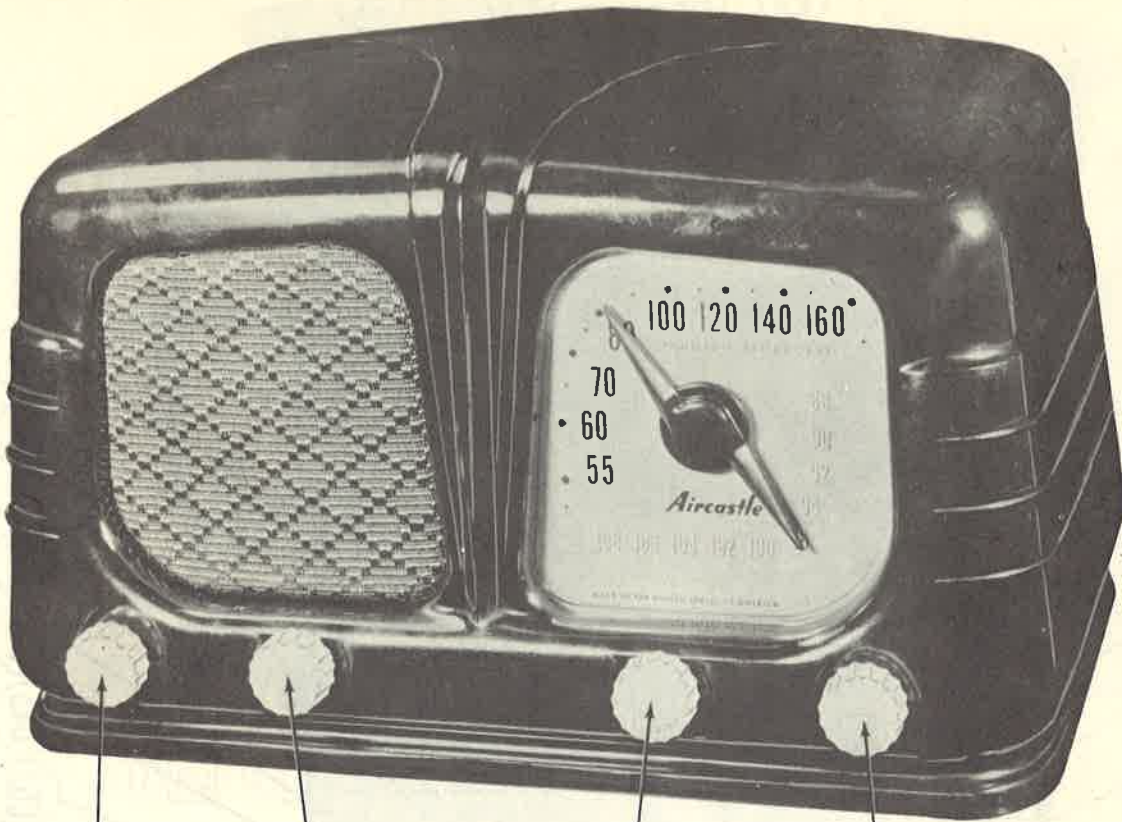




AIRCASTLE  
MODEL WEU-262



VOLUME CONTROL  
ON-OFF SWITCH

TONE CONTROL

TUNING CONTROL

BAND SWITCH

AIRCASTLE  
MODEL WEU-262

AIRCASTLE MODEL WEU-262

TRADE NAME	Aircastle, Model WEU-262		
SUPPLIER	Spiegel Inc., 1061 W. 35th St., Chicago, Illinois		
TYPE SET	AC-DC Operated AM-FM Superheterodyne Receiver with Loop Antenna		
TUBES (EIGHT)	Types 6BA6 RF Amp., 6BE6 Converter, 6BA6 1st IF Amp., 6BA6 FM 2nd IF Amp., 6AL5 Ratio Det., 6SQ7 DET-AVC-AF, 25L6GT Power Output, 25Z6GT Rectifier		
POWER SUPPLY	110-120 Volts AC	RATING	.44 Amp. at 117 Volts AC
TUNING RANGE-BROADCAST	535-1620KC	FREQ. MOD.	88-108MC

HOWARD W. SAMS & CO., INC. • Indianapolis Indiana

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## PARTS LIST AND DESCRIPTIONS (Continued)

### CONTROLS

ITEM No.	RATING		REPLACEMENT DATA			INSTALLATION NOTES
	RESISTANCE	WATTS	AIRCASLTLE	IRC	CLAROSTAT	
			PART No.	PART No.	PART No.	
R1A	500K $\Omega$	2	N6274	Q13-133X	AT-78	Volume control, tapped at 100K $\Omega$ Attach to R1A per instructions
B	Shaft		Not Req.	Not Req.	KSS-3	
C	Switch		Not Req.	76-1	SW-A	
R2	500K $\Omega$		N6273			Tone control

### RESISTORS

ITEM No.	RATING		REPLACEMENT DATA		IDENTIFICATION CODES
	RESISTANCE	WATTS	AIRCASLTLE	IRC	
			PART No.	PART No.	
R3	68 $\Omega$		N-6485		RF Cathode
R4	2200 $\Omega$		N-4898	BTS-2200	RF Screen
R5	820 $\Omega$		N-4279	BTS-820	RF Plate
R6	2.2 Meg.		N-4277	BTS-2.2 Meg.	AVC Network
R7	220K $\Omega$		N-4026	BTS-220K	AVC Network
R8	1 Meg.		N-1262	BTS-1 Meg.	AVC Network
R9	10K $\Omega$		N-4895	BTS-10K	Conv. Grid
R10	22K $\Omega$		N-4025	BTS-22K	Osc. Grid
R11	12 $\Omega$		N-5053		Parasitic Supp.
R12	1000 $\Omega$		N-1594	BTS-1000	Osc. Anode
R13	1000 $\Omega$		N-1594	BTS-1000	Conv. Plate Decoupling
R14	68 $\Omega$		N-6485		1st IF Cathode
R15	470 $\Omega$		N-6011	BTS-470	1st IF Decoupling
R16	47K $\Omega$		N-4063	BTS-47K	Diode Filter
R17	220K $\Omega$		N-4026	BTS-220K	AVC Network
R18	68 $\Omega$		N-6485		FM 2nd IF Cathode
R19	470 $\Omega$		N-6011	BTS-470	FM 2nd IF Decoupling
R20	68 $\Omega$		N-6485		Balancing
R21	33K $\Omega$		N-4064	BTS-33K	De-emphasis
R22	100K $\Omega$		N-2973	BTS-100K	AVC Network
R23	33K $\Omega$		N-4064	BTS-33K	Ratio Det. Diode Load
R24	1.8 Meg.		N-6456	BTS-1.8 Meg.	AVC Network-See Note
R25	27K $\Omega$		N-4451	BTS-27K	Tone Compensation
R26	6.8 Meg.		N-4028	BTS-6.8 Meg.	AF Amp. Grid
R27	220K $\Omega$		N-4026	BTS-220K	AF Amp. Plate
R28	68K $\Omega$		N-5693	BTS-68K	AF Amp. Decoupling
R29	470K $\Omega$		N-4027	BTS-470K	Output Grid
R30	150 $\Omega$		N-3663	BW- $\frac{1}{2}$ -150	Output Cathode
R31	150 $\Omega$		N-3663	BW- $\frac{1}{2}$ -150	Filter
R32	100 $\Omega$		N-1615	BW- $\frac{1}{2}$ -100	Filter-Wire Wound
R33	68 $\Omega$		N-5379	BW-1-68	Filter
R34	12 $\Omega$		N-5053		Surge Limiter
R35	250 $\Omega$		N-6311		Voltage Regulating-Temp. Comp.
R36A	100 $\Omega$		N-6352		Filament Dropping-Wire Wound
B	60 $\Omega$				Filament Dropping-Wire Wound

Note. Some models use two resistors in parallel to obtain required resistance and wattage.

### TRANSFORMER (AUDIO OUTPUT)

ITEM No.	RATING				REPLACEMENT DATA				INSTALLATION NOTES
	IMPEDANCE		DC RES.		AIRCASLTLE	STANCOR	MERIT	CHICAGO	
	PRI	SEC	PRI	SEC	PART No.	PART No.	PART No.	PART No.	
T1	2.5K $\Omega$	3.2 $\Omega$	225 $\Omega$	.5 $\Omega$	N-6369	A-3330 ③	A-3031 ③	RO-3 ③	③ Drill one new mounting hole.

### SPEAKER

ITEM No.	RATINGS		REPLACEMENT DATA			INSTALLATION NOTES
	FIELD	V. C. IMP.	AIRCASLTLE	JENSEN	QUAM	
			PART No.	PART No.	PART No.	
SP1	PM	3.2 $\Omega$	N-6286	ST-105 ① MOD. P5-X	5A07 ②	① Fabricate new mounting bracket. ② Use mounting bracket provided.
SP2	CONE DIA.	V. C. DIA.				
	4 1/2"	9/16"				

## PARTS LIST AND DESCRIPTIONS (Continued)

### R F COILS

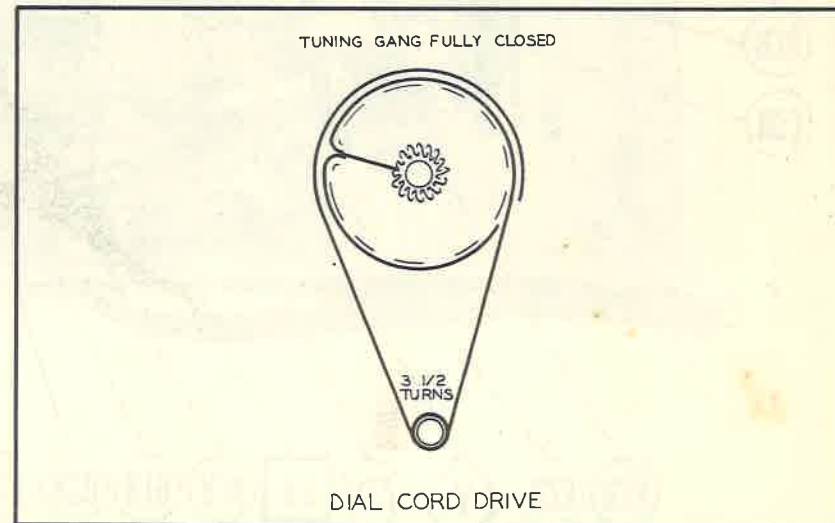
ITEM No.	USE	DC RES.		REPLACEMENT DATA	
		PRI	SEC	AIRCASLTLE	MEISSNER
				PART No.	PART No.
L1	Loop Ant.	.5 $\Omega$	2.5 $\Omega$	N-6343	
L2	FM Ant.	0 $\Omega$	0 $\Omega$	N-6371	
L3	RF Plate	0 $\Omega$		N-6373	
L4	Choke				
L4	FM RF	0 $\Omega$		N-6372	
L5	FM Osc.	0 $\Omega$		N-6349	
L6	AM Osc.	2 $\Omega$	4.5 $\Omega$	N-6348	14-1073
L7	1st FM IF	1.5 $\Omega$	0 $\Omega$	N-6346	
L8	1st AM IF	14 $\Omega$	14 $\Omega$	N-6344	16-6678
L9	2nd FM IF	1.5 $\Omega$	0 $\Omega$	N-6346	
L10	2nd AM IF	12.5 $\Omega$	12.5 $\Omega$	N-6345	16-6678
L11	Ratio Det. Trans.	1 $\Omega$	.1 $\Omega$	N-6341	
L12	Fil. Choke	.5 $\Omega$	.5 $\Omega$	N-6389	
L13	RF Grid Choke	0 $\Omega$			

### DIAL LIGHTS

ITEM No.	BASE TYPE	VOLTS	AMPS.	BEAD COLOR	REPLACEMENT DATA		NOTES
					AIRCASLTLE		
					PART No.		
M1	Bayonet	6-8	.15	Brown	N-1147		Type #47

### MISCELLANEOUS

ITEM No.	PART NAME	AIRCASLTLE	NOTES
		PART No.	
M2	2 Gang Var. Cap.	N-6276	(13-473MMF, 9-196MMF)
M3	Switch	N-6351	AM-FM
A5	Trimmer	N-6407	BC Osc. Adj.
A6	Trimmer	N-6406	BC Ant. Adj.
A13	Trimmer	N-6420	FM Osc. Adj.



# AIRCASTLE MODEL WEU-262

## PARTS LIST AND DESCRIPTIONS

### TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA		RMA BASE TYPE	INSTALLATION NOTES
		AIRCASTLE PART No.	STANDARD REPLACEMENT		
V1	RF Amp.	6BA6	6BA6	7BK	
V2	Converter	6BE6	6BE6	7CH	
V3	1st IF Amp.	6BA6	6BA6	7BK	
V4	2nd FM IF Amp.	6BA6	6BA6	7BK	
V5	Ratio Detector	6AL5	6AL5	6BT	
V6	DET. -AVC-AF	6SQ7	6SQ7	8Q	
V7	Power Output	25L6GT	25L6GT	7AC	
V8	Rectifier	25Z6GT	25Z6GT	7Q	

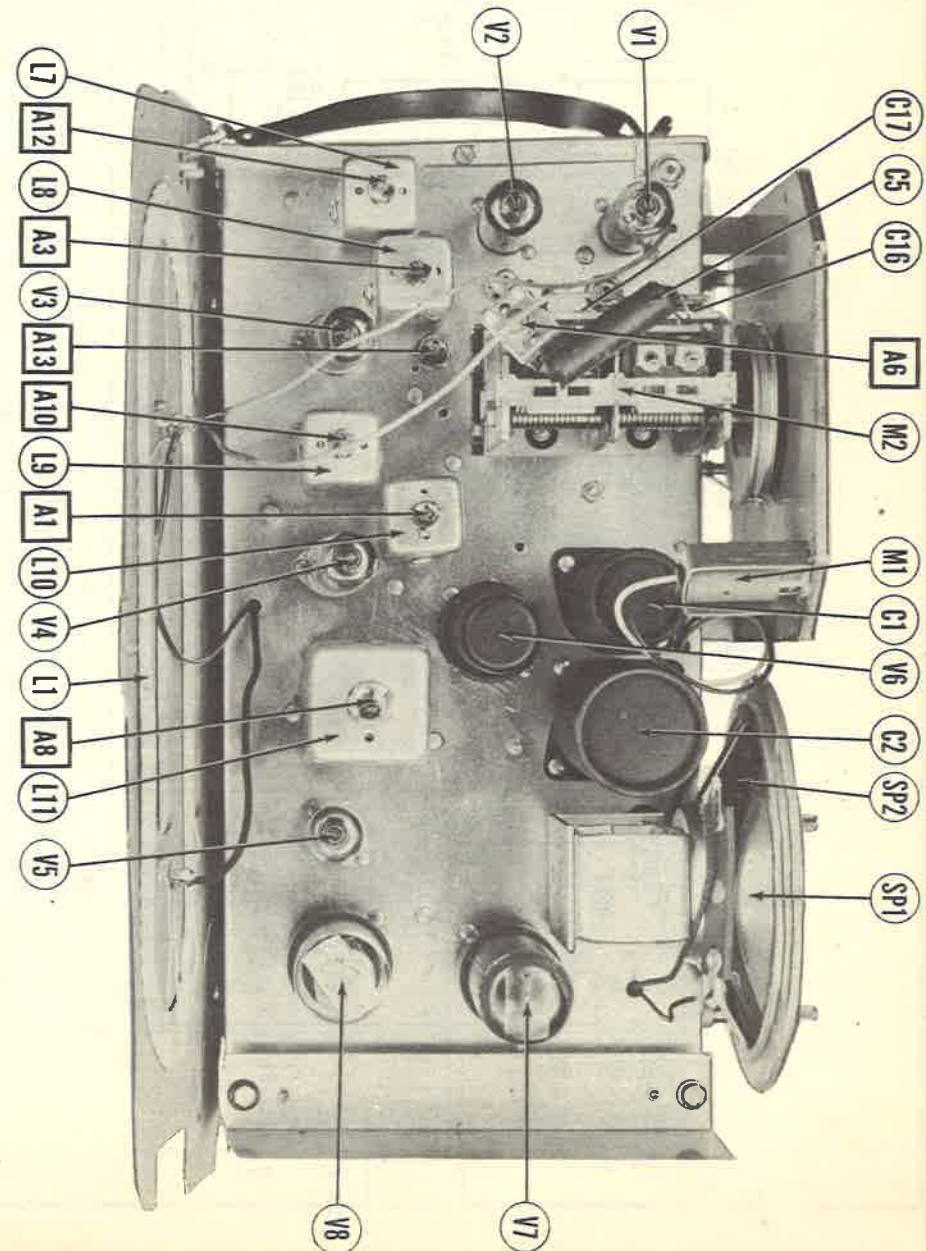
### CAPACITORS

Capacity values given in the rating column are in mfd. for Electrolytic and Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING CAP. VOLT	AIRCASTLE PART No.	REPLACEMENT DATA			IDENTIFICATION CODES AND INSTALLATION NOTES
			AEROVOX PART No.	ERIE PART No.	SPRAGUE PART No.	
C1	80 150	N-6312	AF20D		TVL-1	Filter
C2A	50 150	N-6313	AF101010D4A		EL-452	Filter
B	50 150					Filter
C	50 150					Filter
D	20 25					Output Cathode Bypass
C3	6 150	N-1367	PRS150/4		UT-41	Stabilizing Cap.
C4	.01 400	N-1344	P488-01	821-01	TM-11	Ant. Isolation
C5	.05 400	N-1345	P488-05		TM-15	Tuning Cap. Isolation
C6	.05 400	N-1345	P488-05		TM-15	AVC Filter
C7	20	N-6564	GP20K	NPOK-20	MS-42	Fixed Trimmer
C8	250	N-6488	GP250M	GP2K-250	1FM-325	Ant. Isolation
C9	5000	N-6272	BPD-5	811-005	29C1	AVC Filter
C10	5000	N-6272	BPD-5	811-005	29C1	RF Cathode Bypass
C11	5000	N-6272	BPD-5	811-005	29C1	RF Screen Bypass
C12	5000	N-6272	BPD-5	811-005	29C1	RF Filament Bypass
C13	50	N-6385	GP50K	GPIK-50	1FM-45	RF Coupling
C14	100	N-6015	GP100M	GP2K-100	1FM-31	RF Coupling
C15	75	N-6484	SI75JN750	N750L-75		Fixed Padder
C16	5000	N-6272	BPD-5	811-005	29C1	RF Bypass
C17	5000	N-6272	BPD-5	811-005	29C1	RF Bypass
C18	.1	N-1351	P288-1		TM-1	Line Isolation
C19	5000	N-6272	BPD-5	811-005	29C1	RF Bypass
C20	50	N-6385	GP50K	GPIK-50	1FM-45	Osc. Grid C ap.
C21	4.5	N-6483				Fixed Trimmer-See Note
C22	250	N-6488	GP250M	GP2K-250	1FM-325	Conv. Filament Bypass
C23	5000	N-6272	BPD-5	811-005	29C1	Osc. Anode Bypass
C24	5000	N-6272	BPD-5	811-005	29C1	Conv. Plate Decoupling
C25	5000	N-6272	BPD-5	811-005	29C1	AVC Filter
C26	.05	N-1346	P488-05		TM-15	AVC Filter
C27	5000	N-6272	BPD-5	811-005	29C1	1st IF Filament Bypass
C28	5000	N-6272	BPD-5	811-005	29C1	1st IF Cathode Bypass
C29	5000	N-6272	BPD-5	811-005	29C1	1st IF Decoupling
C30	50	N-6375	GP50M	GPIK-50	1FM-45	Diode RF Filter
C31	50	N-6375	GP50M	GPIK-50	1FM-45	Diode RF Filter
C32	10000	N-6482	GP10000M	821-01	56C1	RF Bypass
C33	5000	N-6272	BPD-5	811-005	29C1	AVC Filter
C34	5000	N-6272	BPD-5	811-005	29C1	2nd IF Cathode Bypass
C35	5000	N-6272	BPD-5	811-005	29C1	2nd IF Decoupling
C36	130	N-6487	GP120K	GP2K-120	1FM-315	Diode Load Cap.
C37	.002	N-6377	P688-002	GP2M-002	TM-22	De-emphasis
C38	5000	N-6272	BPD-5	811-005	29C1	RF Bypass
C39	5000	N-6272	BPD-5	811-005	29C1	Ratio Det. Filament Bypass
C40	250	N-6488	GP250M	GP2K-250	1FM-325	RF Bypass
C41	10000	N-6482	GP10000M	821-01	56C1	RF Bypass
C42	.02	N-1376	P488-02		TM-12	Audio Coupling
C43	.01	N-1344	P488-01	821-01	TM-11	Tone Compensation
C44	.006	N-4894	P688-006	GP2M-006	TM-26	Audio Coupling
C45	.1	N-1351	P288-1		TM-1	RF Bypass
C46	250	N-6488	GP250M	GP2K-250	1FM-325	RF Bypass
C47	250	N-6488	GP250M	GP2K-250	1FM-325	AF Amp. Plate Bypass
C48	.01	N-1344	P488-01	821-01	TM-11	Audio Coupling
C49	.005	N-4894	P688-005	811-005	TM-25	Tone Compensation
C50	.1	N-1351	P288-1		TM-1	AF Amp. Plate Decoupling
C51	.01	N-1344	P488-01	821-01	TM-11	Output Plate Bypass
C52	5000	N-6272	BPD-5	811-005	29C1	RF Bypass
C53	.05	N-1346	P488-05		TM-15	Line Filter
C54	4.5		SI4.5CN750	N750K-5		Osc. Feedback - See Note

Note. Not used in all models.

## CHASSIS—TOP VIEW



**ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT**

Use isolation transformer if available. If not connect a .1MFD capacitor in series with low side of signal generator and B-. To set pointer turn tuning cap fully closed and set pointer to last reference mark at low frequency end of dial.

**AM ALIGNMENT**

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 alignment screwdriver for adjusting.  
In steps 2 and 3, fashion a loop of several turns of wire and radiate the signal from the signal generator into the loop of the receiver.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1. .05MFD	High side to pin 7 (Grid) of 6BE6 (V2). Low side to B-.	455KC (400 $\nu$ Mod.)	AM (CCW)	Tuning gang fully open	Across voice coil	A1, A2, A3, A4	Adjust for maximum output. If two peaks are noted on any adjustment, use the one with the slug farthest out.
2.	Loop	1620KC	"	"	"	A5	Adjust for maximum output.
3.	Loop	1400KC	"	Tune for max. output.	"	A6	Adjust for maximum output.

**FM IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM**

Connect two matched 100K $\Omega$  ( $\pm 1\%$ ) resistors in series from point A to B-. The junction of these two resistors is alignment point C as shown on the schematic.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
4. 250MMF	High side to pin 1 (Grid) of 6BA6 (V4). Low side to B-.	10.7MC (Unmod.)	FM (CW)	Tuning gang fully open	DC Probe to Point A, Common to B-.	A7	Adjust for maximum deflection.
5.	"	"	"	"	DC Probe to Point B, Common to Point C.	A8	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.
6.	High side to Pin 1 (Grid) of 6BA6 (V3). Low side to B-.	"	"	"	DC Probe to Point A, Common to B-.	A9, A10	Adjust for maximum deflection.
7.	High side to pin 7 (Grid) of 6BE6 (V2). Low side to B-.	"	"	"	"	A11, A12	"

**FM IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE**

Use frequency modulated signal with 80% modulation and 450KC sweep. Use 120  $\nu$  sawtooth voltage in scope for horizontal deflection.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT SCOPE	ADJUST	REMARKS
4. 250MMF	High side to pin 1 (Grid) of 6BA6 (V3). Low side to B-.	10.7MC (450KC Mod.)	FM (CW)	Tuning gang fully open	Vert. Amp. to Point A, Low side to B-.	A7, A9, A10	Disconnect stabilizer capacitor C3. Adjust for maximum amplitude and symmetry as per Fig 1.
5.	High side to pin 7 (Grid) of 6BE6 (V2). Low side to B-.	"	"	"	"	A11, A12	"
6.	"	"	"	"	Vert. Amp. to Point B, Low side to B-.	A8	Reconnect capacitor C3. Adjust A8 so 10.7MC occurs at center of crossover lines as per Fig 2. SLIGHTLY re-touch A7 for maximum amplitude and straightness of crossover lines. Continue with step 8.

**FM RF ALIGNMENT**

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
8. Two 120 $\Omega$ carbon res.	Across "FM Ant." terminals with 120 $\Omega$ in each lead.	106MC (Unmod.)	FM	106MC	DC Probe to Point A, Common to B-.	A13	Adjust for maximum deflection
9.	"	90MC	"	90MC	"	"	Slightly bend the end plates of the FM RF section of tuning gang for maximum deflection.

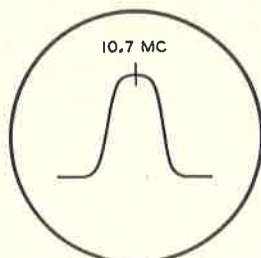


FIG. 1

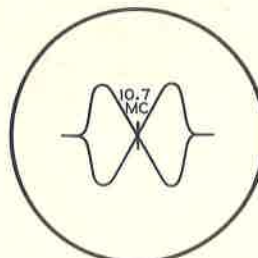
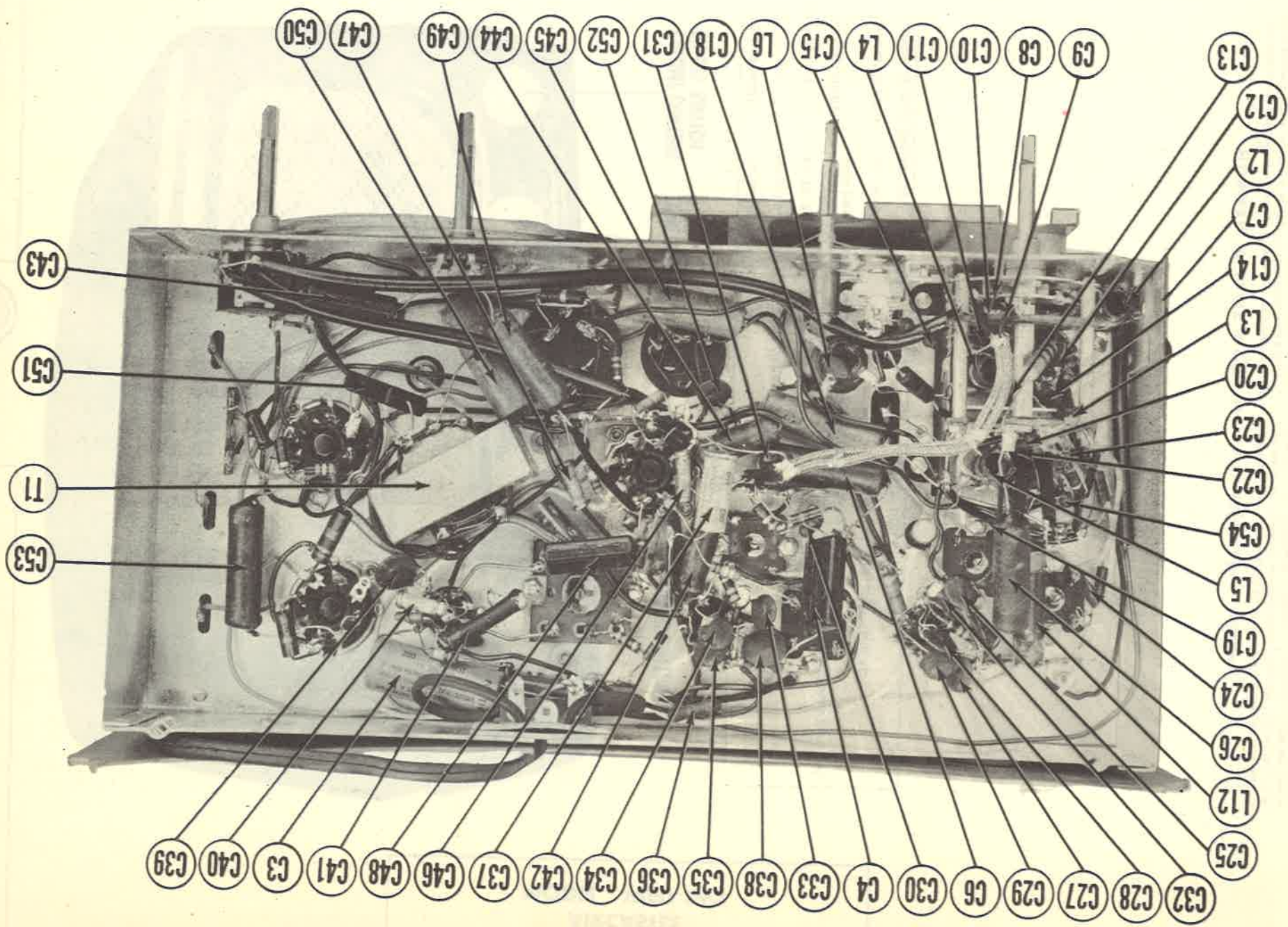


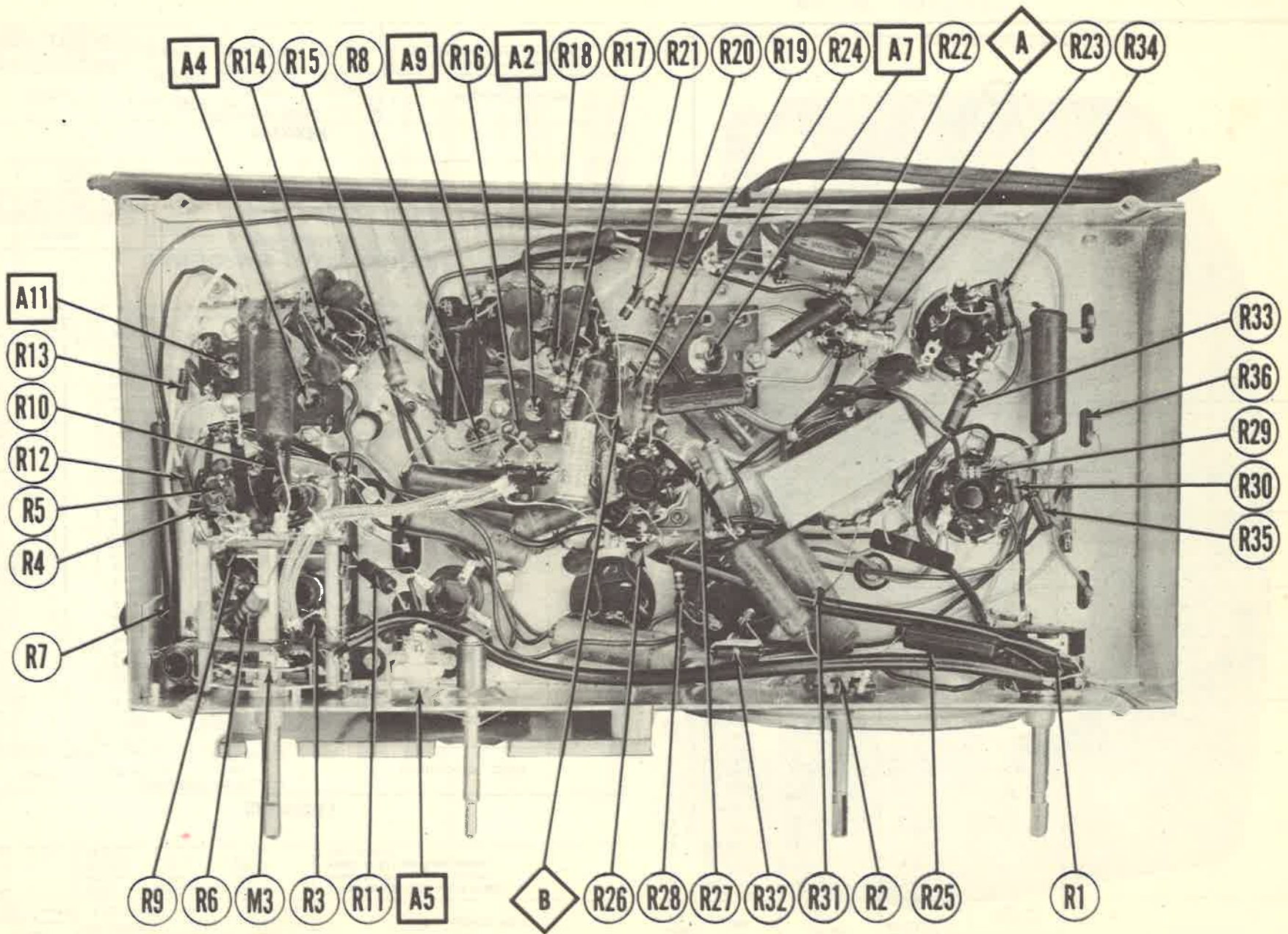
FIG. 2

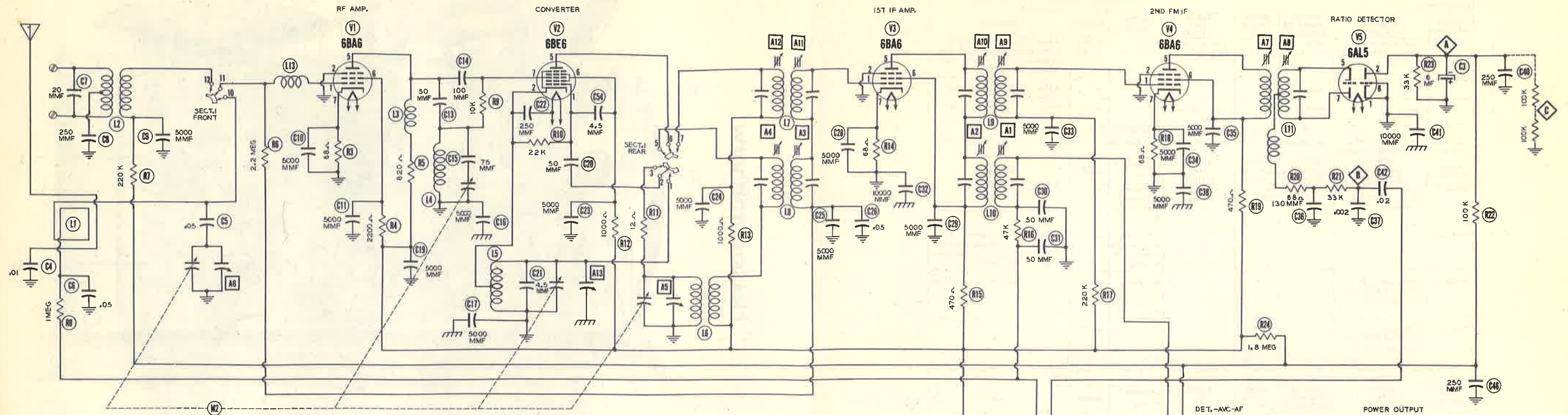
MODEL 3800-201  
SERIAL 1000000000



MODEL 3800-201  
SERIAL 1000000000

1000000000





BAND SWITCH SHOWN IN BROADCAST POSITION

VOLTAGE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
V 1	6BA6	-1VDC	0V.	18VAC	25VAC	105VDC	100VDC	4VDC	
V 2	6BE6	1-1.6VDC	0V.	12VAC	18VAC	105VDC	100VDC	0V.	
V 3	6BA6	-1VDC	0V.	25VAC	31VAC	100VDC	105VDC	4VDC	
V 4	6BA6	2VDC	0V.	31VAC	31VAC	100VDC	100VDC	1.1VDC	
V 5	6AL5	0V.	-6VDC	6VAC	0V.	-1VDC	0V.	-1VDC	
V 6	6SQ7	0V.	-4VDC	0V.	-1VDC	63VDC	6VAC	12VAC	
V 7	25L6GT	0V.	37VAC	110VDC	108VDC	1VDC	0V.	50VAC	7VDC
V 8	25Z6GT	0V.	117VAC	117VAC	125VDC	117VAC	125VDC	94VAC	125VDC

‡ TAKEN WITH VACUUM TUBE VOLTMETER.

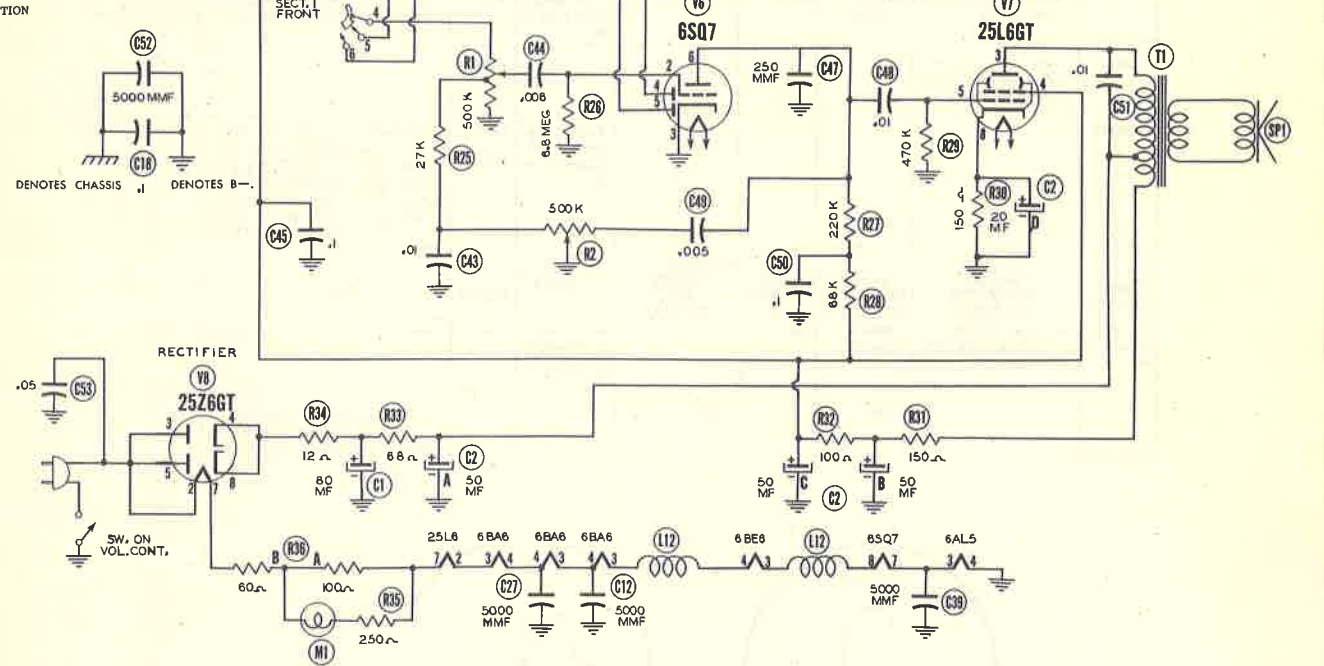
RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
V 1	6BA6	3 Meg.	0Ω	14Ω	18.5Ω	11000Ω	12.8KΩ	88Ω	
V 2	6BE6	22KΩ	.10	9Ω	13.5Ω	1350Ω	11.5KΩ	10KΩ	
V 3	6BA6	4.5 Meg.	0Ω	18.5Ω	23Ω	1900Ω	1900Ω	88Ω	
V 4	6BA6	350KΩ	0Ω	27.5Ω	23Ω	1350Ω	1350Ω	88Ω	
V 5	6AL5	0Ω	33KΩ	4.5Ω	0Ω	Inf.	0Ω	Inf.	
V 6	6SQ7	0Ω	6.8Meg.	0Ω	450KΩ	150KΩ	300KΩ	4.5Ω	9Ω
V 7	25L6GT	Inf.	27.5Ω	1300Ω	1400Ω	400KΩ	.5Ω	44Ω	180Ω
V 8	25Z6GT	Inf.	200Ω	200Ω	700KΩ	200Ω	180Ω	180Ω	700KΩ

† MEASURED FROM PIN 8 OF V8.  
‡ TAKEN IN FM POSITION.

THE COOPERATION OF THE MANUFACTURER OF THIS RECEIVER MAKES IT POSSIBLE TO BRING YOU THIS SERVICE

IF = 455 KC AM  
IF = 10.7 MC FM



1. DC Voltage measurements are at 20,000 ohms per volt; AC Voltages measured at 1,000 ohms per volt.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of + 10% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.