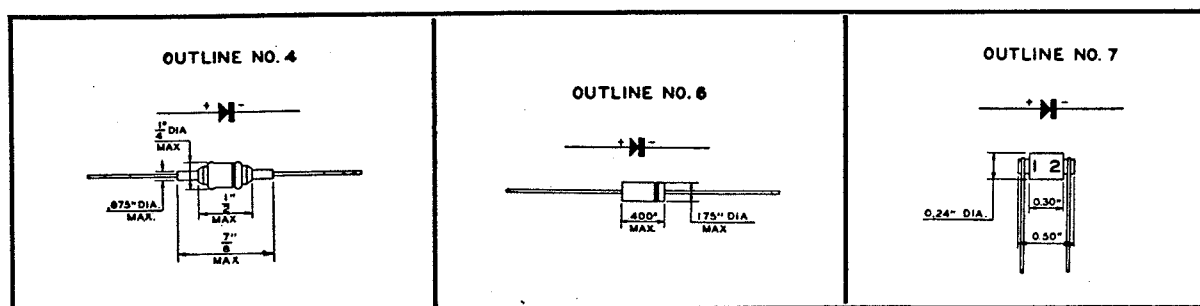


111

Note 1: The case of this diode has one conical-shaped end, which is the anode terminal.



T-X – Physical Characteristics of Types Not Conforming

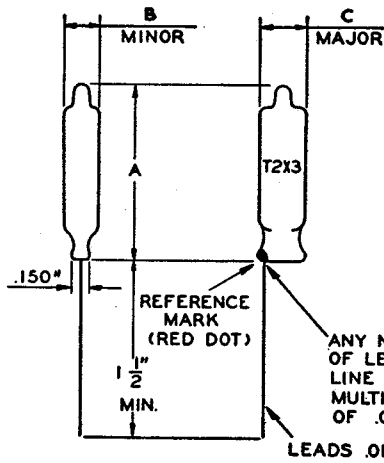
Tube Type	Max. Dimensions in Inches			Type Socket Used
	Diameter	Over-all Length	Seated Height	
0Y4-G	$1\frac{1}{16}$	$2\frac{5}{8}$	$2\frac{1}{16}$	Octal
0Z4-G	$1\frac{1}{16}$	$2\frac{5}{8}$	$2\frac{1}{16}$	Octal
1AB6	$\frac{3}{4}$	2.205	1.955	7-Pin Min
1AE5	0.400×0.300	—	1.5	Flexible Leads (Inline Subm)
1AH5	$\frac{3}{4}$	2.205	1.955	7-Pin Min
1T2	$1\frac{7}{32}$	—	$1\frac{29}{32}$	Flexible Leads
1Y2	$1\frac{9}{16}$	$4\frac{19}{32}$	$3\frac{31}{32}$	4-Pin
1Z2	$\frac{3}{4}$	2.70	2.45	7-Pin Min
2C22	$1\frac{5}{16}$	$3\frac{1}{4}$	$2\frac{11}{16}$	Octal
2E31	0.400×0.300	—	$1\frac{9}{16}$	Flexible Leads (Inline Subm)
2E32	0.400×0.300	—	$1\frac{9}{16}$	Inline Subm
2E35	0.390×0.290	—	$1\frac{9}{16}$	Flexible Leads (Inline Subm)
2E36	0.390×0.290	—	$1\frac{9}{16}$	Inline Subm
2E41	0.390×0.290	—	$1\frac{9}{16}$	Flexible Leads (Inline Subm)
2E42	0.390×0.290	—	$1\frac{9}{16}$	Inline Subm
2G21	0.400×0.300	—	$1\frac{9}{16}$	Flexible Leads (Inline Subm)
2G22	0.400×0.300	—	$1\frac{9}{16}$	Inline Subm
3C4	$\frac{3}{4}$	2.205	1.955	7-Pin Min
6AE8	$\frac{7}{8}$	$2\frac{1}{4}$	—	9-Pin Min
6AR6	$1\frac{7}{16}$	$3\frac{15}{32}$	$2\frac{29}{32}$	Octal
6AR7-GT	$1\frac{5}{16}$	$3\frac{5}{8}$	$3\frac{1}{16}$	Octal
6AZ6	0.400	—	1.25	Flexible Leads (8-Pin Subm)
6BD5-GT	$1\frac{9}{32}$	$3\frac{7}{8}$	$3\frac{5}{16}$	Octal
6BJ5	$\frac{3}{4}$	$2\frac{3}{4}$	—	7-Pin Min
6CJ6	$\frac{7}{8}$	$3\frac{3}{16}$	$2\frac{15}{16}$	9-Pin Min
6X2	0.571	—	2.087	Flexible Leads
21A6	$\frac{7}{8}$	$3\frac{3}{16}$	$2\frac{15}{16}$	9-Pin Min
V-99	$1\frac{1}{16}$	$3\frac{1}{2}$	—	Special

DRAWINGS

113

to Standard or Commonly Used Outline Drawings

Tube Type	Max. Dimensions in Inches			Type Socket Used
	Diameter	Over-all Length	Seated Height	
1654	$\frac{3}{4}$	$2\frac{7}{16}$	$2\frac{3}{16}$	7-Pin Min
5633	0.400	—	1.660	Flexible Leads
5634	0.400	—	1.660	Flexible Leads
5642	0.400	—	2.160	Flexible Leads
5645	0.310	—	1.300	Flexible Leads
5646	0.310	—	1.300	Flexible Leads
5647	0.215	—	1.250	Flexible Leads
5675	(Pencil Type)		2.108	Special
5676	0.400×0.300	—	1.5	Flexible Leads (Inline Subm)
5677	0.400×0.300	—	1.5	Flexible Leads (Inline Subm)
5678	0.400×0.300	—	1.515	Flexible Leads (Inline Subm)
5704	0.315	—	$1\frac{1}{2}$	Flexible Leads (Inline Subm)
5785	0.400×0.300	—	1.5	Flexible Leads (Inline Subm)
5825	$2\frac{1}{16}$	$5\frac{27}{32}$	$5\frac{7}{32}$	4-Pin
5838	$1\frac{5}{16}$	$3\frac{3}{8}$	$2\frac{7}{8}$	Octal
5839	$1\frac{5}{16}$	$3\frac{3}{8}$	$2\frac{7}{8}$	Octal
5851	0.400	—	1.600	Flexible Leads (8-Pin Subm)
5852	$1\frac{5}{16}$	$3\frac{3}{8}$	$2\frac{7}{8}$	Octal
5876	(Pencil Type)		2.108	Special
5881	$1\frac{7}{16}$	$3\frac{15}{32}$	$2\frac{29}{32}$	Octal
5890	$1\frac{1}{2}$	$6\frac{3}{4}$	$6\frac{1}{4}$	Duodecal
5930	1.70	$4\frac{1}{2}$	$3\frac{7}{8}$	4-Pin
5931	1.70	$4\frac{29}{32}$	$4\frac{11}{32}$	Octal
5932	1.70	$3\frac{27}{32}$	$3\frac{9}{32}$	Octal
5995	0.400	—	1.75	Flexible Leads (Inline Subm)
6004	$1\frac{5}{16}$	$4\frac{1}{16}$	—	Octal
6080	$1\frac{23}{32}$	$4\frac{1}{4}$	$3\frac{11}{16}$	Octal
6082	$1\frac{23}{32}$	$4\frac{1}{4}$	$3\frac{11}{16}$	Octal

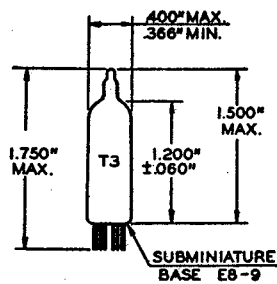


OUTLINE DRAWING NUMBER	DIMENSIONS		
	A MAX.	B MAX.	C MAX.
2-1	1.50"	0.285"	0.385"
2-2	1.25"	0.285"	0.385"
2-3	1.50"	0.285"	0.410"
2-4	1.25"	0.285"	0.410"

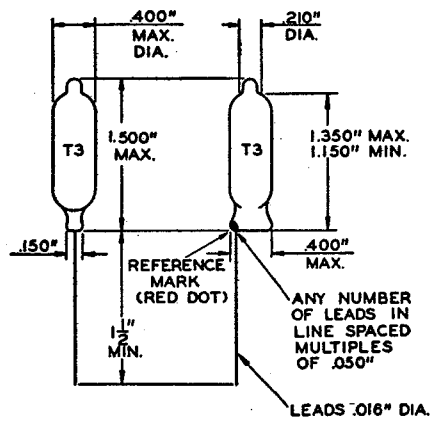
ANY NUMBER
OF LEADS IN
LINE SPACED
MULTIPLES
OF .050"

LEADS .016" DIA.

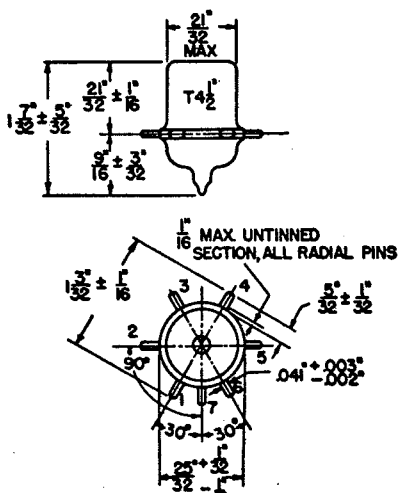
2-1 TO 2-4



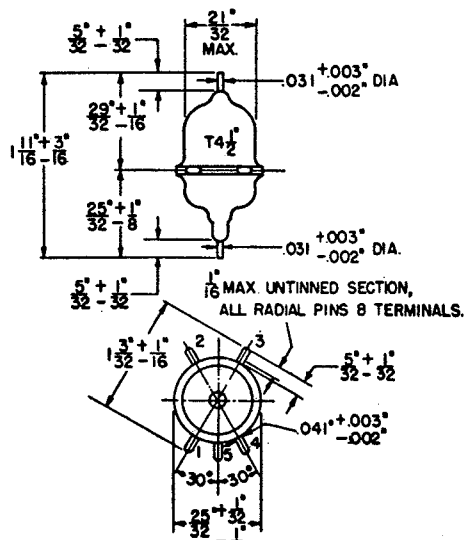
3-5



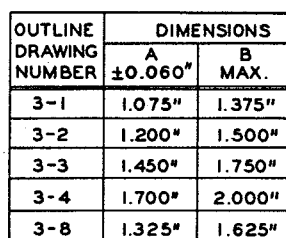
3-6



4-2

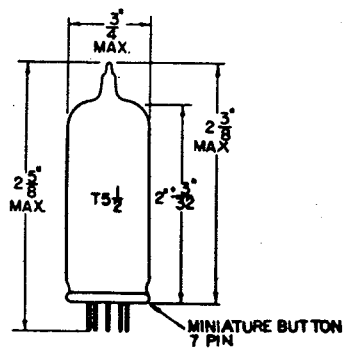


4-3

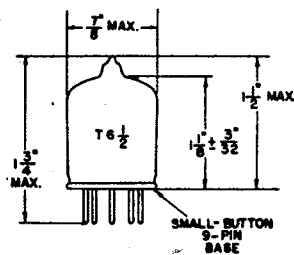


3-1 TO 3-4, 3-8

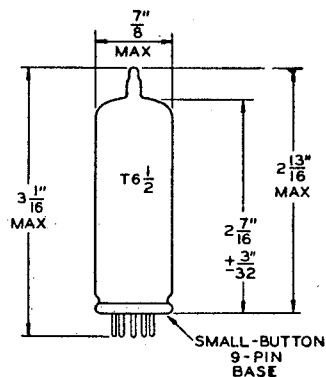




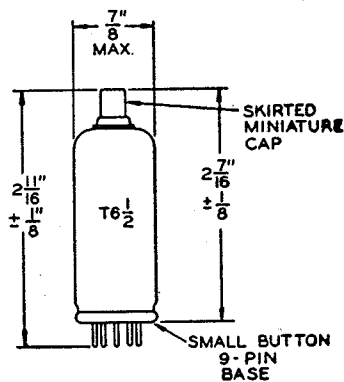
5-3



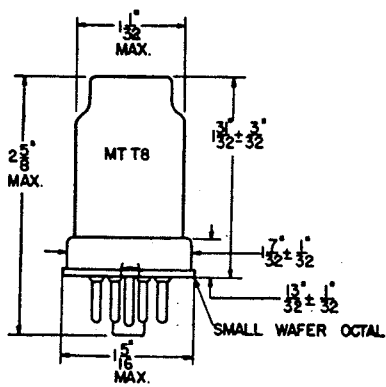
6-1



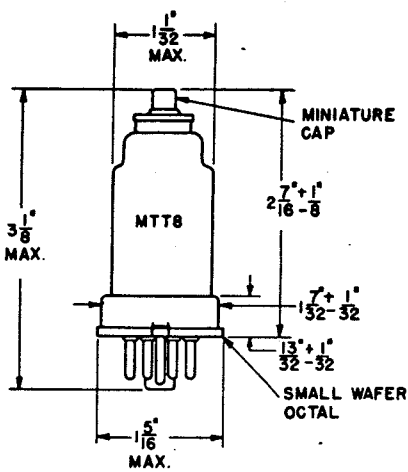
6A-1



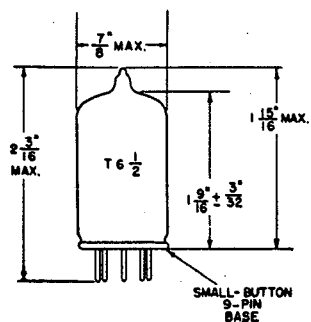
6A-2



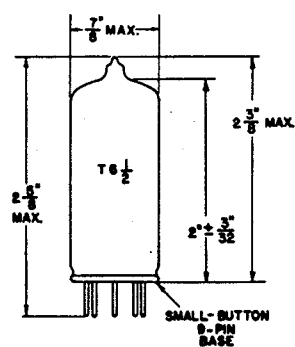
8-3



8-4

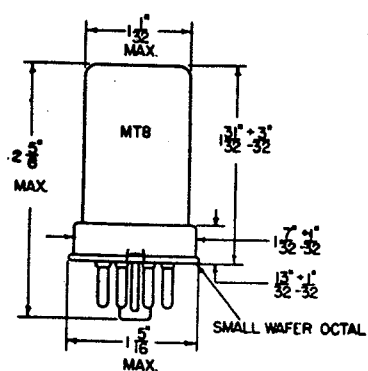


6-2

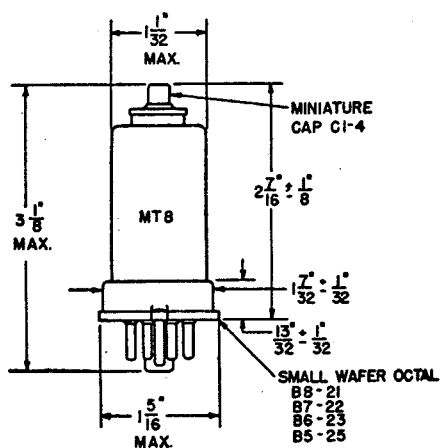


6-3

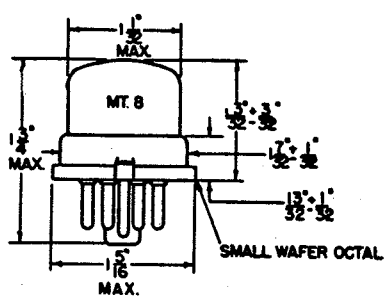
6-3



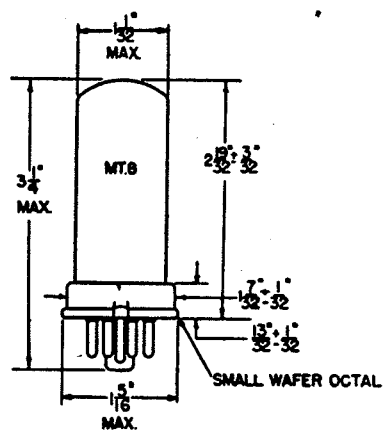
8-1



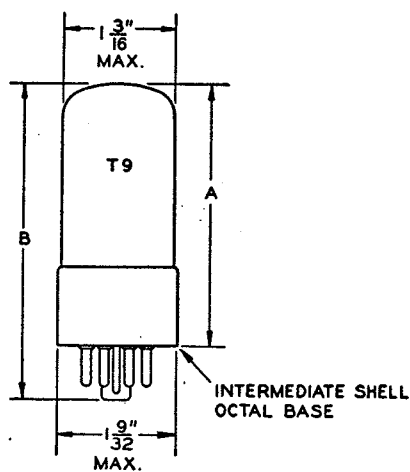
8-2



8-5

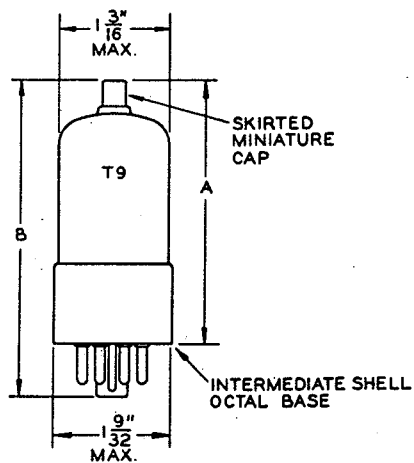


8-6



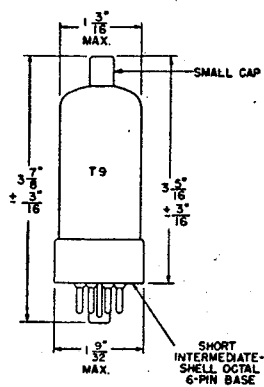
OUTLINE DRAWING NUMBER	DIMENSIONS	
	A MAX.	B MAX.
9-1	1 $\frac{3}{4}$	2 $\frac{5}{16}$
9-3	2 $\frac{5}{16}$	2 $\frac{7}{8}$
9-5	2 $\frac{7}{16}$	3"
9-7	2 $\frac{1}{2}$	3 $\frac{1}{16}$
9-9	2 $\frac{11}{16}$	3 $\frac{1}{4}$
9-11	2 $\frac{3}{4}$	3 $\frac{5}{16}$
9-13	2 $\frac{13}{16}$	3 $\frac{3}{8}$
9-15	2 $\frac{7}{8}$	3 $\frac{7}{16}$
9-33	3 $\frac{1}{4}$	3 $\frac{13}{16}$

9-1 TO 9-15 (ODD), 9-33

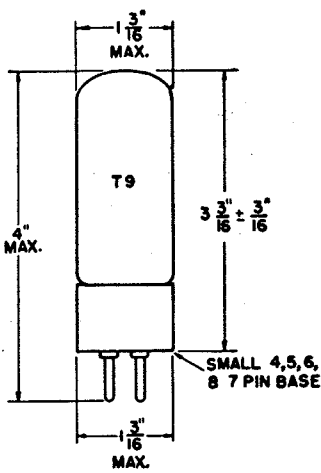


OUTLINE DRAWING NUMBER	DIMENSIONS		
	A		B MAX.
	MIN.	MAX.	
9-17	2 $\frac{5}{16}$	2 $\frac{3}{4}$	3 $\frac{5}{16}$
9-19	2 $\frac{5}{16}$	2 $\frac{7}{8}$	3 $\frac{7}{16}$
9-21	2 $\frac{5}{16}$	2 $\frac{15}{16}$	3 $\frac{1}{2}$
9-23	2 $\frac{5}{16}$	3"	3 $\frac{9}{16}$
9-50	2 $\frac{7}{8}$	3 $\frac{5}{16}$	3 $\frac{7}{8}$

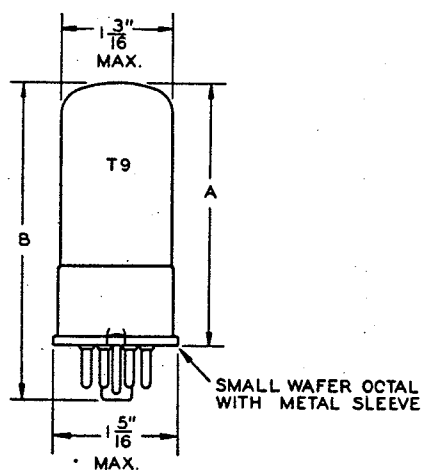
9-17 TO 9-23 (ODD), 9-50



9A-5

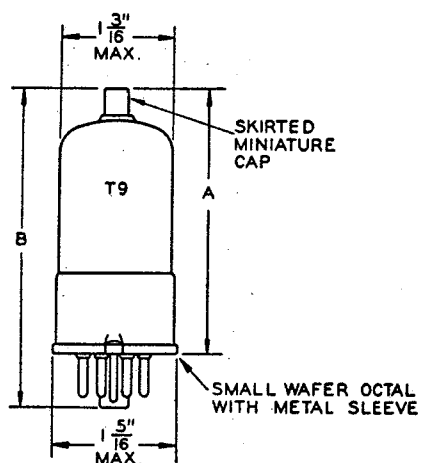


9-25



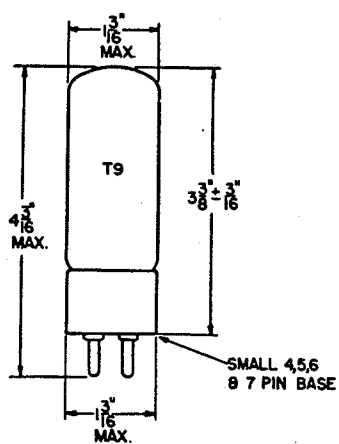
OUTLINE DRAWING NUMBER	DIMENSIONS	
	A MAX.	B MAX.
9-2	$1\frac{3}{4}$	$2\frac{5}{16}$
9-4	$2\frac{5}{16}$	$2\frac{7}{8}$
9-6	$2\frac{7}{16}$	3"
9-8	$2\frac{1}{2}$	$3\frac{1}{16}$
9-10	$2\frac{11}{16}$	$3\frac{1}{4}$
9-12	$2\frac{3}{4}$	$3\frac{5}{16}$
9-14	$2\frac{13}{16}$	$3\frac{3}{8}$
9-16	$2\frac{7}{8}$	$3\frac{7}{16}$

9-2 TO 9-16 (EVEN)

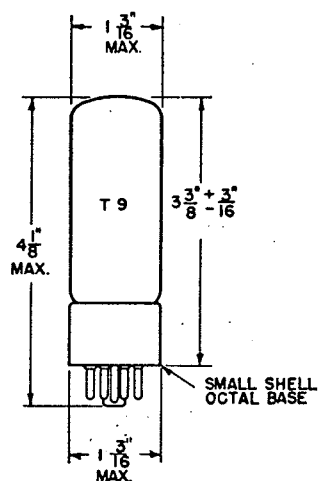


OUTLINE DRAWING NUMBER	DIMENSIONS		
	A		B MAX.
	MIN.	MAX.	
9-18	$2\frac{5}{16}$	$2\frac{3}{4}$	$3\frac{5}{16}$
9-20	$2\frac{5}{16}$	$2\frac{7}{8}$	$3\frac{7}{16}$
9-22	$2\frac{5}{16}$	$2\frac{15}{16}$	$3\frac{1}{2}$
9-24	$2\frac{5}{16}$	3"	$3\frac{9}{16}$

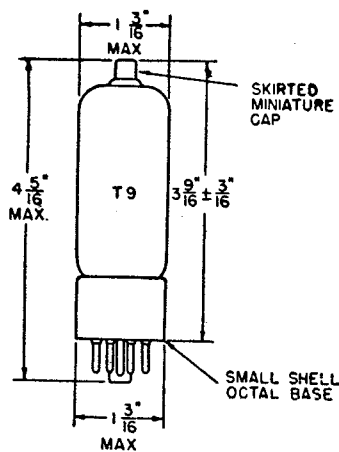
9-18 TO 9-24 (EVEN)



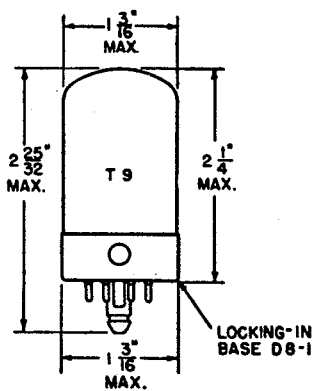
9-26



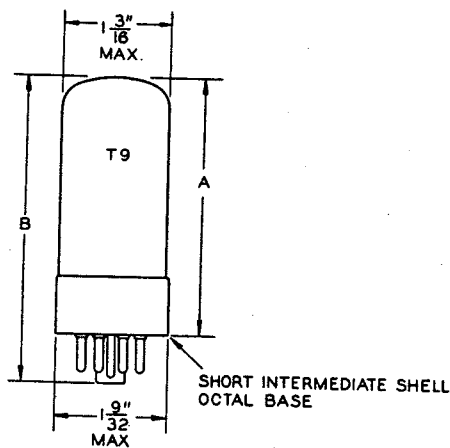
9-27



9-28

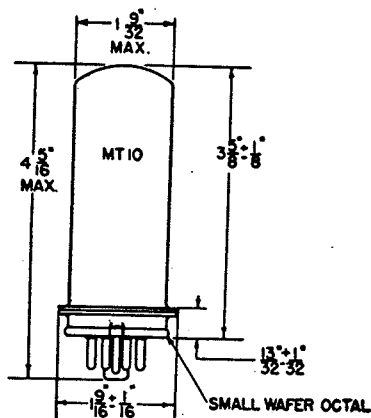


9-30

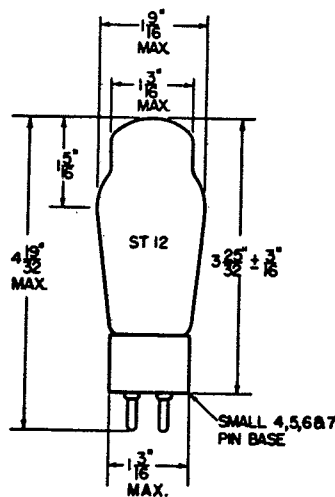


OUTLINE DRAWING NUMBER	DIMENSIONS	
	A MAX.	B MAX.
9-36	$1\frac{3}{4}$	$2\frac{5}{16}$
9-37	$2\frac{5}{16}$	$2\frac{7}{8}$
9-38	$2\frac{7}{16}$	3"
9-39	$2\frac{1}{2}$	$3\frac{1}{16}$
9-40	$2\frac{11}{16}$	$3\frac{1}{4}$
9-41	$2\frac{3}{4}$	$3\frac{5}{16}$
9-42	$2\frac{13}{16}$	$3\frac{3}{8}$
9-43	$2\frac{7}{8}$	$3\frac{7}{16}$
9-44	$3\frac{1}{4}$	$3\frac{13}{16}$

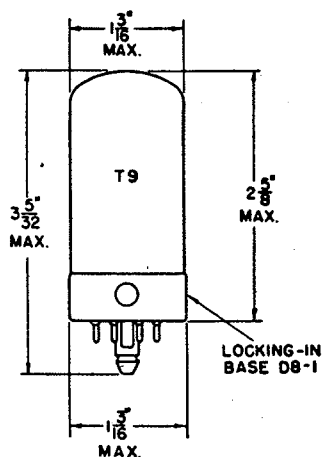
9-36 TO 9-44



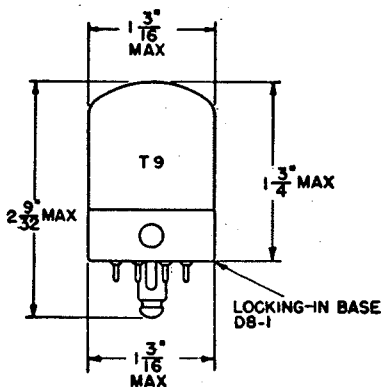
10-1



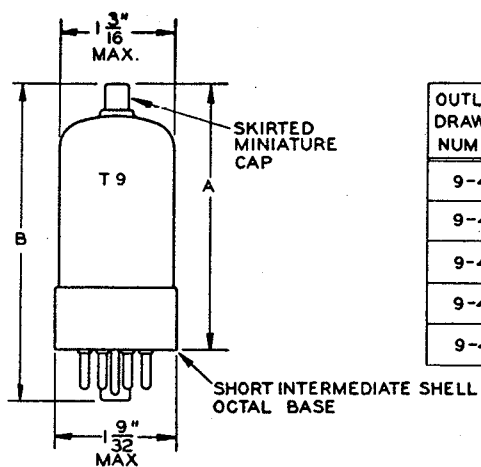
12-1



9-31

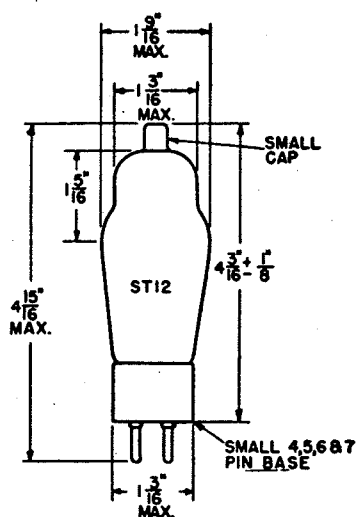


9-32

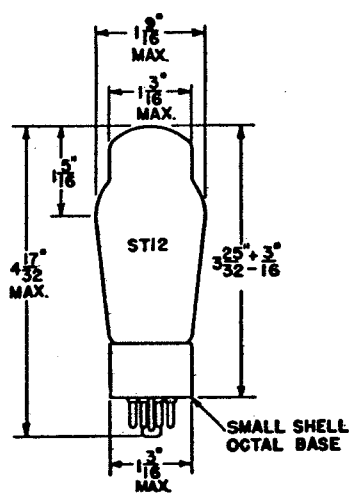


OUTLINE DRAWING NUMBER	DIMENSIONS		
	MIN.	MAX.	MAX.
9-45	2 5/16	2 3/4	3 5/16
9-46	2 5/16	2 7/8	3 7/16
9-47	2 5/16	2 15/16	3 1/2
9-48	2 5/16	3"	3 9/16
9-49	2 7/8	3 5/16	3 7/8

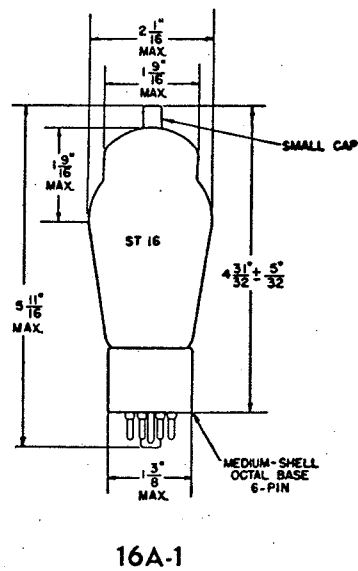
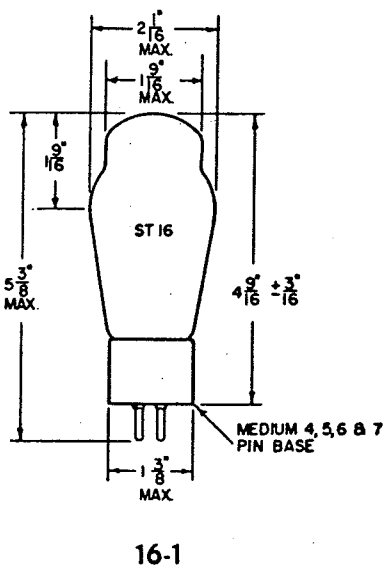
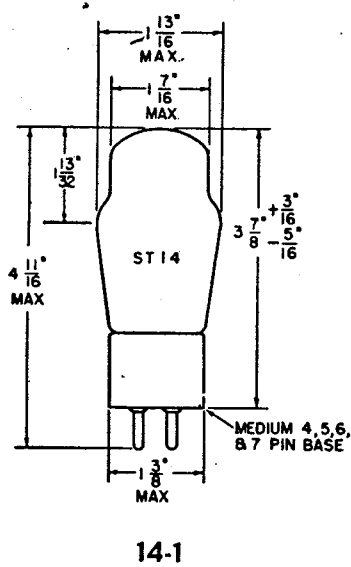
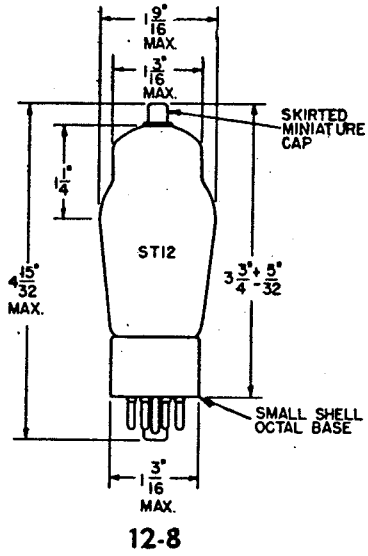
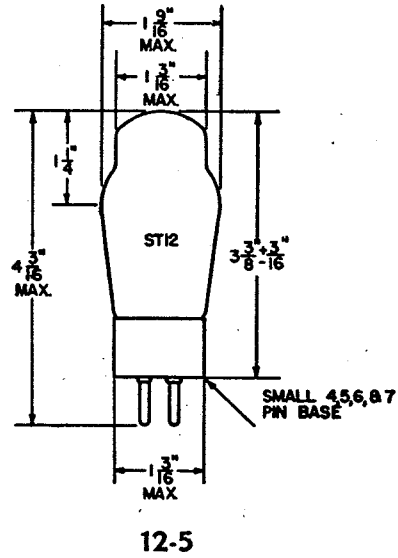
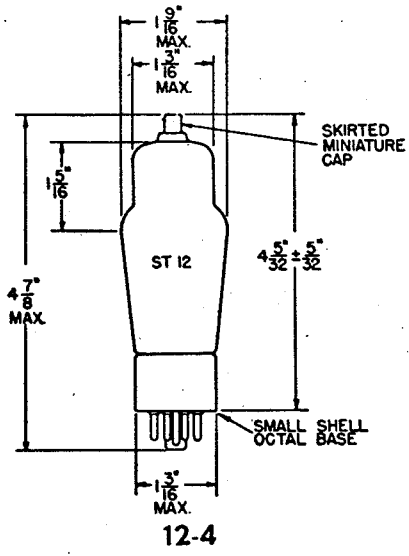
9-45 TO 9-49

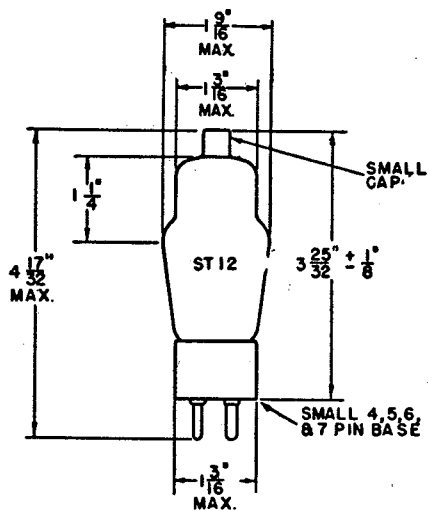


12-2

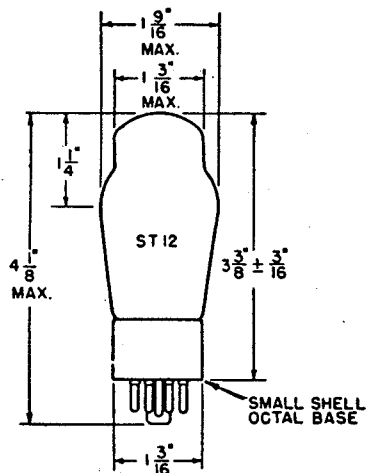


12-3

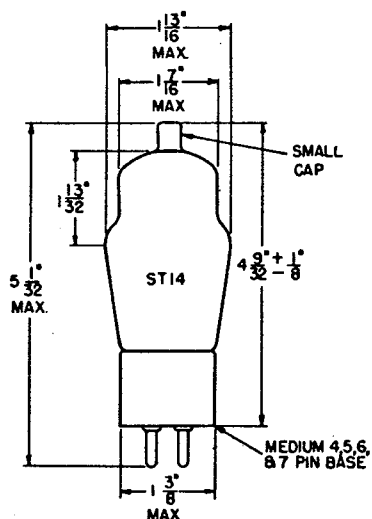




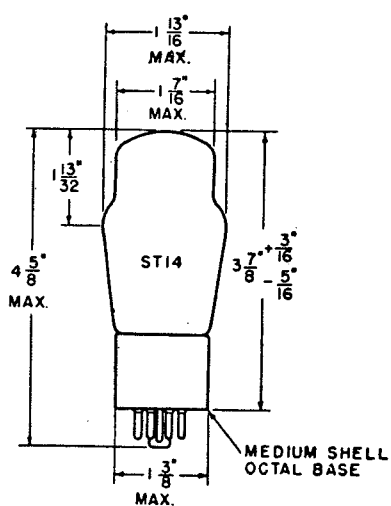
12-6



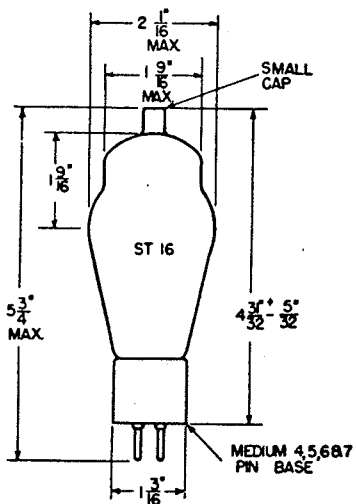
12-7



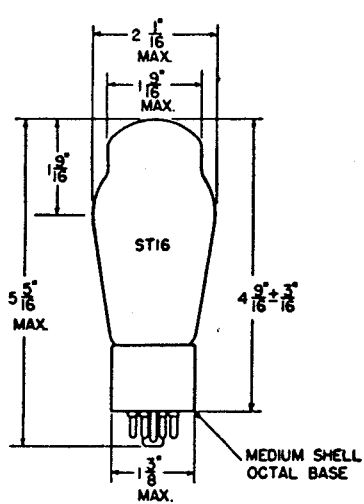
14-2



14-3

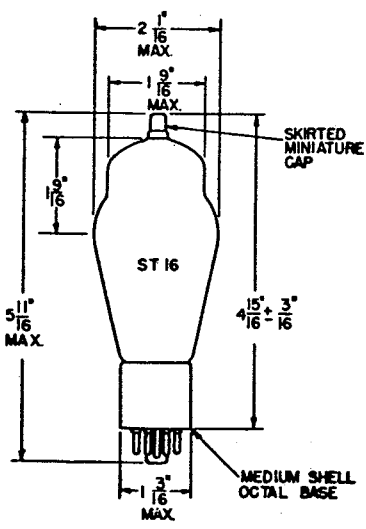


16-2

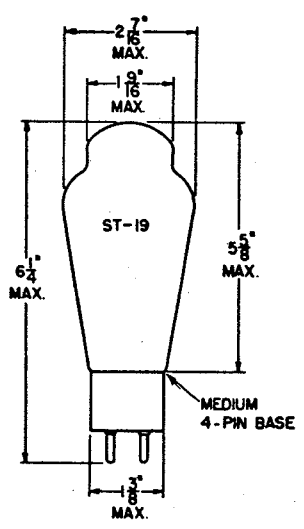


16-3

OUTLINE DRAWINGS

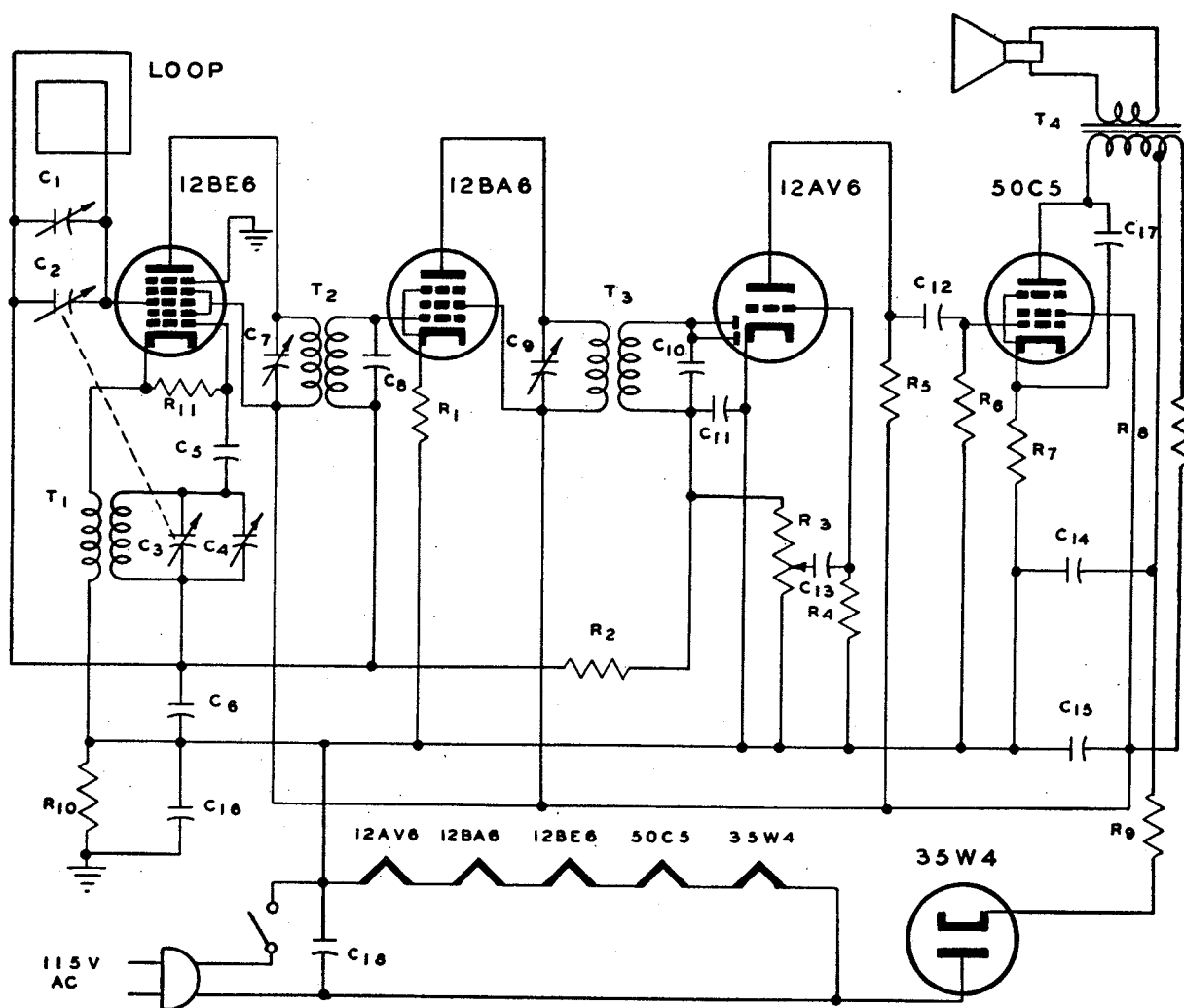


16-4



19A-1

AC-DC RECEIVER



C_1 = 0-15 μ f TRIMMER

$C_2 C_3$ = GANGED 14-434 μ f & 9-135 μ f

C_4 = 1.5-15 μ f TRIMMER

C_5 = 47 μ f

$C_6 C_{18}$ = .05 μ f

$C_7 C_8 C_9 C_{10}$ = 60-140 μ f

C_{11} = 220 μ f

$C_{12} C_{13} C_{16}$ = .01 μ f

$C_{14} C_{15}$ = 50 μ f 150V

C_{17} = .005 μ f

T_1 = OSCILLATOR TRANSFORMER

$T_2 T_3$ = IF TRANSFORMER 455 KC

T_4 = 2500 Ω TO 3.4 Ω OUTPUT TRANSFORMER

R_1 = 47 Ω

R_2 = 2.2 MEG.

R_3 = .5 MEG. POT.

R_4 = 6.8 MEG.

$R_5 R_6 R_{10}$ = .47 MEG.

R_7 = 150 Ω 1WATT

R_8 = 1000 Ω 2WATT

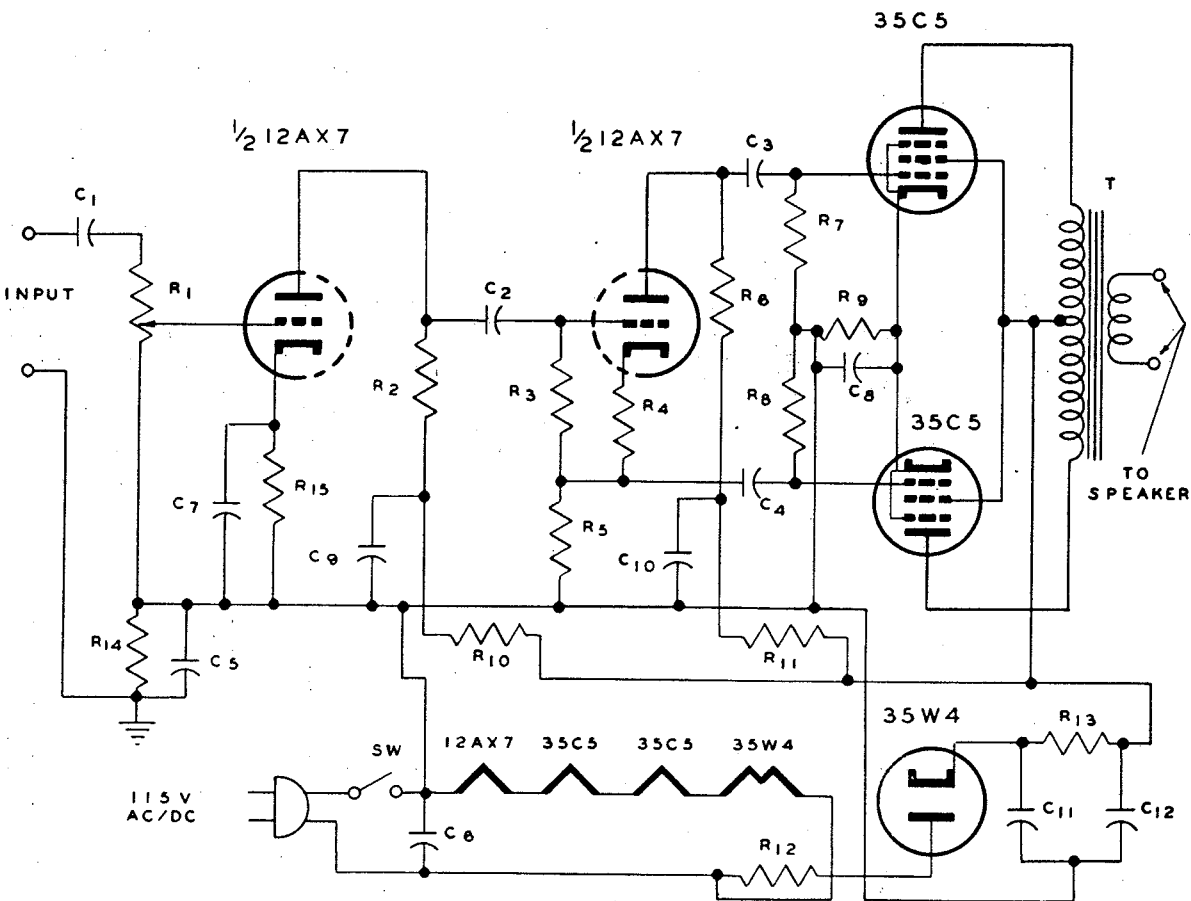
R_9 = 22 Ω 1WATT

R_{11} = 22 K

ALL RESISTORS $\frac{1}{2}$ WATT
UNLESS OTHERWISE SPECIFIED

Circuits shown in this publication are examples of possible tube applications and the description and illustration of them does not convey to the purchaser of tubes any license under patent rights of General Electric Company.

AC/DC AMPLIFIER



ALL RESISTORS 1WATT UNLESS OTHERWISE SPECIFIED

R_1 - .5 MEG. POT.
 R_2 - .24MEG.
 R_3 - .24MEG. $\frac{1}{2}$ WATT
 R_4 - 1200 Ω
 R_5 R_6 - 47K
 R_7 R_8 R_{14} - .47 MEG. $\frac{1}{2}$ WATT
 R_9 - 100 Ω 5WATT
 R_{10} R_{11} - 33K
 R_{12} R_{13} - 47 Ω
 R_{15} - 2700 Ω

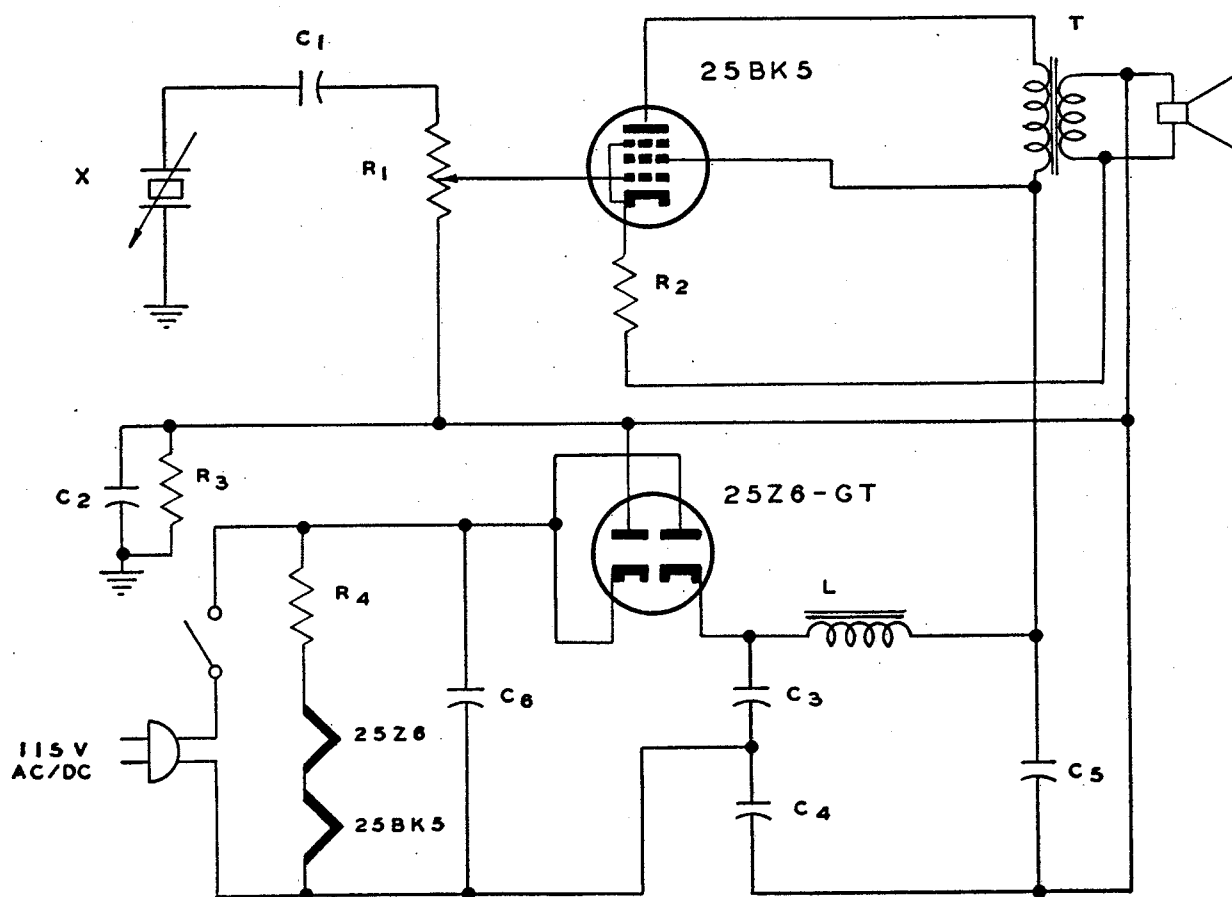
C_1 C_2 C_3 C_4 C_6 - 0.5 μ f 400V
 C_5 - 0.1 μ f 600V
 C_7 - 25 μ f 25V
 C_8 - 50 μ f 25V
 C_9 - 8 μ f 150V
 C_{10} - 8 μ f 150V
 C_{11} - 20 μ f 150V
 C_{12} - 80 μ f 150V

T - OUTPUT TRANSFORMER
 5000 Ω TO VOICE COIL
 SW - SPST TOGGLE SWITCH

NOTE :-

SW SHOULD NOT BE MOUNTED ON THE BACK OF R_1 . THIS PRECAUTION IS TO REDUCE HUM.

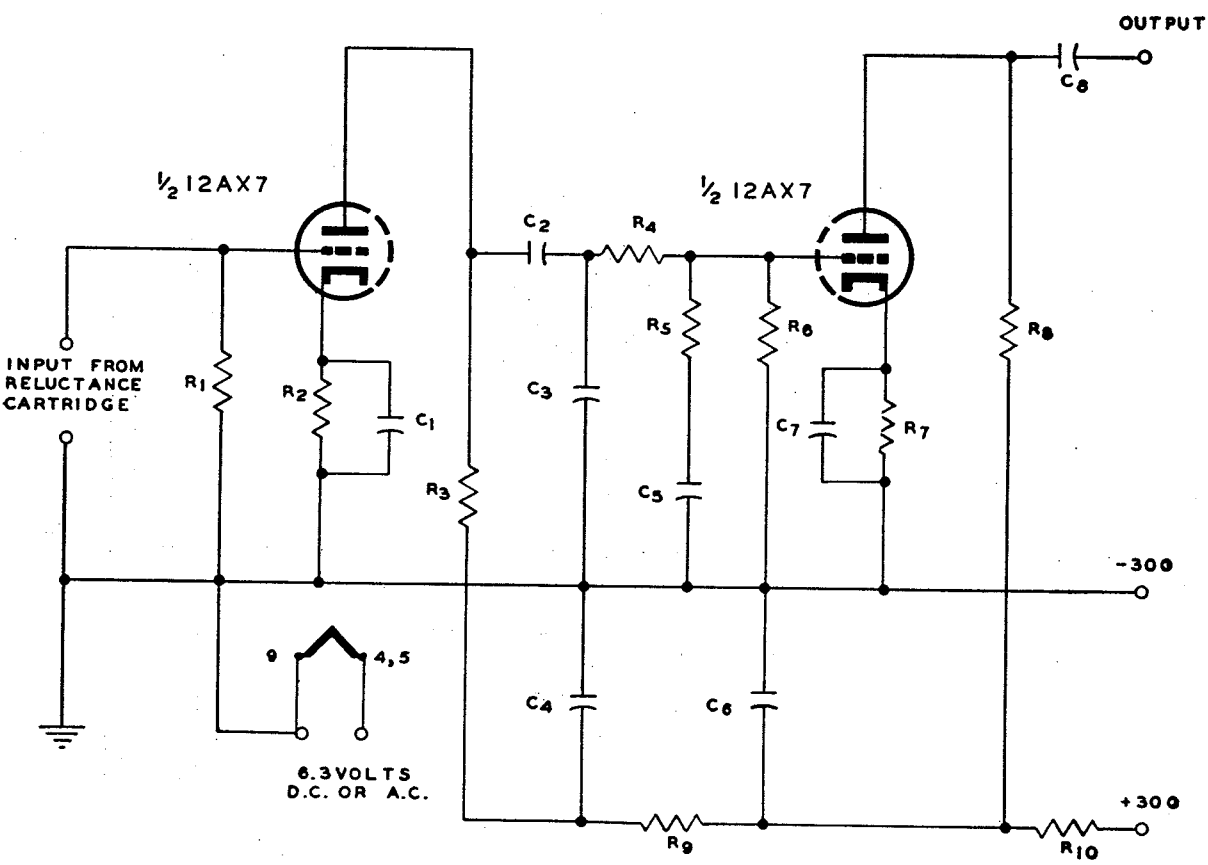
TWO TUBE PHONO-AMPLIFIER



C_1 - $.01\mu f$ 400V
 C_2 - $.01\mu f$ 400V
 $C_3 C_4$ - $10\mu f$ 250V
 C_5 - $20\mu f$ 450V
 C_6 - $.01\mu f$ 600V

R_1 - .5MEG. POT.
 R_2 - 150 Ω 1WATT
 R_3 - 500 K $\frac{1}{2}$ WATT
 R_4 - 220 Ω 10WATT
 T - OUTPUT TRANSFORMER
 6500 Ω TO VOICE COIL
 L - 3.5 HENRYS
 X - HIGH OUTPUT CRYSTAL
 CARTRIDGE

EQUALIZER PREAMPLIFIER
FOR VARIABLE RELUCTANCE PHONOGRAPH CARTRIDGE



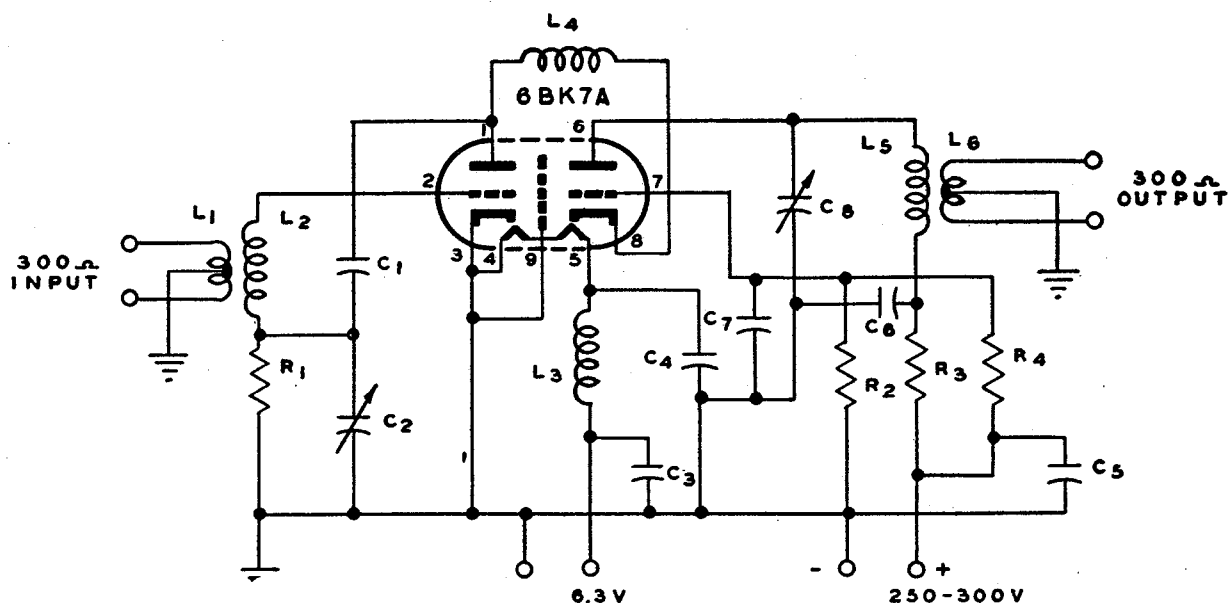
- $C_1 C_7$ - 25 μf 25 VOLTS
- $C_2 C_8$ - .05 μf 400 VOLTS
- C_3 - .001 μf 400 VOLTS
- $C_4 C_6$ - 20 μf 450 VOLTS
- C_5 - .02 μf 400 VOLTS

- R_1 - SEE NOTE
- $R_2 R_7$ - 2200 OHMS
- $R_3 R_4 R_8$ - .24 MEG.
- R_5 - 12 K
- R_6 - 1 MEG.
- R_9 - 6800 OHMS
- R_{10} - 3300 OHMS

NOTE:—

THE VALUE OF R_1 IS SPECIFIED BY THE MANUFACTURER OF THE PARTICULAR PHONOGRAPH CARTRIDGE USED. FOR THE GENERAL ELECTRIC CARTRIDGE, A VALUE OF 15K IS RECOMMENDED.

6BK7A CASCODE TELEVISION BOOSTER



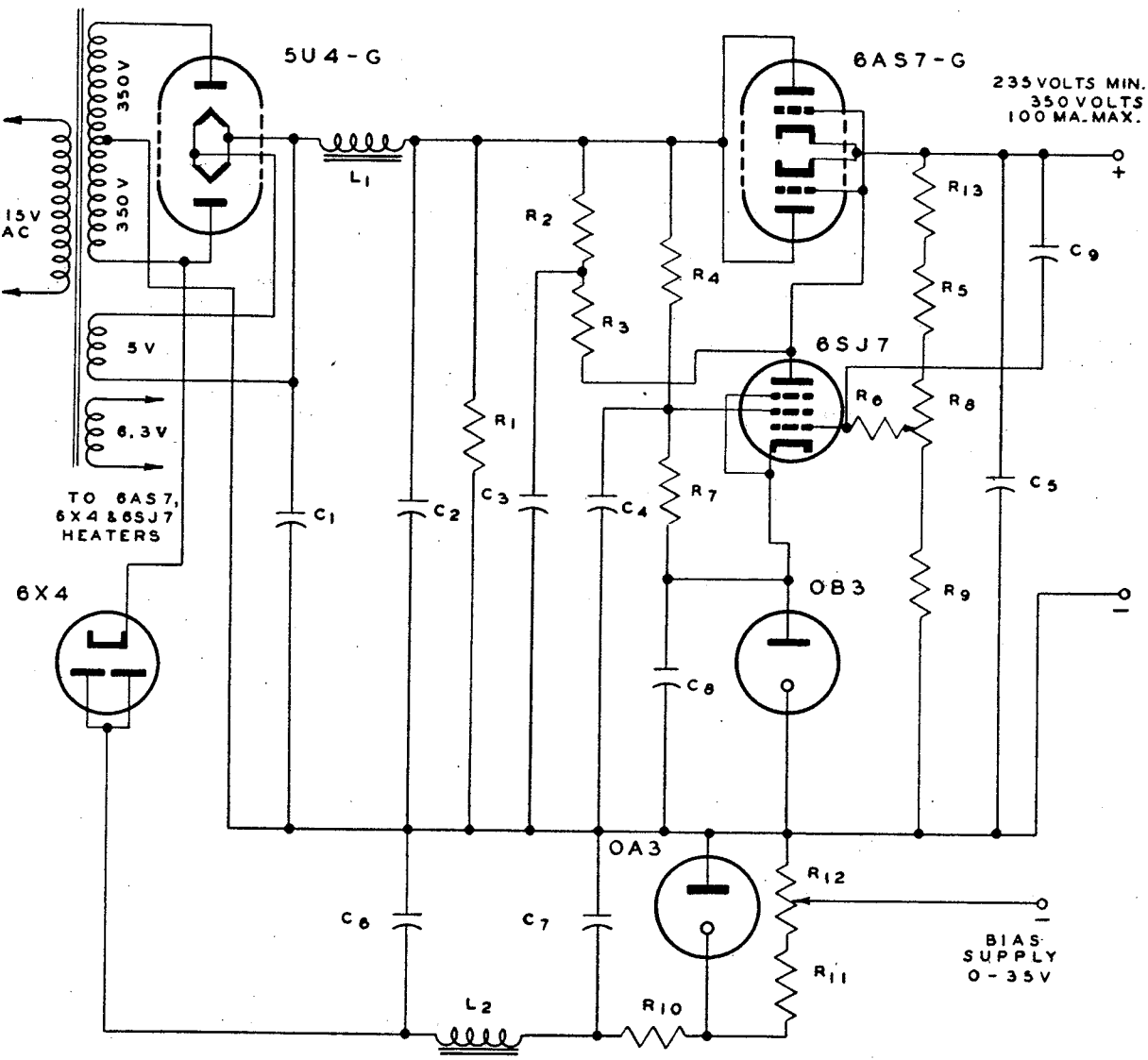
C_1 - 4.7 μ f
 C_2 - 3-13 μ f
 $C_3 C_4 C_5 C_6$ - 1000 μ f
 C_7 - 1000 μ f BUTTON TYPE
 C_8 - 1.5-7 μ f
 R_1 - 47K
 R_2 - 270K
 R_3 - 680 Ω
 R_4 - 100K

TYPICAL VALUES FOR CHANNEL N# 4

L_1 - 5T N#18 WOUND OVER L_2
 L_2 - 16T N#28 $\frac{1}{4}$ " FORM CLOSE WOUND
 L_3 - 12T N#18 $\frac{1}{4}$ " FORM CLOSE WOUND
 L_4 - 3T N#18 $\frac{1}{4}$ " FORM CLOSE WOUND
 L_5 - 8T N#28 $\frac{1}{4}$ " FORM CLOSE WOUND
 L_6 - 5T N#18 WOUND OVER L_5
 L_1 & L_6 ARE CENTER-TAPPED

ALL RESISTORS $\frac{1}{2}$ WATT

REGULATED POWER SUPPLY

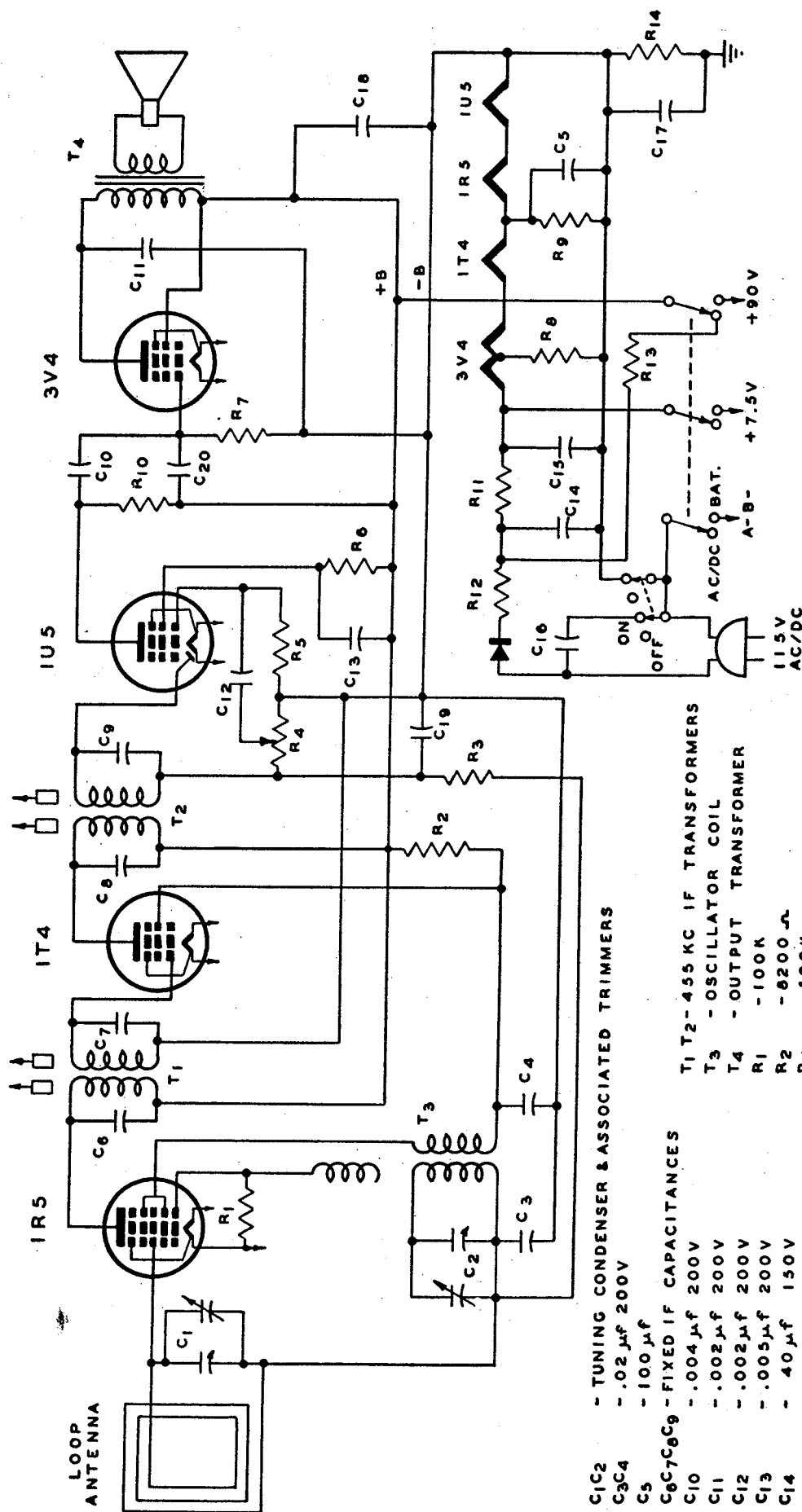


ALL RESISTORS 1WATT UNLESS OTHERWISE SPECIFIED

- | | | |
|---|--|-----------------------------------|
| C ₁ C ₂ - 16 μ f 600V | R ₁ - .47 MEG. | R ₁₂ - 5K POT. (5WATT) |
| C ₃ C ₈ - 1 μ f 600V | R ₂ R ₉ R ₁₃ - .33 MEG. | L ₁ - 200 MA 15 HY |
| C ₄ - 8 μ f 450V | R ₃ - .1 MEG. | L ₂ - 80 MA 15 HY |
| C ₅ - 4 μ f 600V | R ₄ - 20K 10 WATT | |
| C ₆ C ₇ - 40 μ f 450V | R ₅ R ₆ - 1 MEG. | |
| C ₉ - .1 μ f 600V | R ₇ - 10K 10 WATT | |
| | R ₈ - .5 MEG. POT. | |
| | R ₁₀ - 20K 5 WATT | |
| | R ₁₁ - 5K 5 WATT | |

THREE-WAY BATTERY PORTABLE

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TUNING CONDENSER & ASSOCIATED TRIMMERS

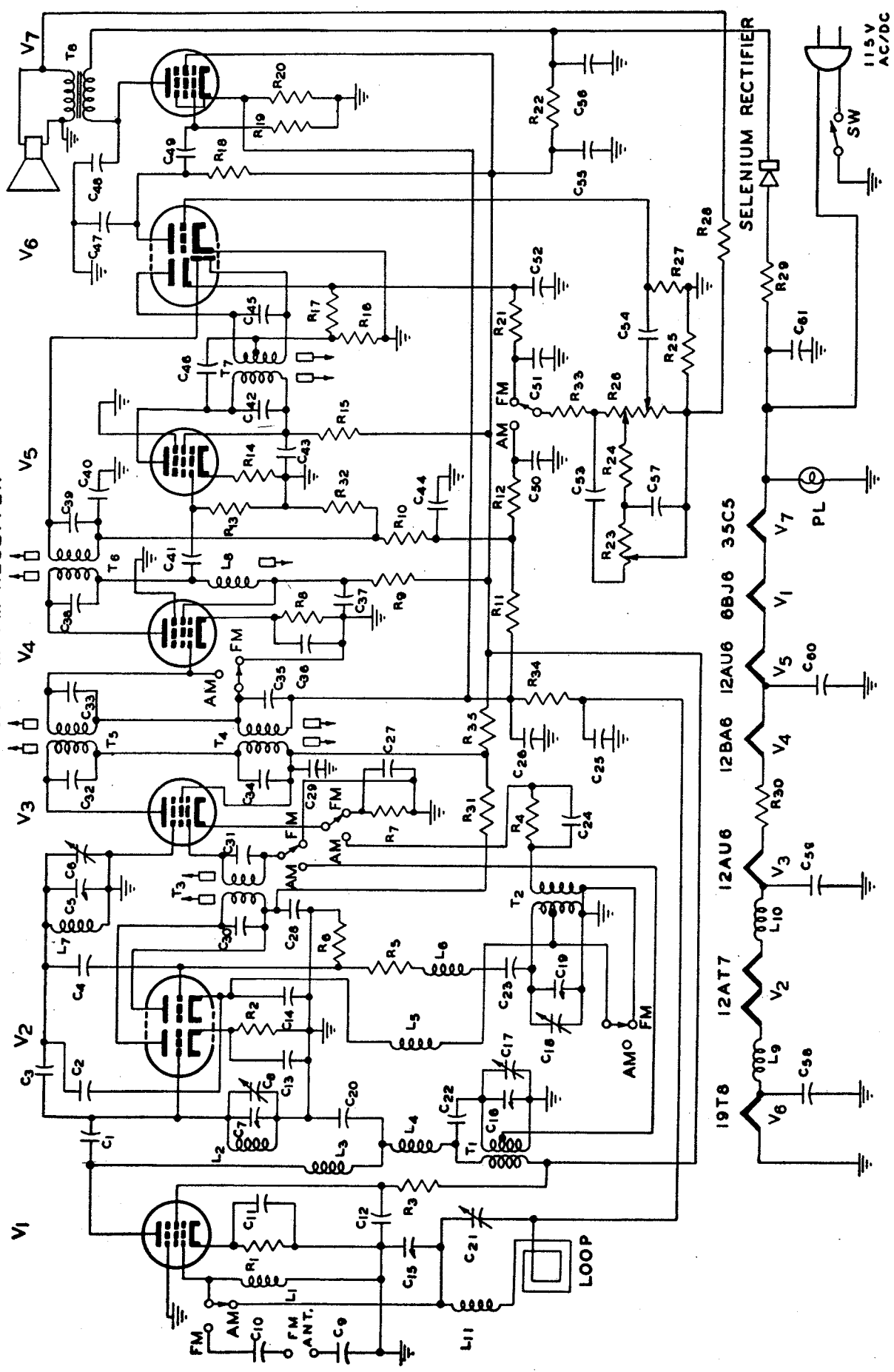
- C1C2 - .02 μ f 200V
- C3C4 - .004 μ f 200V
- C5 - .002 μ f 200V
- C6C7C8C9 - .002 μ f 200V
- C10 - .002 μ f 200V
- C11 - .002 μ f 200V
- C12 - .002 μ f 200V
- C13 - .005 μ f 200V
- C14 - .005 μ f 200V
- C15 - .005 μ f 200V
- C16C17 - .05 μ f 400V
- C18 - .05 μ f 250V
- C19 - .330 μ f
- C20 - .220 μ f

TRANSFORMERS

- T1 T2 - 455 KC IF TRANSFORMERS
- T3 - OSCILLATOR COIL
- T4 - OUTPUT TRANSFORMER
- R1 - 100K
- R2 - 500K
- R3 - 10MEG.
- R4 - 500K
- R5 - 10MEG.
- R6R7 - 3.3 MEG.
- R8 - 1500 Ω
- R9 - 680 Ω
- R10 - 470K

- R11 - 2300 Ω
- R12 - 68 Ω 1WATT
- R13 - 2200 Ω 1WATT

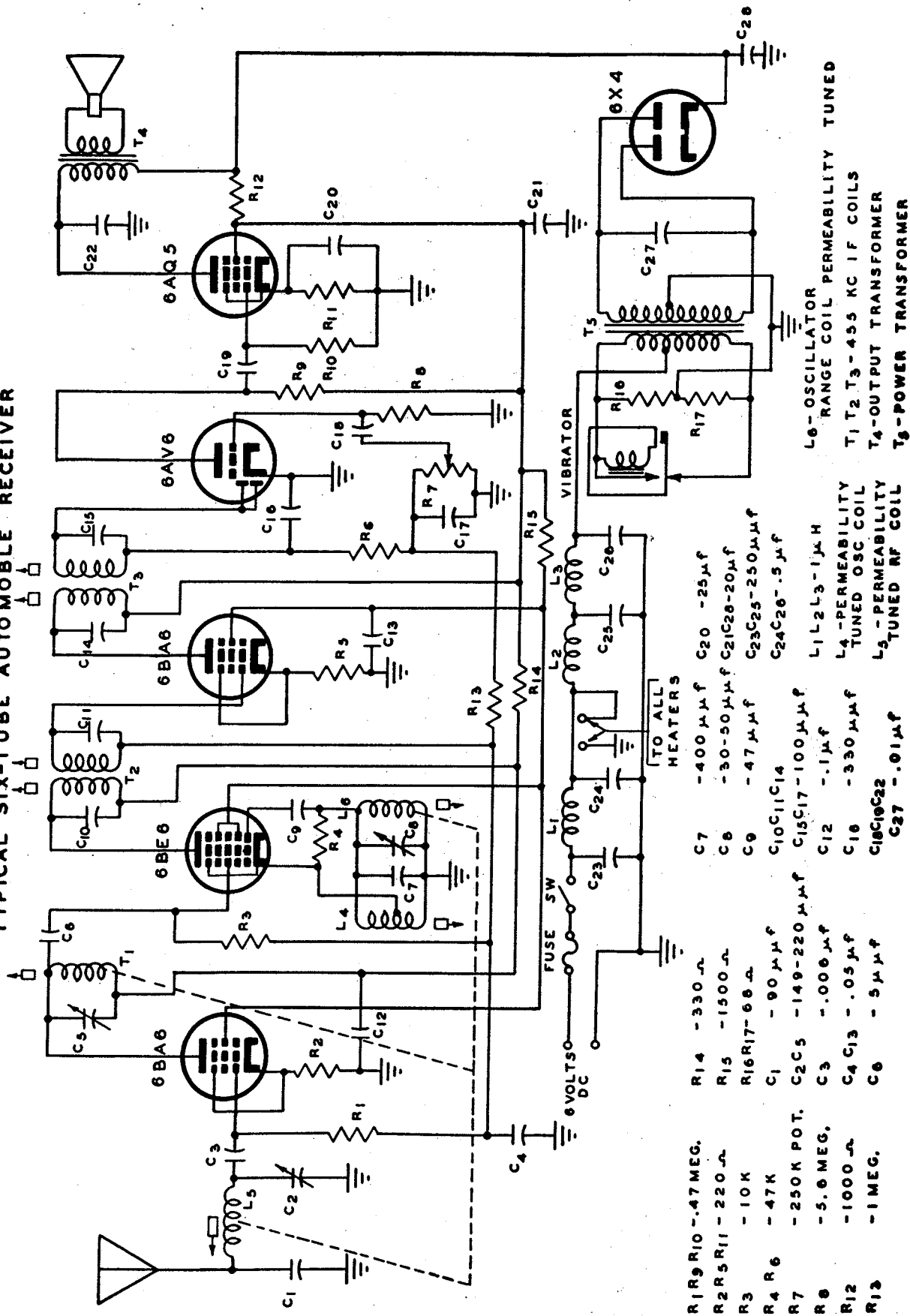
ALL RESISTORS $\frac{1}{2}$ WATT UNLESS OTHERWISE SPECIFIED.



PARTS LIST FOR AC/DC AM-FM RECEIVER

C ₁ —10 μ f	C ₄₀ C ₄₄ —100 μ f	R ₁₉ R ₁₉ —470K
C ₂ —22 μ f	C ₄₁ C ₄₅ C ₄₆ —33 μ f	R ₂₀ —150 Ω
C ₃ C ₂₂ —1.5 μ f	C ₄₂ —50 μ f	R ₂₂ —1000 Ω 2-Watt W.W.
C ₄ C ₂₃ —20 μ f	C ₄₇ C ₅₀ —47 μ f	R ₂₃ —4 Meg. Tone Control
C ₅ C ₆ C ₇ C ₈ —FM Tuning Condenser and Trimmers	C ₅₁ —0.01 μ f	R ₂₆ —2 Meg. Volume Control tapped at 1 meg.
C ₉ C ₁₁ C ₁₂ C ₅₂ —470 μ f	C ₅₃ —0.002 μ f	R ₂₇ —6.8 Meg.
C ₁₀ —6 μ f	C ₅₅ —40 μ f	R ₂₉ —22 Ω 1-Watt
C ₁₃ —0.0015 μ f	C ₅₆ —80 μ f	R ₃₀ —33 Ω 2-Watt W.W.
C ₁₄ —18 μ f	C ₅₇ —0.003 μ f	R ₃₃ R ₃₄ —220K
C ₁₅ C ₁₆ C ₁₇ C ₁₈ C ₁₉ —AM Tuning Condensers and Trimmers	PL—110 Volt Pilot Lamp	T ₁ —Broadcast RF Coil
C ₂₀ —82 μ f	R ₁ R ₆ R ₇ R ₈ R ₂₅ —100 Ω	T ₂ —Broadcast Oscillator Coil
C ₂₁ —2–20 μ f Trimmer	R ₂ —1500 Ω	T ₃ T ₅ —10.7MC FM IF Transformer
C ₂₄ C ₄₉ C ₅₄ —0.1 μ f	R ₃ R ₃₁ R ₃₅ —220 Ω	T ₄ T ₆ —455KC IF Transformer
C ₂₅ C ₃₆ C ₆₁ —0.05 μ f	R ₄ —2.2K	T ₇ —10.7MC Discriminator Trans.
C ₂₇ C ₂₈ C ₂₉ C ₃₆ C ₃₇ C ₄₃ C ₄₈ C ₅₈ C ₅₉ C ₆₀ —0.005 μ f	R ₆ —27K	T ₈ —Output Transformer
C ₃₀ C ₃₁ —40 μ f	R ₉ R ₂₈ —470 Ω	L ₁ —FM Antenna Choke
C ₃₂ C ₃₃ —17 μ f	R ₁₀ R ₁₂ R ₃₃ —47K	L ₂ —FM RF Coil
C ₃₄ —107 μ f	R ₁₁ —2.2 Meg.	L ₃ —RF Plate Choke
C ₃₅ —73 μ f	R ₁₃ R ₂₁ R ₂₄ —100K	L ₄ L ₅ L ₆ L ₁₁ —RF Choke 2.2 μ h
C ₃₈ —106 μ f	R ₁₄ —180 Ω	L ₇ —FM Oscillator Coil
C ₃₉ —131 μ f	R ₁₅ —22K	L ₈ —10.7MC 3rd FM IF Coil
	R ₁₆ R ₁₇ —120K	L ₉ L ₁₀ —RF Choke

TYPICAL SIX-TUBE AUTOMOBILE RECEIVER



NOTES

