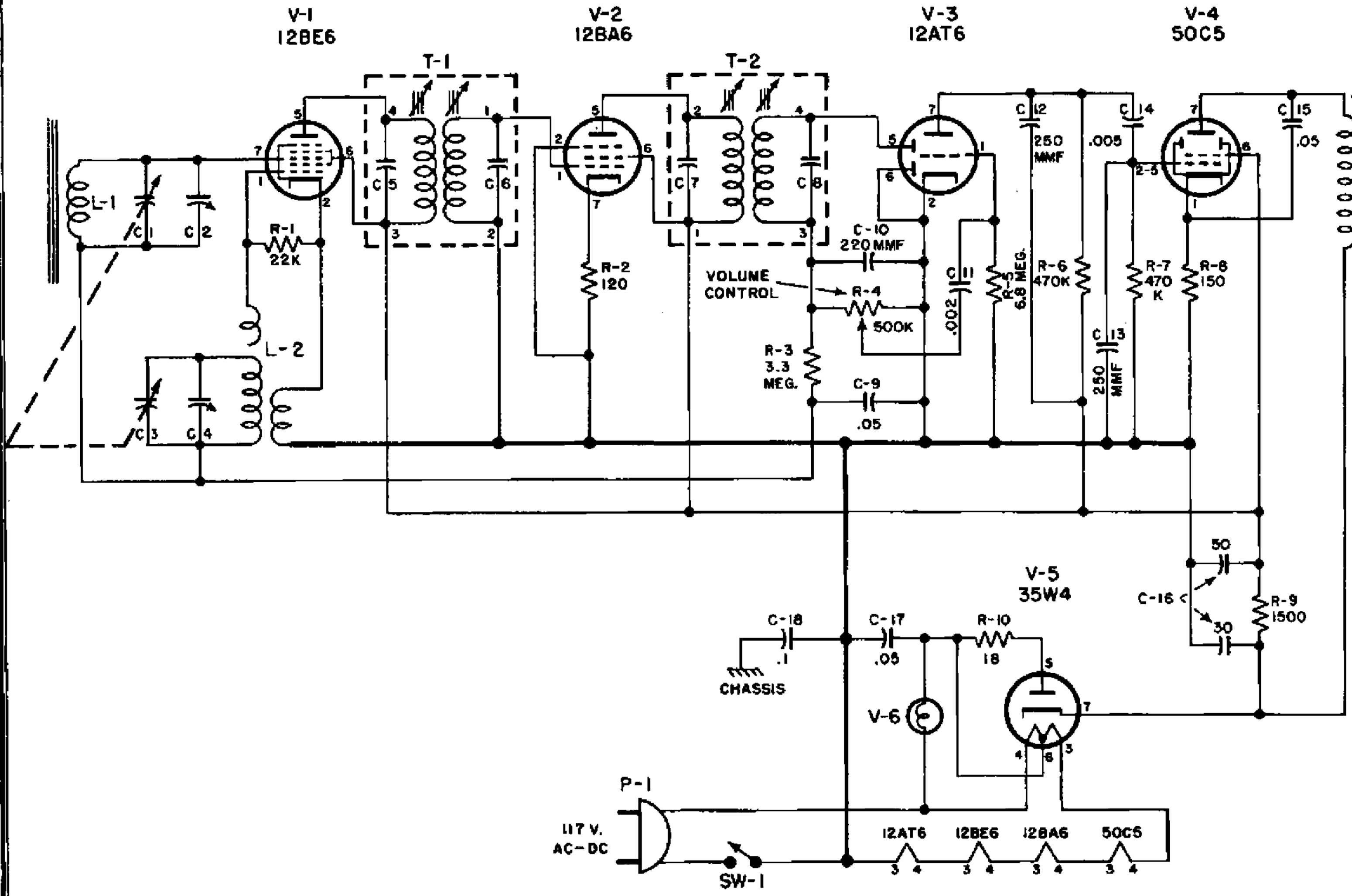


PART NO. 950228
950214

RES. IN OHMS,
CAP. IN MFDS
UNLESS OTHERWISE NOTED.

CHASSIS NO. 120165-B
120156-B

Fig. 1 - Schematic Diagram,

MODELS 708B, Ch. 120165-B; 713B, Ch. 120156-B

MODELS 708B, Ch. 120165-B; 713B, Ch. 120156-B

CONDITIONS FOR VOLTAGE AND RESISTANCE READINGS

1. Voltages indicated are positive d.c., resistances are in ohms, unless otherwise indicated.
2. Measurements made with voltohmyst or equivalent.
3. Line voltage maintained at 117 volts a.c. for voltage measurements.
4. Socket connections are shown as bottom views, with measurements from pin to common negative.
5. Volume control at maximum; no signal applied for voltage measurements.
6. Nominal tolerance on component values makes possible a variation of ± 15% in voltage and resistance readings.
7. NC denotes no connection, K is kilohms, MEG is megohms. Resistances marked * are measured to pin 7 of rectifier (B +).

ALIGNMENT INSTRUCTIONS

1. Use isolation transformer if available. If not, connect a .1 mfd. condenser in series with low side of signal generator and B -
2. Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading. Use an insulated screw driver for adjusting.

STEP	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1	.1 mfd.	High side to grid (pin 7) of V1 (12BE6). Low side to B -	455 KC	Variable condenser fully open.	Across voice coil.	T2, T1 (A3, A4, A1, A2)	Adjust for maximum output. If isolation transformer is not used, reduce dummy ant. to .001 mfd. to reduce hum modulation.
2		Form loop of several turns and radiate signal into receiver	1620 KC	"	Across voice coil.	Trimmer C-4 (Osc.)	Adjust for maximum output.
3		"	1400 KC	Tune for maximum output.	Across voice coil.	Trimmer C-2 (Ant.)	Adjust for maximum output.

VOLTAGE READINGS FOR CHASSIS 120156-B and 120165-B

SYMBOL	TUBE	PIN 1	PIN 2	PIN 3	PIN 4	PIN 5	PIN 6	PIN 7
V-1	12BE6	-7.6	0	12 AC	24 AC	95	95	-.5
V-2	12BA6	0	0	24 AC	36 AC	95	95	1.3
V-3	12AT6 ⊕	-1	0	0	12 AC	-.65	0	45
V-4	50C5	6.5	0	36 AC	85 AC	0	95	120
V-5	35W4	N.C.	N.C.	85 AC	117 AC	110 AC	112 AC	130

RESISTANT READINGS FOR CHASSIS 120156-B and 120165-B

SYMBOL	TUBE	PIN 1	PIN 2	PIN 3	PIN 4	PIN 5	PIN 6	PIN 7
V-1	12BE6	23K	.5	12	24	1500*	1500*	4 MEG
V-2	12BA6	18	0	24	36	1500*	1500*	120
V-3	12AT6 ⊕	6 MEG	0	0	12	500K	0	470*
V-4	50C5	150	470 K	36	90	470K	1500*	210*
V-5	35W4	N.C.	N.C.	90	120	135	115	0*

⊕ In some models 12AV6 may be used as alternate for 12AT6.

* Resistances measured to pin 7 of rectifier (B +).

VOLTAGE AND RESISTANCE READING INSTRUCTIONS

1. Line voltage maintained at 115 volts for voltage readings.
2. D.C. and A.C. voltages measured with V.T.V.M.
3. Measured values are from socket pin to B neutral.
4. Volume control at maximum, no signal applied for voltage measurements.

MODELS 708B, Ch. 120165-B; 713B, Ch. 120156-B

CHASSIS PARTS LIST (Chassis 120156-B and 120165-B)

SYM-BOL	PART NO.	DESCRIPTION	LIST PRICE
C-1	900086	Variable Capacitor - R.F. Sec.	3.25
C-2	PT. of C-1	Trimmer RF Sec.	
C-3	PT. of C-1	Variable Capacitor - Osc. Sec.	
C-4	PT. of C-1	Trimmer Osc. Sec.	
C-5	PT. of T-1		
C-6	PT. of T-1		
C-7	PT. of T-2		
C-8	PT. of T-2		
C-9	923554	.05 MFD Paper 400V.	.25
C-10	923024	220 MMF R.C. Coupling Unit	1.05
C-11		.002 MF	
C-12		250 MMF	
C-13		250 MMF	
C-14		.005 MF	
C-15	923554	.05 MFD Paper 400V.	.25
C-16	925218	30 MF 50 MF Electrolytic 150V.	1.40
C-17	923554	.05 MFD Paper 400V.	.25
C-18	923515	.1 MFD Paper 400V.	.30
L-1	700066	Loop Antenna Assembly - Ferrite For Chassis 120156-B Only	1.85
L-1	700072	Loop Antenna Assembly - Ferrite For Chassis 120165-B Only	1.85
L-2	716071	Oscillator Coil	.95

SYM-BOL	PART NO.	DESCRIPTION	LIST PRICE
P-1	583037P	Line Cord and Plug	.55
R-1	Pt.of L-2	22000 ohm Carbon	
R-2	340272	120 ohm Carbon ½W ±10%	.14
R-3	351332	3.3 megohm Carbon ½W ±20%	.14
R-4	390205	500,000 ohm Volume Control	1.30
R-5	Part of	6.8 megohm R.C. Coupling Unit	
R-6		470,000 ohm	
R-7	923024	470,000 ohm	
R-8	340292	150 ohm Carbon ½W ±10%	.10
R-9	380532	1,500 ohm Carbon 1W ±20%	.16
R-10	340072	18 ohm Carbon ½W ±10%	.14
SP-1	180084 or	Speaker-P.M.-4" (with Output Trans.)	4.95
SP-1	180088	For Chassis 120156 only.	6.55
SP-1	180086 or	Speaker-P.M.-4" (with Output Trans.)	
SP-1	180090	For Chassis 120165-B only.	6.55
SW-1	Pt.of R-4	On-Off Switch	
T-1	720033	1st I.F. Transformer	1.80
T-2	720033	2nd I.F. Transformer	1.80
T-3	Pt.of SP-1	Output Transformer	
V-1	800525	Vacuum Tube - 12BE6	
V-2	800524	Vacuum Tube - 12BA6	
V-3	800523	Vacuum Tube - 12AT6	
V-4	800032	Vacuum Tube - 50C5	
V-5	800526	Vacuum Tube - 35W4	
V-6	807000	Pilot Light	

Prices subject to change without notice.

CABINET PARTS LIST - MODELS 708B, 713B

MODELS 708B	MODELS 713B	DESCRIPTION	LIST PRICE
140473		Cabinet	2.00
	140477	Cabinet - Wood	8.00
	140452B	Front Plate - Gold & Dull Silver	2.40
575897		Baffle	.30
	575871	Baffle	.40
460326		Knob - Tuning	.45
	460312	Knob - Tuning	.20
460311	460311	Knob - Volume	.10
542280	542280	Spring - Knob	.02
575898		Back	.10
	575839	Back	.10
635001		Jewel Amber	.12

Prices subject to change without notice.

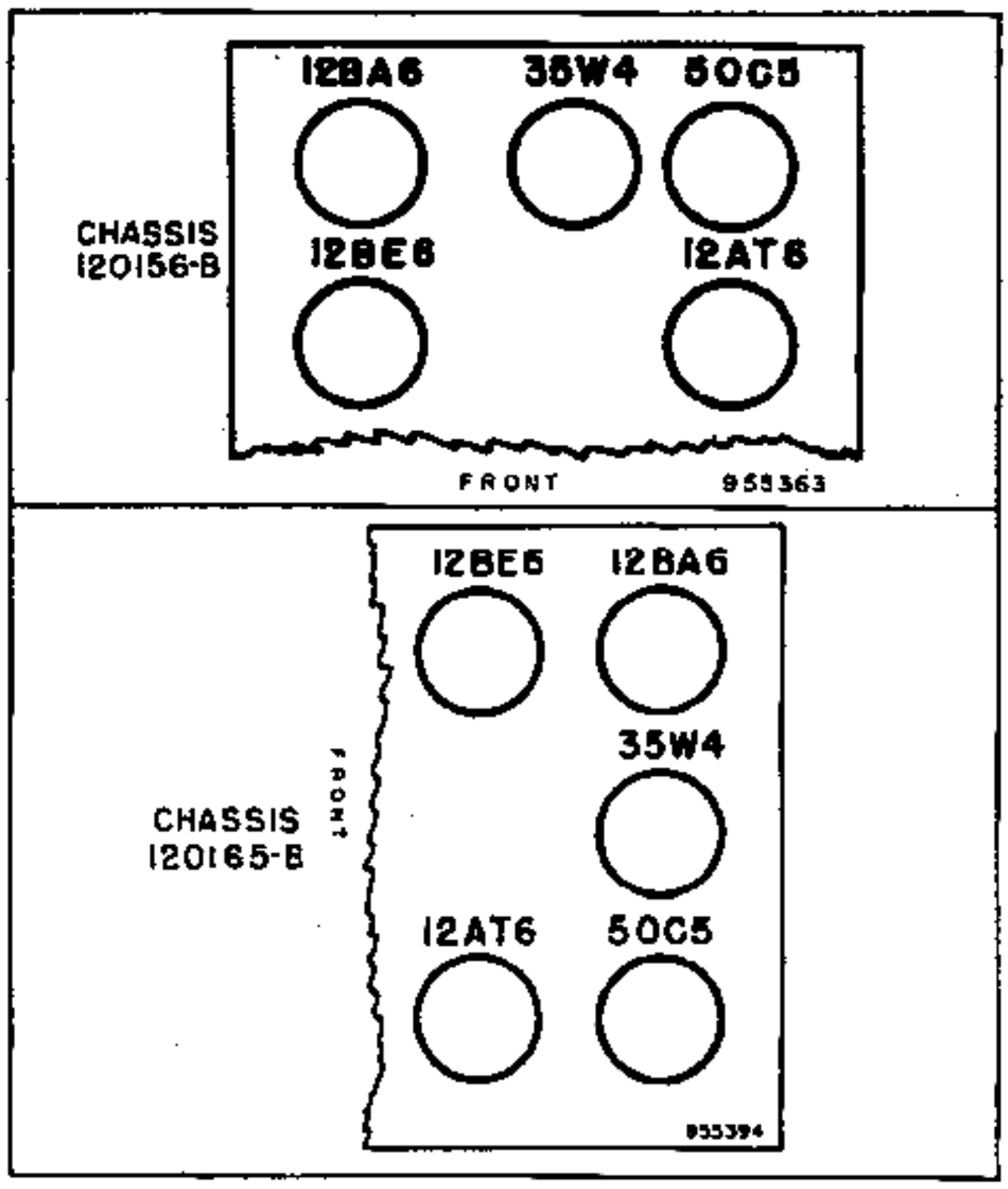
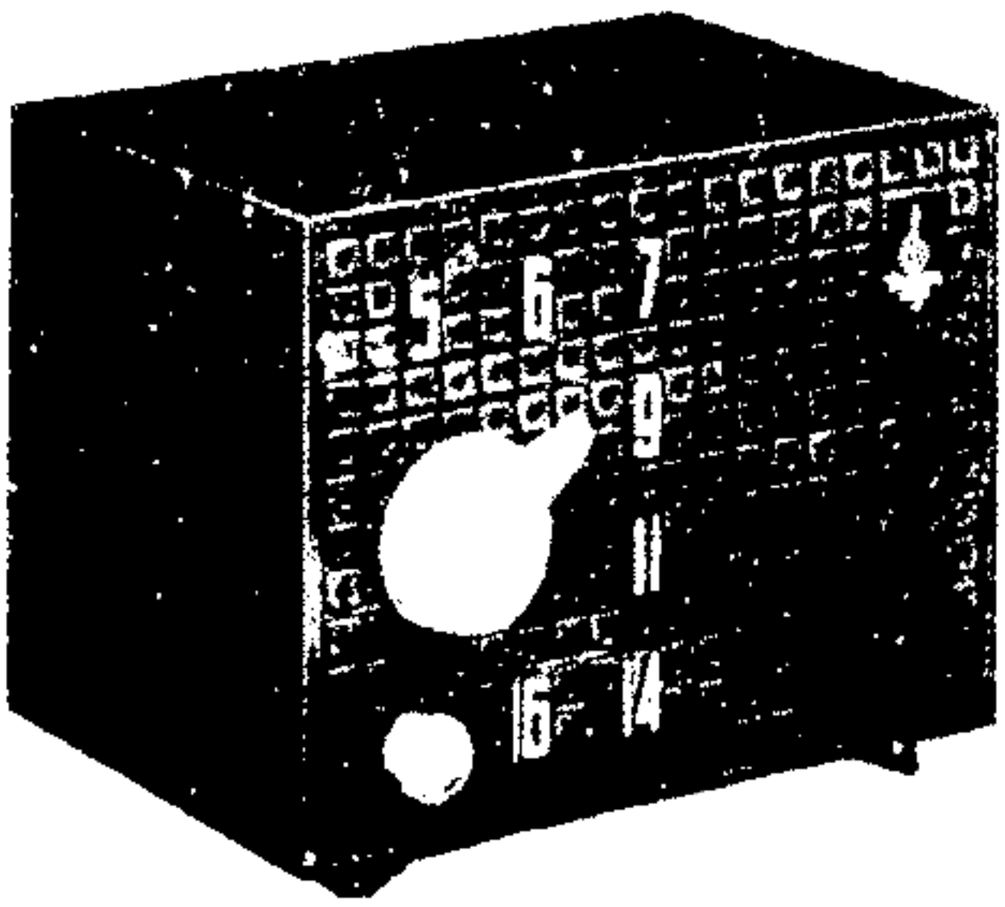
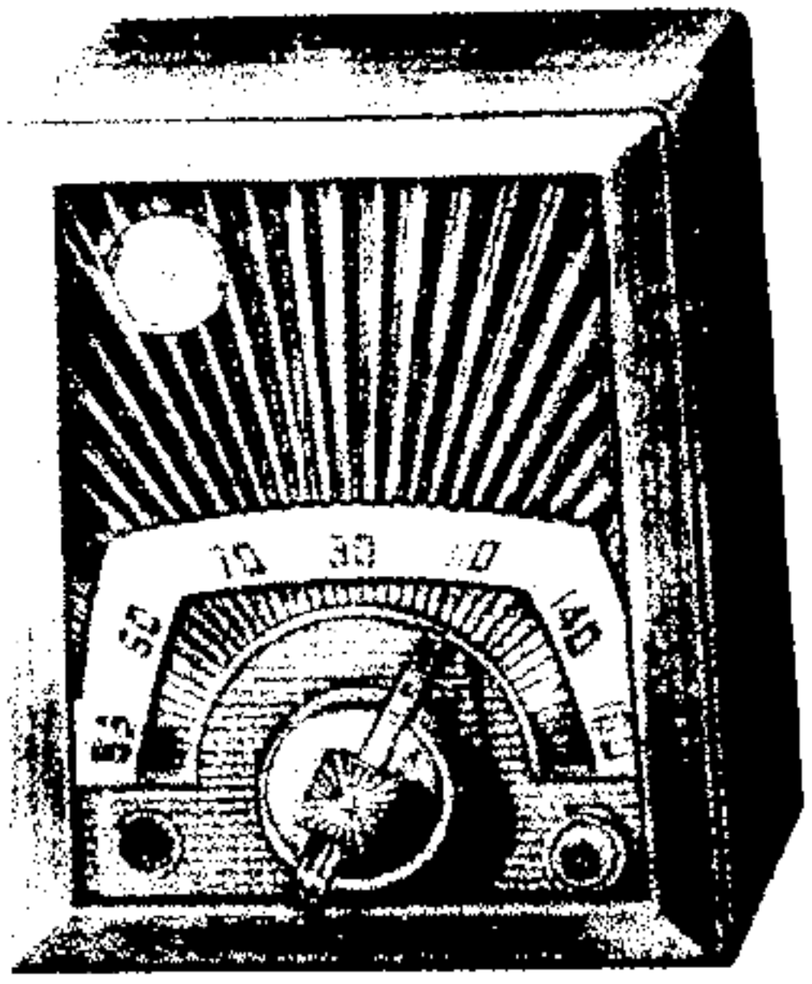


Fig. 2 Tube Location Diagram of Chassis 120156-B, 120165-B

MODELS 708B, Ch. 120165-B;
713B, Ch. 120156-B



MODEL
708B
CHASSIS - 120165-B



MODEL
713B
CHASSIS - 120156-B

DESCRIPTION

TYPE: Single-band (AM) superheterodyne.

FREQUENCY RANGE: Broadcast 540-1620 kc

TYPE OF TUBES:

V-1--12BE6, converter

V-2--12BA6, i-f amplifier

V-3—12AT6, detector, a.v.c. a-f amplifier

V-4—50C5, power output

V-5--35W4, rectifier

POWER SUPPLY: A.C. or D.C.

VOLTAGE RATING: 105-125 volts.

POWER CONSUMPTION: 30 watts.

CURRENT DRAIN: 0.24 amp. at 117 volts a.c.

GENERAL NOTES

1. If replacements are made or the wiring disturbed in the r-f section of the circuit, the receiver should be carefully realigned.

2. In operating the receiver on d.c., it may be necessary to reverse the line plug for correct polarity.

3. Models 708B and 713B have a self-contained antenna and do not require additional antenna connections.

4. The self-contained bar type antenna operates at maximum efficiency when its position is pointing to the broadcasting source. It is important, therefore, once the station is tuned in, to rotate the cabinet back and forth through a quarter of a circle (90 degrees), leaving it at the position where the station is received with maximum volume.