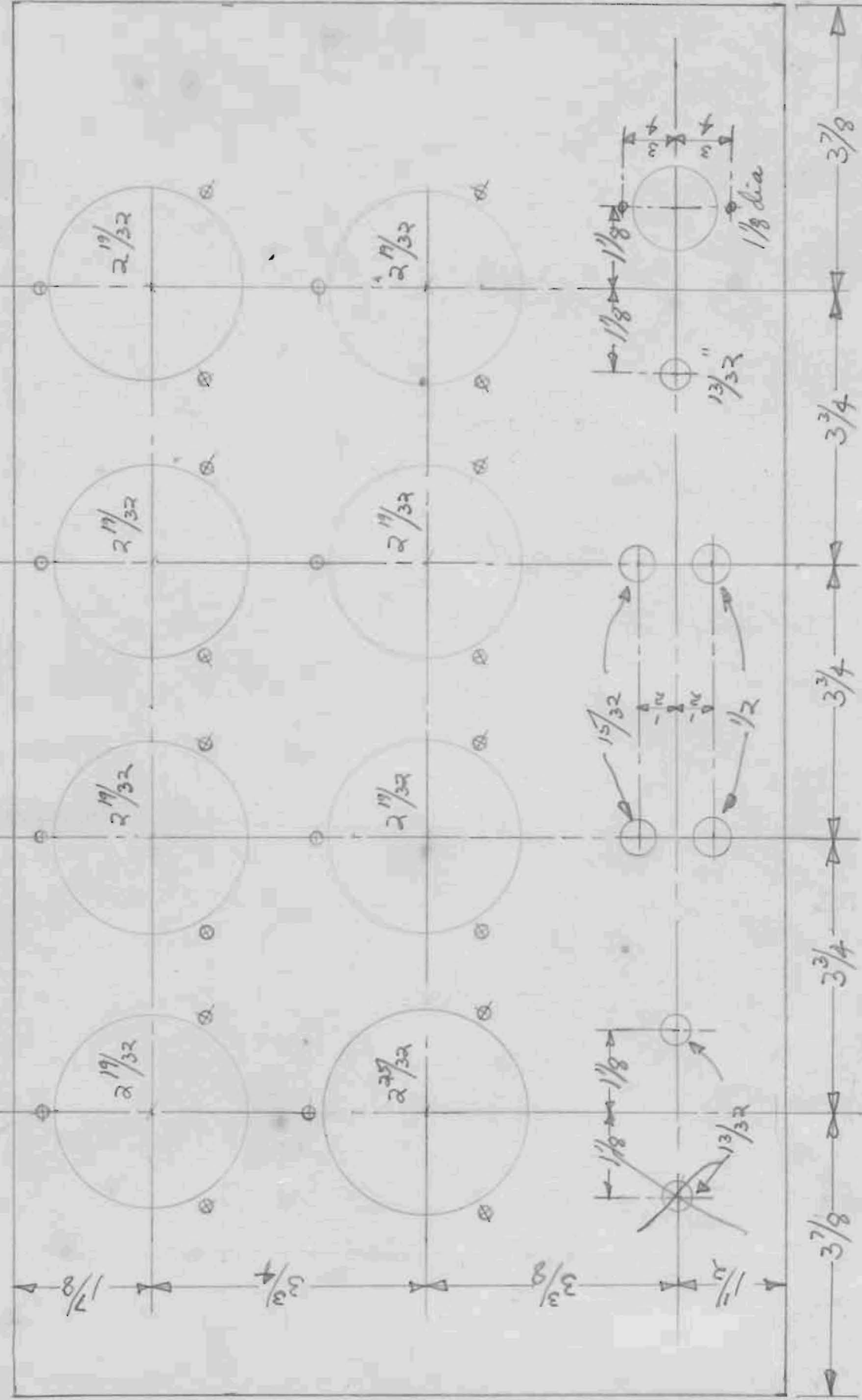


Make from brass rod

Grote Riber
 12-8-50

Panel

1 hole $2\frac{25}{32}$ " dia. with three $\frac{3}{16}$ " dia. holes on $1\frac{17}{32}$ " radius speed 120°
7 holes $2\frac{19}{32}$ " dia. with three $\frac{3}{16}$ " dia holes on $1\frac{17}{32}$ " radius speed 120°



10-31-52

11-21-52

Transformer T₂

Current transformer to change regulated output of heater source from 18.9V @ 1/2 amp to 6.3V @ 1.5 amps.

$$T_{\text{rms}} = N = \frac{10^8 E}{4.44 \times f \times B \times A}$$

$$A = 0.9 \text{ sq"} , E = 6.3 \text{ V} , f = 60 \text{ Hz} , B = 25,000$$

$$N = 105 \text{ turns}$$

Actual about 110 turns #18 on inside for 6.3V winding.

Over this about 330 turns with tap at 220 turns of #20 wire for 25.2 + 18.9 volt primaries. The tap was found to be satisfactory.

Transformer actually handles 6.3V @ 1 amp. 6.3 watts of power. The remaining 3.2 watts of power flow directly to heaters from source.

6.3V winding has current density of 1629 cm/amp.

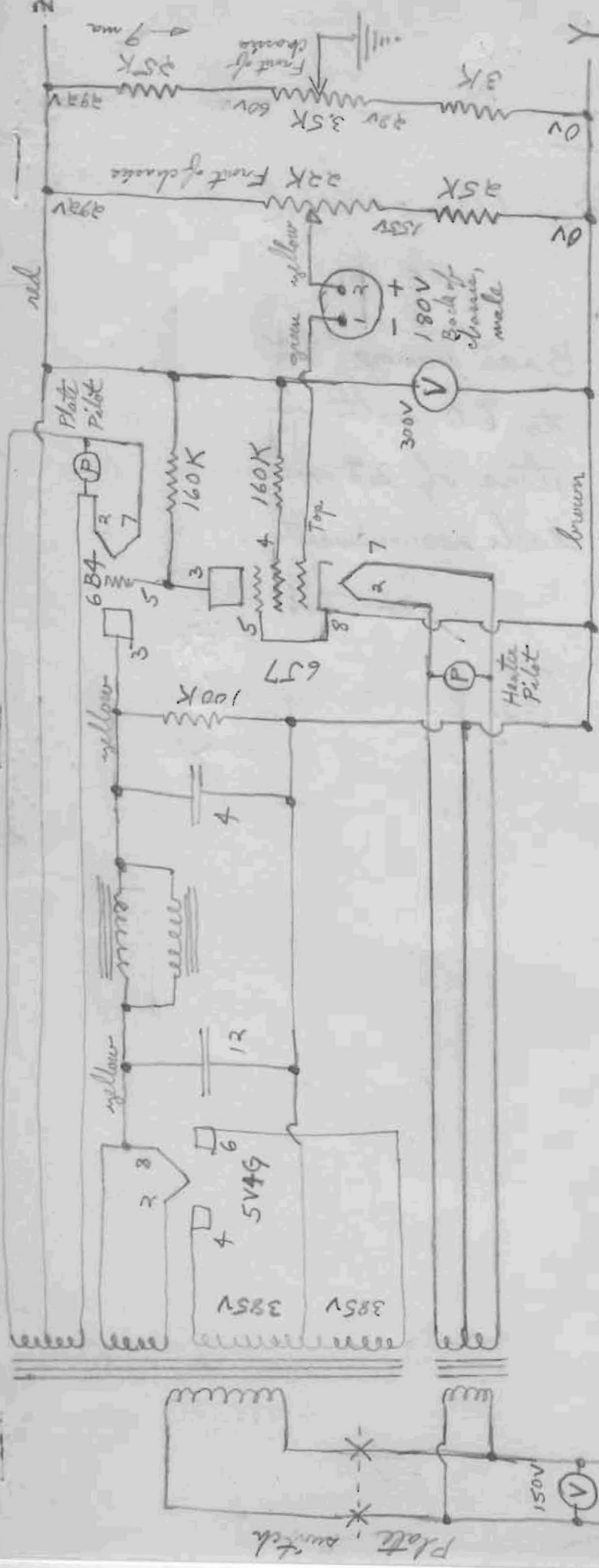
18.9V " " " " " 2094 " "

Device has low losses due to low flux density and low current density. Runs stone cold.

November 23, 1952

Power Supply

This is same one which was originally built for 1420 mc receiver. It has been remodelled for use at Kolo Kolo. The original meters were all made by Westinghouse, 7-10ma + 1-500V. These are stored in box with other meters. Panel for these is black steel with eight holes.



To Heater transformer
 see next sheet
 To Power factor condensers, rear of chassis, female
 Heater switch
 115V output, Back of chassis, female
 115V input, Front of chassis, male

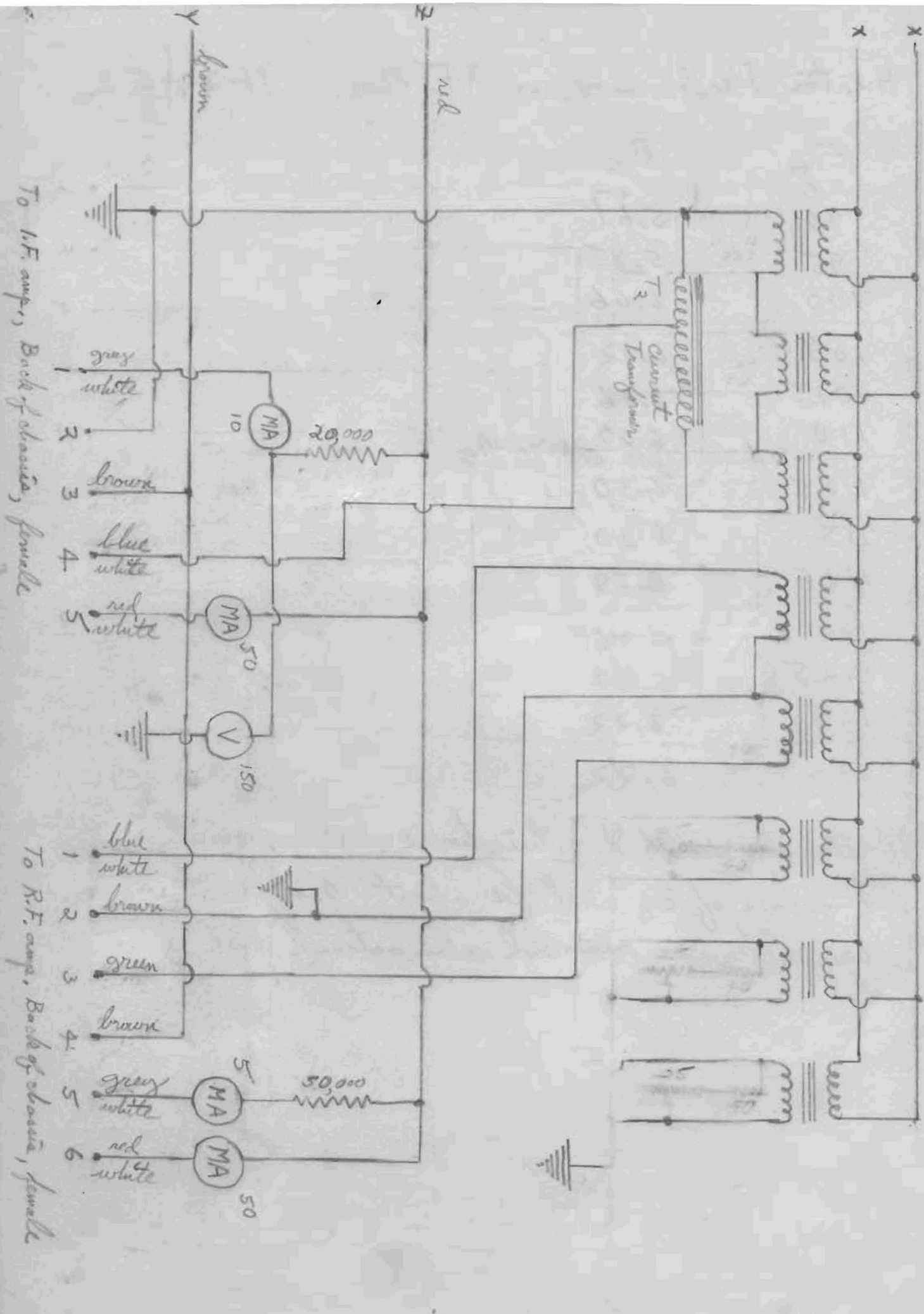
Plate Regulation

Control at Center scale, 10ma load

Line Volts	Output Volts
90	222
100	222
110	223
120	224
130	224

Bias range 28
to 60 volts in
steps of 3.2 volts
each approximately.

Control range at
115v line is 176
to 322 volts in
ten steps



To 1A. amp., Back of chassis, female

To R.F. amp., Back of chassis, female

Heater Performance on 1. F. Amp, 11-22-52

E_p	E_s
90	5.61
95	5.85
100	6.06
105	6.22
107.5	6.26
110	6.28
112.5	6.30
115	6.30
117.5	6.28
120	6.26
122.5	6.24
125	6.22
130	6.22

Meter was small Westinghouse, 100 Ω resistance
 all values of E_s will be about 0.10 volt higher
 when meter is removed as in actual use,