VOL. 8

AUTO RADIO MANUAL

service data on 48 models produced in 1957-58

AR-8

A Howard W. Sams PHOTOFACT PUBLICATION

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AUTO RADIO MANUAL

VOLUME 8

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FIRST EDITION

HOWARD W. SAMS & CO., INC.
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AUTO RADIO MANUAL, VOL. 8

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For other custom equipment for use in Pontiac cars, see Motorola listing.

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For other custom equipment for use in Studebaker cars, see Automatic, Firestone, and Motorola listings.

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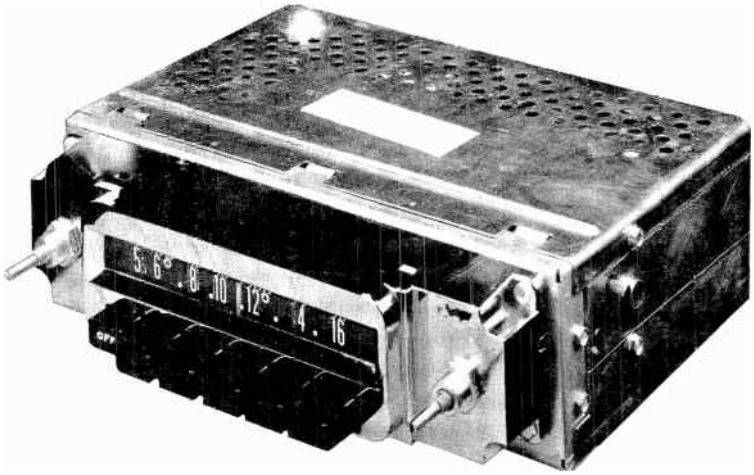
• Signifies coverage in this volume

AMERICAN MOTORS MODEL 8990494



TRADE NAME	American Motors Model 8990494 (For 1958 Hudson Ambassador, Nash, Rambler, Rambler Rebel Automobiles)
MANUFACTURER	Motorola Inc., 4545 W. Augusta Blvd., Chicago 51, Illinois
TYPE SET	Battery Operated Custom Built AM Automobile Receiver With Transistorized Output
TUBES (Four)	Types 12BL6 RF Amplifier, 12AD6 Converter, 12BL6 IF Amplifier, 12DK7 Det.-AVC-AF Amp.
POWER SUPPLY	12 Volt Storage Battery — RATING 1.8 Amp. @ 12.6 Volts DC
TUNING RANGE—BROADCAST	540KC-1610KC

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING 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.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.1mfd	High side to pin 7 (grid) of 12AD6 (V2). Low side to chassis.	262.5KC (400∿ Mod)	High freq. end stop.	Across voice coil	A1, A2, A3, A4	Adjust for maximum output.
2.	Fig. 1	Thru dummy to antenna receptacle.	1610KC	"	"	A5, A6, A7	"
	It is not necessary to perform steps 3, 4, and 5 unless the tuner has been tampered with or associated components have been replaced. If necessary, remove dial scale background bracket to expose core adjustments. Back tuning cores (A8, A9, A10) 1" out of coils. (Alignment tool Part #66A76278 may be used.)						
3.	Fig. 1	Thru dummy to antenna receptacle.	1610KC	High freq. end stop.	Across voice coil	A5, A6, A7	Adjust for maximum output.
4.	"	"	1020KC	49/64" from high freq. end stop.	"	A8, A9, A10	"
5.	"	"	1610KC	High freq. end stop.	"	A5, A6, A7	Adjust for maximum output. Repeat steps 4 and 5 until no further improvement is noted. Step 5 should be the last step. (Cement cores).
	With radio installed in car and antenna fully extended, tune in weak station near 1400KC and adjust A7 for maximum volume.						

PUSHBUTTON ADJUSTMENT

1. Allow receiver to warm up for 15 minutes. Antenna should be in its lowest position.
2. Press pushbutton to the left, then pull out.
3. Tune manually to desired station. Press pushbutton in firmly.
4. Repeat for remaining pushbuttons.

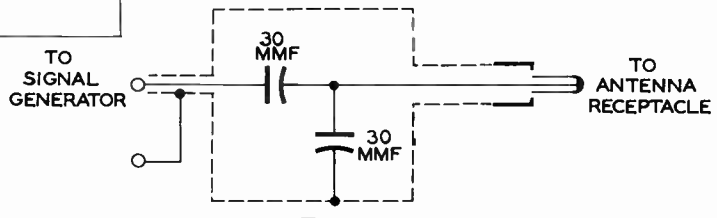


FIG. 1

AMERICAN MOTORS MODEL 8990494

H403

PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier	12BL6	
V2	Converter	12AD6	
V3	IF Amplifier	12BL6	
V4	Det.-AVC-AF Amp.	12DK7	

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			CBS PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	2N176	Output	2N155		2N178	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	MOTOROLA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	500	16	23B539261	AFH2-02-10	B0045	WP200.5			R2452 *
B	100	16							

FIXED CAPACITORS

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

ITEM No.	RATING		REPLACEMENT DATA							NOTES
	CAP.	VOLT	MOTOROLA PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	
C2	20-150		20B532899							
C3	.1	200	8R121573	P288N-1	DF-104	CUB2P1		GEM-201	2TM-P1	
C4	18		21R120578							N150 10%
C5A	50-260		20B539612							
B	47									
C	120-210									
C6	100		21R124032							N220 5%
C7	10000	1000	21R122789	DAC-27	DD16-103	BYA10S1		GEM-1011	BL-S10	
C8	100		21R410036	N750-DI 100	TCN-100	C10T1U	TC7-100	NT-531	5TCU-T1	N750 10%
C9	100		21R400537	N750-DI 100	TCN-100	C10T1U	TC7-100	NT-531	5TCU-T1	N750
C10	3300		21R120422	BPD-0033	DD-332	BYA10D33	ED-0033	UC-5233	5GA-D33	
C11	1000		21R410127	BPD-001	DD-102	BYA6D1	ED-1000	DC521	5HK-D1	
C12	10000	1000	21R122789	DAC-27	DD16-103	BYA10S1		GEM-1011	BL-S10	

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	MOTOROLA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1A	4meg		18B560145	F1-82			■ UE3786	Tone
B	1meg			R2-56				Volume - Tap ⓐ 500K
R2	210Ω	2(WW)	18K540718		39-200			Bias Adjustment

■ STA-LOC Equivalent; FA46L, OS1750, RU16T55, IS2312.

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING		MOTOROLA PART No.	NOTES
	OHMS	WATT		
R3	3.3meg		6K119407	
R4	1.5meg		6R3986	
R5	15meg		6R488284	
R6	1.5meg		6R6480	
R7	3.3meg		6K119407	
R8	47K		6R6048	
R9	12meg		6R400334	

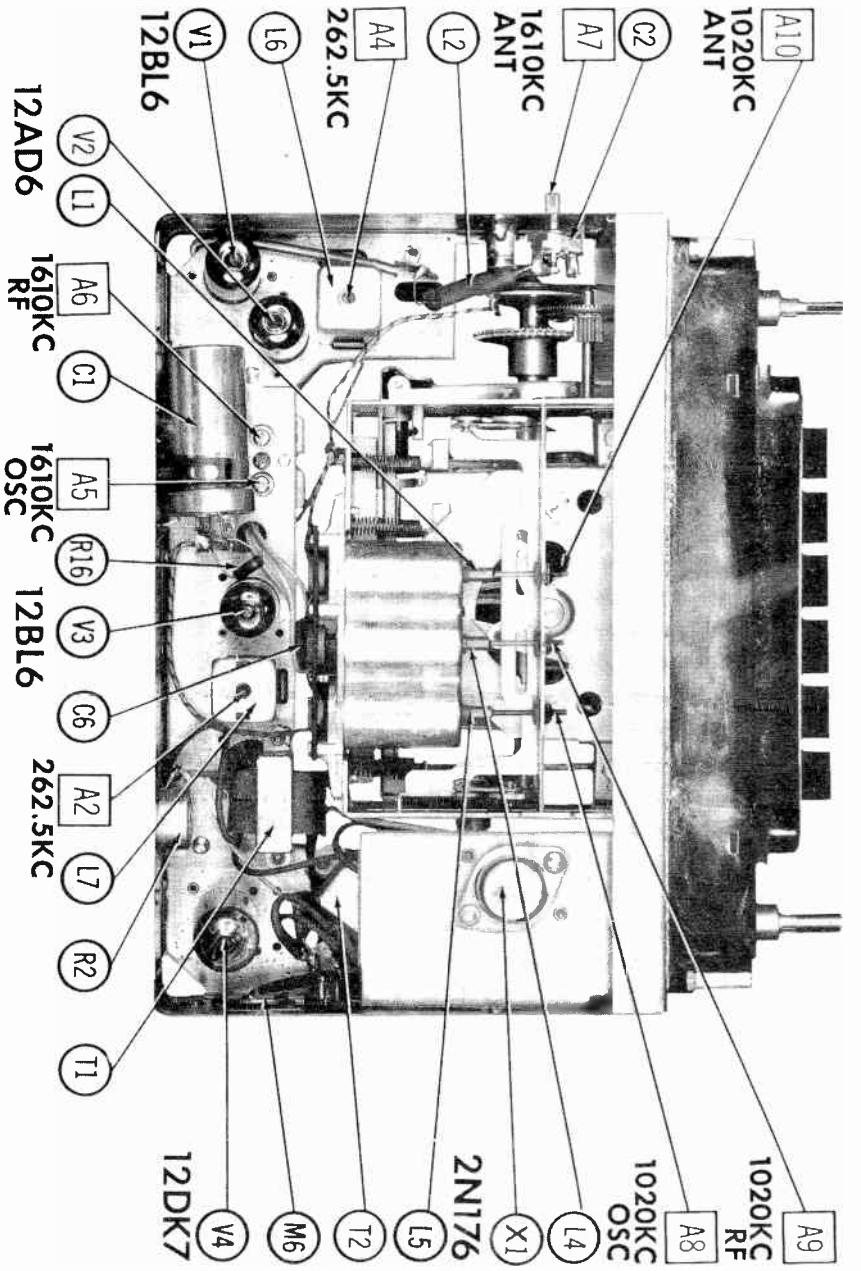
ITEM No.	RATING		MOTOROLA PART No.	NOTES
	OHMS	WATT		
R10	47K		6R6048	Note 1
R11	68K		6R6074	
R12	10meg		6R5622	
R13			6K540634	Note 2
R14	.47Ω		17K488286	
R15	5.6Ω		17K739323	
R16	100Ω		6R6326	

Note 1. Some versions may use 330K (Part #6R2096) in this application.
Note 2. Temperature compensating unit, 10Ω ⓐ 25° C.

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA						NOTES
	PRI.	SEC.	MOTOROLA PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T1	15 :	1	25C560231 ①						① Alt. part #25K560162.

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE PRI.	IMPEDANCE SEC.	REPLACEMENT DATA MOTOROLA PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
T2	7Ω tap ⓐ 6.8Ω tap ⓐ 3-4Ω		25C560156							

SPEAKER

ITEM No.	TYPE SIZE	TYPE FIELD	TYPE V. C. IMP.	REPLACEMENT DATA MOTOROLA PART No.	REPLACEMENT DATA QUAM PART No.	NOTES
SP1	5" x 7"	PM	3-4Ω	50D560146 ①	57A21	① Includes plug only.
	5" x 7"	PM	3-4Ω	50D560147 ②		② Includes plug and receptacle

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA MOTOROLA PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Ram PART No.	NOTES
L1	Ant. Coil	24C536308					Note 1
L2	RF Choke	24K539955					Includes 27mmf Cap.
L3	IF Trap Coil	24K539616	19-3125	TV-195	6153	VP-4	133 Microhenries
L4	RF Coil	24C536308					Note 1
L5	Osc. Coil	24B536300					Note 1
L6	Input IF	24K560419	16-6752	BC-350	12-H2	RF-3	
	Input IF	24K537792 *	16-6752	BC-350	12-H2	RF-3	*Alternate part number.
L7	Output IF	24K560102					
	Output IF	24B542371 *					*Alternate part number.

Note 1. Part of Tuner (M4).

FILTER CHOKE

ITEM No.	RATINGS TOTAL DIRECT CURRENT	RATINGS D. C. RESISTANCE	RATINGS INDUCTANCE (0 CURRENT 1000 ~)	REPLACEMENT DATA MOTOROLA PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
L8	1.8A	.3Ω	4 MH.	25C560440 ①					

FUSES

ITEM No.	TYPE	RATING	MOTOROLA PART No. FUSE	MOTOROLA PART No. HOLDER	LITTELFUSE PART No. FUSE	LITTELFUSE PART No. HOLDER	BUSS PART No. FUSE	BUSS PART No. HOLDER
M1	AGA 5	5A	65R122345	9K560411	301005.	155004	AGA 5	HIF

MISCELLANEOUS

ITEM No.	PART NAME	MOTOROLA PART No.	NOTES
M2	Dial Lamp		#44 (Alternate type #47, part #65R10867)
M3	Dial Lamp		#44 (Alternate type #47, part #65R10867)
M4	Tuner	77E542307	(AT-234) Complete. (Includes coils L1, L4, L5 and Mounting Plate Assy. part #1V536078)
M5	Switch	40B534023	On-off (SPST)
M6	Spark Plate	48A539147	Selenium (Alternate Part #48K539953)

CABINETS & CABINET PARTS

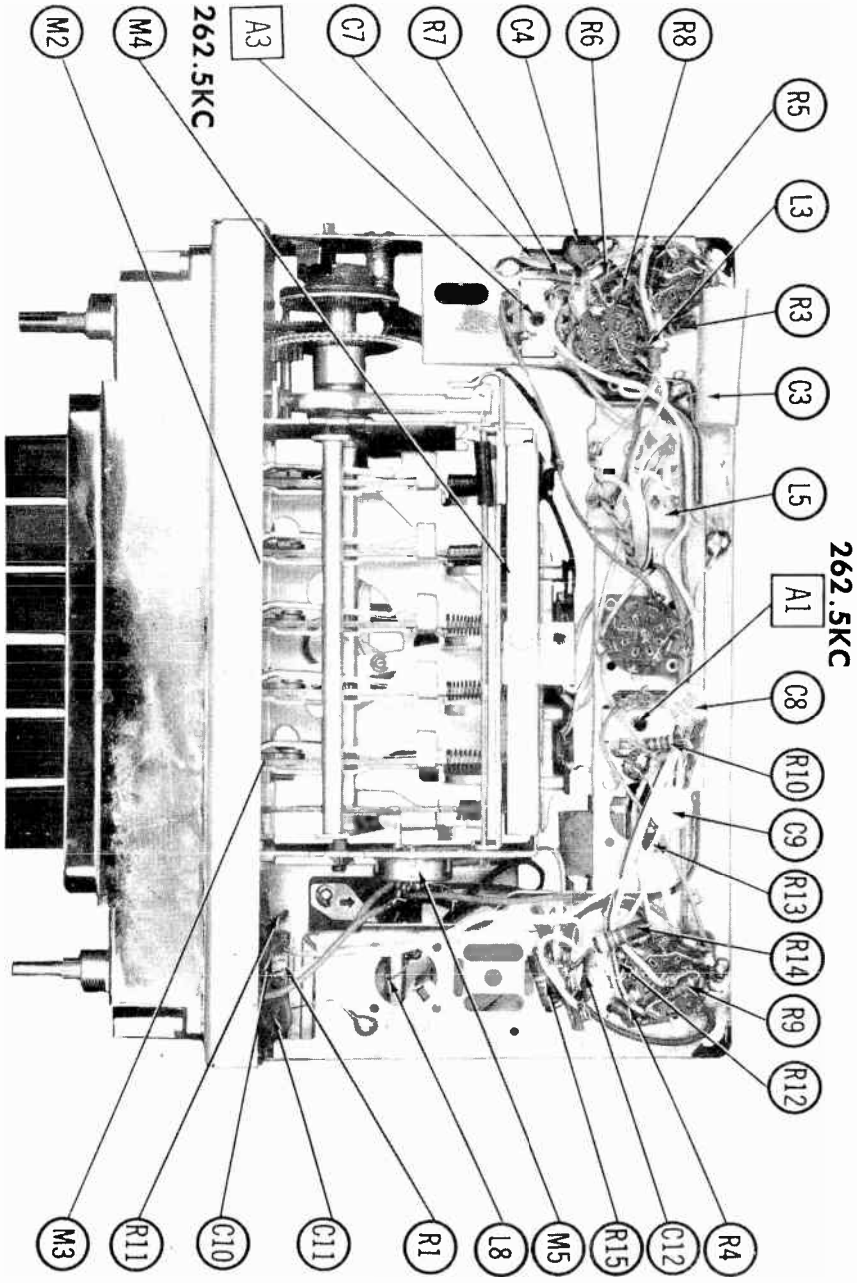
(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

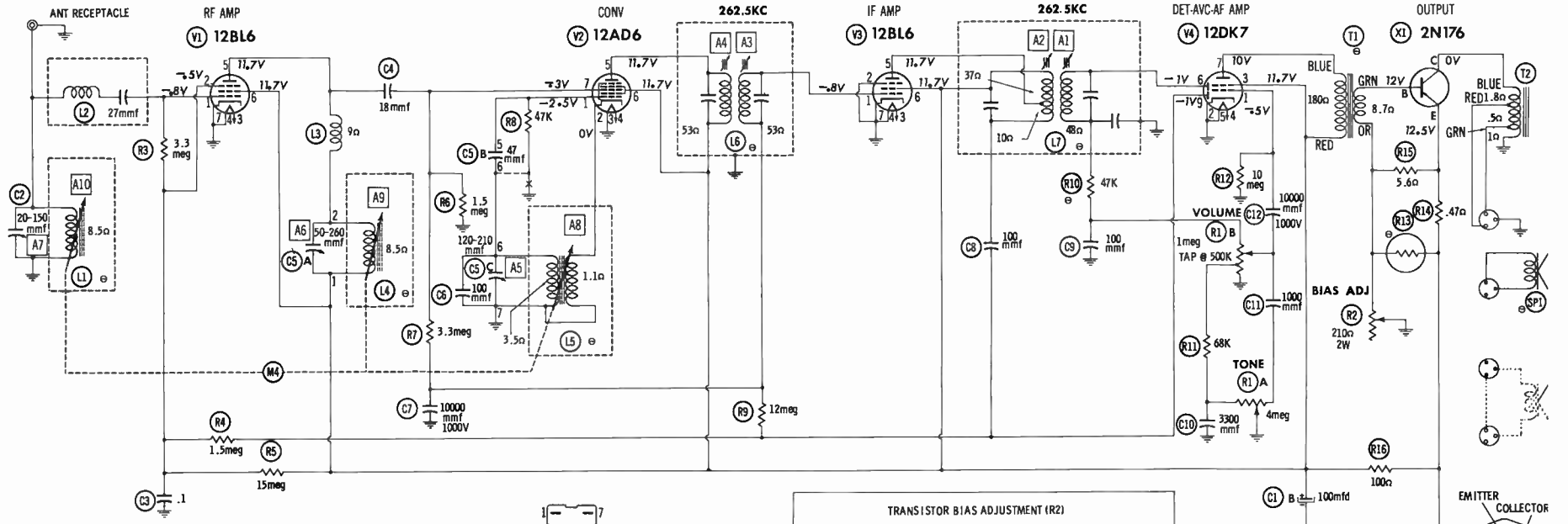
NAME	PART NO.	DESCRIPTION
Knob	36B560158	Tone & dummy
Knob	1V560741	Tuning & volume
Dial Scale	34B560043	
Pushbutton	38K560032	Off
Pushbutton	38K560553	Station

WIRING DATA

General-use Shielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors
Shielded Hook-up Wire ..... Use BELDEN No. 8885
Bonding Strap ..... Use BELDEN No. 8661

CHASSIS—BOTTOM VIEW





RF-OSC CAP BLOCK TERMS.

TRANSISTOR BIAS ADJUSTMENT (R2)

The bias adjustment should be checked after a transistor is replaced. Turn the bias control fully counterclockwise. Apply power to the receiver and allow a 15 minute warm-up period. Connect the positive lead of a low-range VTVM to the junction of T2 and X1. Connect the negative lead to chassis. Adjust R2 for a meter reading of .98 volts. (This is equivalent to acollector current of 420MA).

RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12BL6	11meg	8meg	1.3Ω	0Ω	†120Ω	†100Ω	0Ω		
V2	12AD6	47K	1.1Ω	0Ω	1.3Ω	†150Ω	†100Ω	1.3meg		
V3	12BL6	4meg	0Ω	1.3Ω	0Ω	†140Ω	†100Ω	0Ω		
V4	12DK7	10meg	0Ω	†100Ω	1.3Ω	0Ω	1meg	†280Ω	NC	6meg

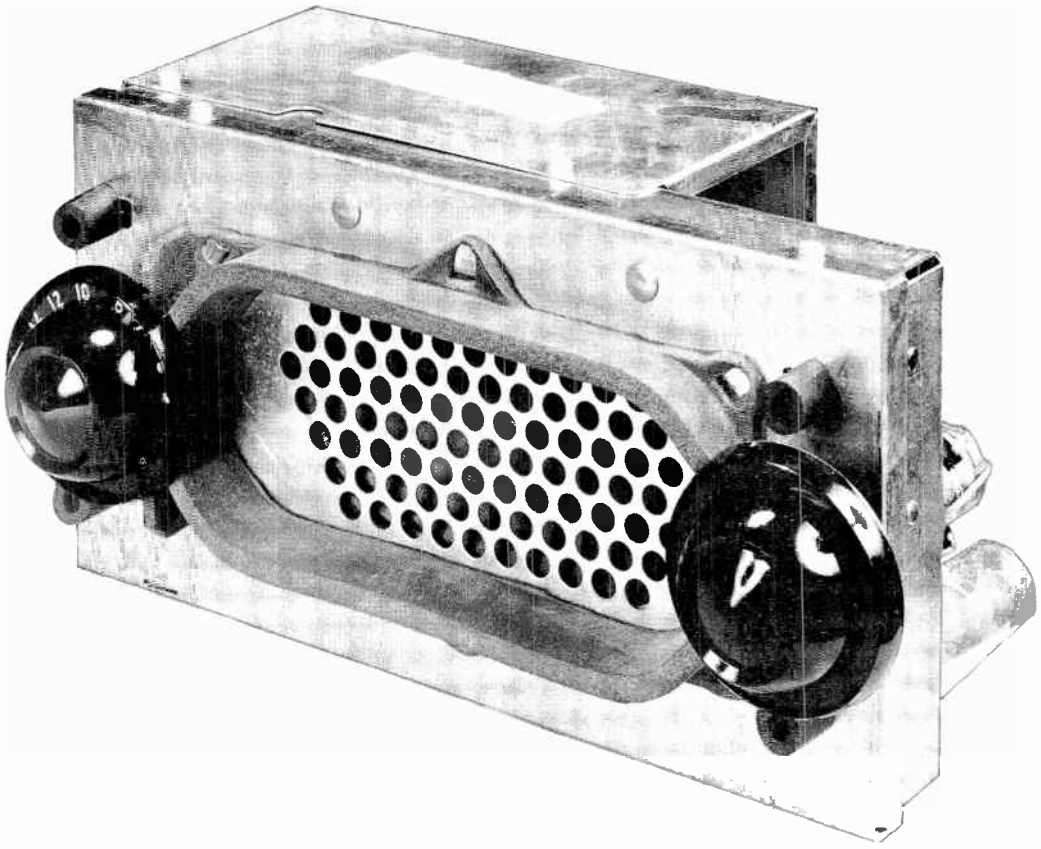
TRANSISTOR CIRCUIT RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.
† MEASURED FROM POSITIVE TERMINAL OF C1A.
NC NO CONNECTION.

1. DC voltage measurements taken with vacuum tube voltmeter.
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes posssible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

⊖ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

A PHOTOFACT STANDARD NOTATION SCHEMATIC
Howard W. Sams & Co., Inc. 1958



TRADE NAME	American Motors Model 8990543 (83MR) for 1958 Rambler Automobiles
MANUFACTURER	Motorola Inc., 4545 W. Augusta Blvd., Chicago 51, Illinois
TYPE SET	Battery Operated Custom Built AM Automobile Receiver with Transistorized Output.
TUBES (Three)	Types 12AD6 Converter, 12BL6 IF Amplifier, 12DK7 Det.-AVC-AF Amp.
POWER SUPPLY	12 Volt Storage Battery — RATING 1 Amp. @ 12.6 Volts DC
TUNING RANGE—BROADCAST	540-1605KC

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING 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.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.1mfd	High side to pin 7 (grid) of 12AD6 (V1). Low side to chassis.	455KC (400~ Mod.)	Tuning gang fully open.	Across voice coil.	A1, A2, A3, A4	Adjust for maximum output.
2.	Fig. 1.	Thru dummy to antenna receptacle	1605KC	"	"	A5	"
3.	"	"	1400KC	Tune to 1400KC signal	"	A6	"
4.	"	"	600KC	Tune to 600KC signal.	"	A7	Adjust for maximum output while rocking gang.
5.							Repeat steps 3 & 4. Last adjustment should be A6.
6.	With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A6 for maximum output.						

H558

AMERICAN MOTORS
MODELS 8990543 (83MR)

PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	Converter	12AD6	
V2	IF Amplifier	12BL6	

ITEM No.	USE	TYPE	NOTES
V3	Det. -AVC-AF Amp.	12DK7	

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA				NOTES
			CBS PART No.	RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	2N176	Output	CBS-2N155	2N176		2N176	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	MOTOROLA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	■500	16	23B539261	AFH2-02-10	B0045	WP200.5			R2452 *
B	▲100	16							

* Non-Catalog Item

FIXED CAPACITORS

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

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT	MOTOROLA PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
C2	20-180		20K481527						
C3	.1	200	8R121573	P288N-1	DF-104	CUB2P1	GEM-201	2TM-P1	
C4	12-40		20K511186						
C5	100		21R410036	N750-DI 100	DTN-100	C10T1U	NT-531	5TCU-T1	N750 10%
C6	3300		21R120422	BPD-0033	DD-332	BYA10D33	UC-5233	5GA-D33	
C7	5000		21R115312	BPD-005	DD-502	BYA10D5	DC525	5HK-D5	
C8	.05	200	8R121005	P288N-05	DF-503	CUB2S5	GEM-415	2TM-S5	
C9	680		21K125371		D6-681	5R5T68		MS-368	10%

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	MOTOROLA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1A	4meg		18B560804	F1-82			■	Tone
B	1meg			R2-59				Volume, Tap② 300K
C	Switch			KB-4				
R2	200Ω	1 (WW)	18K560864				FL-200	Transistor Bias, 75Ω Stop.

■ "STA-LOC" Equivalent: FA46L, OS2125, RU16T35, IS2687

RESISTORS

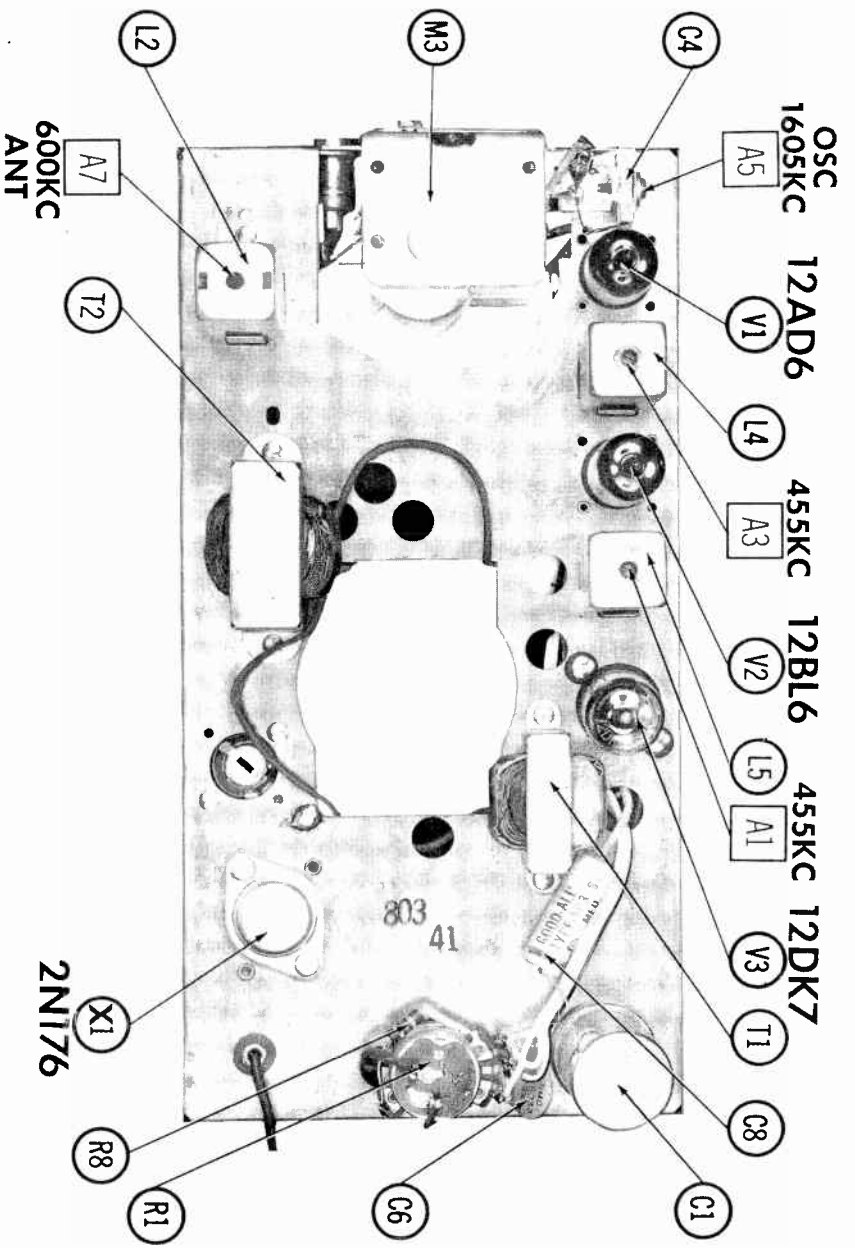
All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING		MOTOROLA PART No.	NOTES
	OHMS	WATT		
R3	330K		6R2096	
R4	33K		6K121704	
R5	3.9meg		6R490110	
R6	47K		6K121687	
R7	5.6meg		6R3988	
R8	47K		6K121687	

ITEM No.	RATING		MOTOROLA PART No.	NOTES
	OHMS	WATT		
R9	10meg		6K119408	
R10			6A561001	Note 1.
R11	5.6Ω		17K739323	
R12	.68Ω		17K560865	
R13	10Ω Cold		6K540634	
R14	100Ω		6K119402	

Note 1. Value varies depending on applied voltage (Approx. 5000-12000Ω)

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					
		MOTOROLA PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Rom PART No.	NOTES
L1	Ant. Coil	24K592197					2.7 microhenries; IRC Part #CLA
L2	Ant. Coil	24B591628					
L3	Osc. Coil	24A591629					
L4	Input IF	24K560863	16-6758	BC-352	12-C1	RF-1	
L5	Output IF	24K560801	16-6770	BC-355	12-C6		

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA						
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000 ~)	MOTOROLA PART No.	Holldorson PART No.	Merit PART No.	Rom PART No.	Stancor PART No.	Thordorson PART No.	Triod PART No.
L6	1A	.3Ω	.004HY	25C560440						

TRANSFORMER (INTERSTAGE)

ITEM No.	TURNS RATIO		REPLACEMENT DATA							NOTES
	PRI.	SEC.	MOTOROLA PART No.	Holldorson PART No.	Merit PART No.	Rom PART No.	Stancor PART No.	Thordorson PART No.	Triod PART No.	
T1	12	:1	25K560799							

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA							NOTES
	PRI.	MOTOROLA PART No.	Holldorson PART No.	Merit PART No.	Rom PART No.	Stancor PART No.	Thordorson PART No.	Triod PART No.	
T2	39Ω Tap @ 3-4Ω	25K560798							

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	MOTOROLA PART No.	QUAM PART No.	
SP1	4" x 6"	PM	3-4Ω	50K560802	46A15 ①	①Drill New Mounting Holes.

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			MOTOROLA PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	1AG	5A 32V	65R122 345	9K56U871	301005. (1AG 5A 32V)	155004	AGA5	HAF

MISCELLANEOUS

ITEM No.	PART NAME	MOTOROLA PART No.	NOTES
M2	Lamp	65R533821	#1891
M3	Tuning Cap.	19B501790	2 Gang (Ant. 16-495mmf, Osc. 26-144mmf)
M4	Spark Plate	48K539953	Selenium Type (Use #43A539954 Bushing, #5K124848 Eyelet, #4A542137 Washer)
	Spark Plate	48A539147	Selenium Type (Use #43A539259 Bushing, #5K124633 Eyelet, #4A540423 Washer)

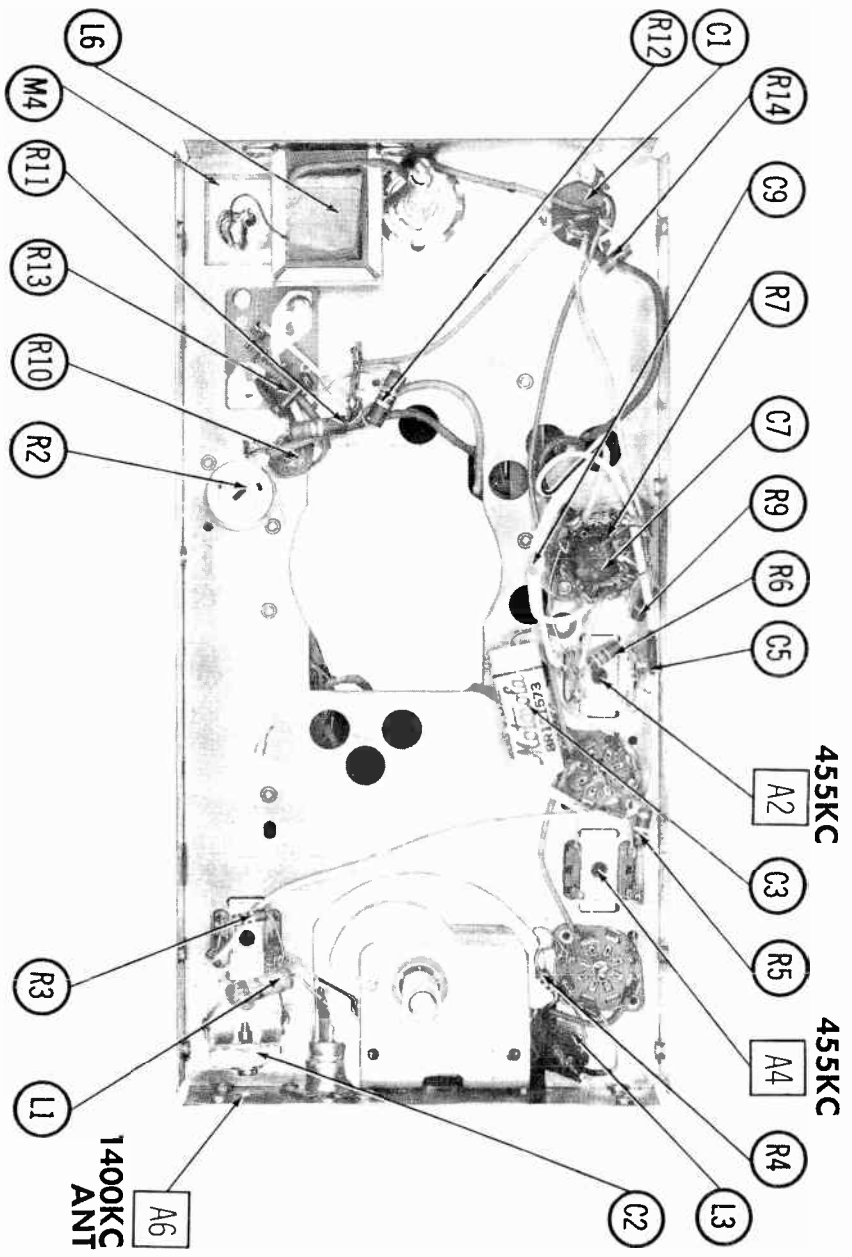
CABINETS & CABINET PARTS

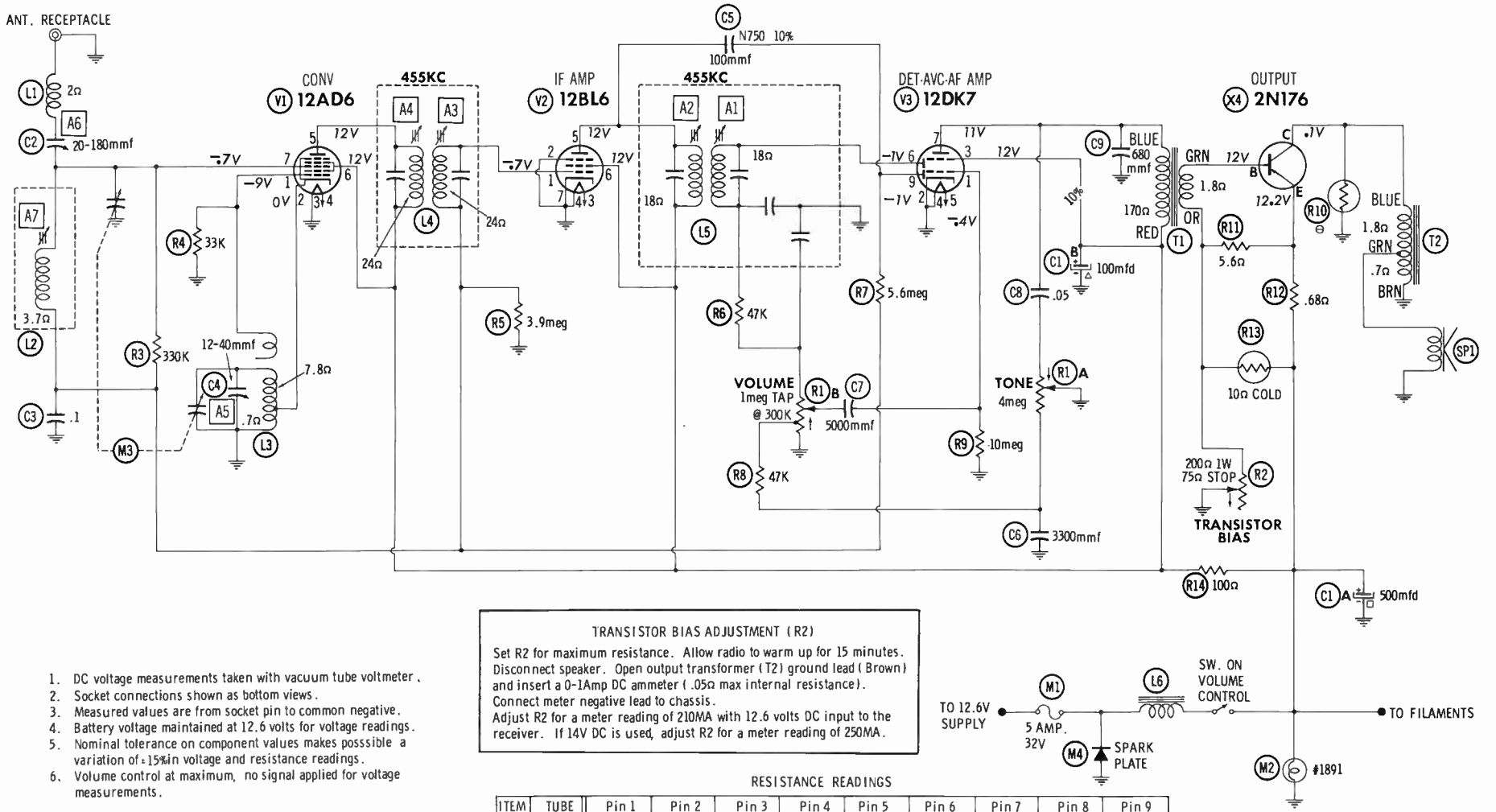
(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

WIRING DATA

General-use Shielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors
Shielded Hook-up Wire ..... Use BELDEN No. 8885
Bonding Strap ..... Use BELDEN No. 8661

CHASSIS—BOTTOM VIEW





1. DC voltage measurements taken with vacuum tube voltmeter.
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

⊖ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)

A PHOTOFACT STANDARD NOTATION SCHEMATIC

TRANSISTOR BIAS ADJUSTMENT (R2)

Set R2 for maximum resistance. Allow radio to warm up for 15 minutes. Disconnect speaker. Open output transformer (T2) ground lead (Brown) and insert a 0-1Amp DC ammeter (.05Ω max internal resistance). Connect meter negative lead to chassis. Adjust R2 for a meter reading of 210MA with 12.6 volts DC input to the receiver. If 14V DC is used, adjust R2 for a meter reading of 250MA.

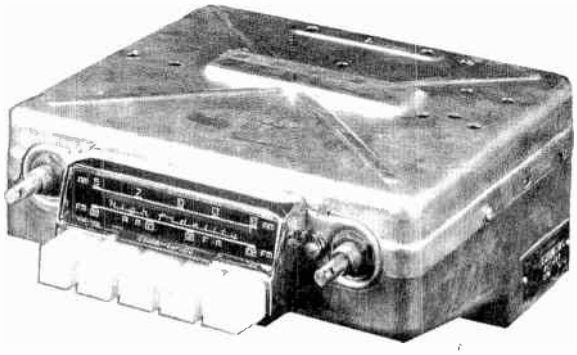
RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12AD6	33K	.7Ω	0Ω	1.6Ω	†124Ω	†100Ω	3.9meg		
V2	12BL6	3.9meg	0Ω	1.6Ω	0Ω	†118Ω	†100Ω	0Ω		
V3	12DK7	10meg	0Ω	†100Ω	0Ω	1.6Ω	780K	†270Ω	NC	9.5meg

TRANSISTOR CIRCUIT RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE

† MEASURED FROM POSITIVE TERMINAL OF C1A

NC NO CONNECTION



BECKER MODELS
"Europa" MU, MUK

TRADE NAME	Becker Models Europa MU, Europa MUK		
SUPPLIER	Witte Import Distributors, 613-19 S. 24th St., Philadelphia 46, Pa.		
TYPE SET	Battery Operated Universal FM-BC Receiver (Model Europa MU Has Marine Band)		
TUBES (Six)	Types 6AQ8/ECC85 FM AM RF Amp.-FM Conv., 6AJ8/ECH81 1st FM IF Amp.-AM Mixer-AM Osc., EBF89 2nd FM IF Amp.-AM IF Amp.-AM Det.-AVC, 6DA6/EF89 Limiter, 6T8/EABC80 Ratio Det.-AF Amp., 6BQ5/EL84 Output (Some Versions Have Push-Pull Output)		
POWER SUPPLY	Storage Battery (6 Volt or 12 Volt)	RATING	2.71 Amp. @ 12.6 Volts DC
TUNING RANGE—BROADCAST	510KC - 1630KC	FREQ. MOD.	88MC - 108MC

HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana

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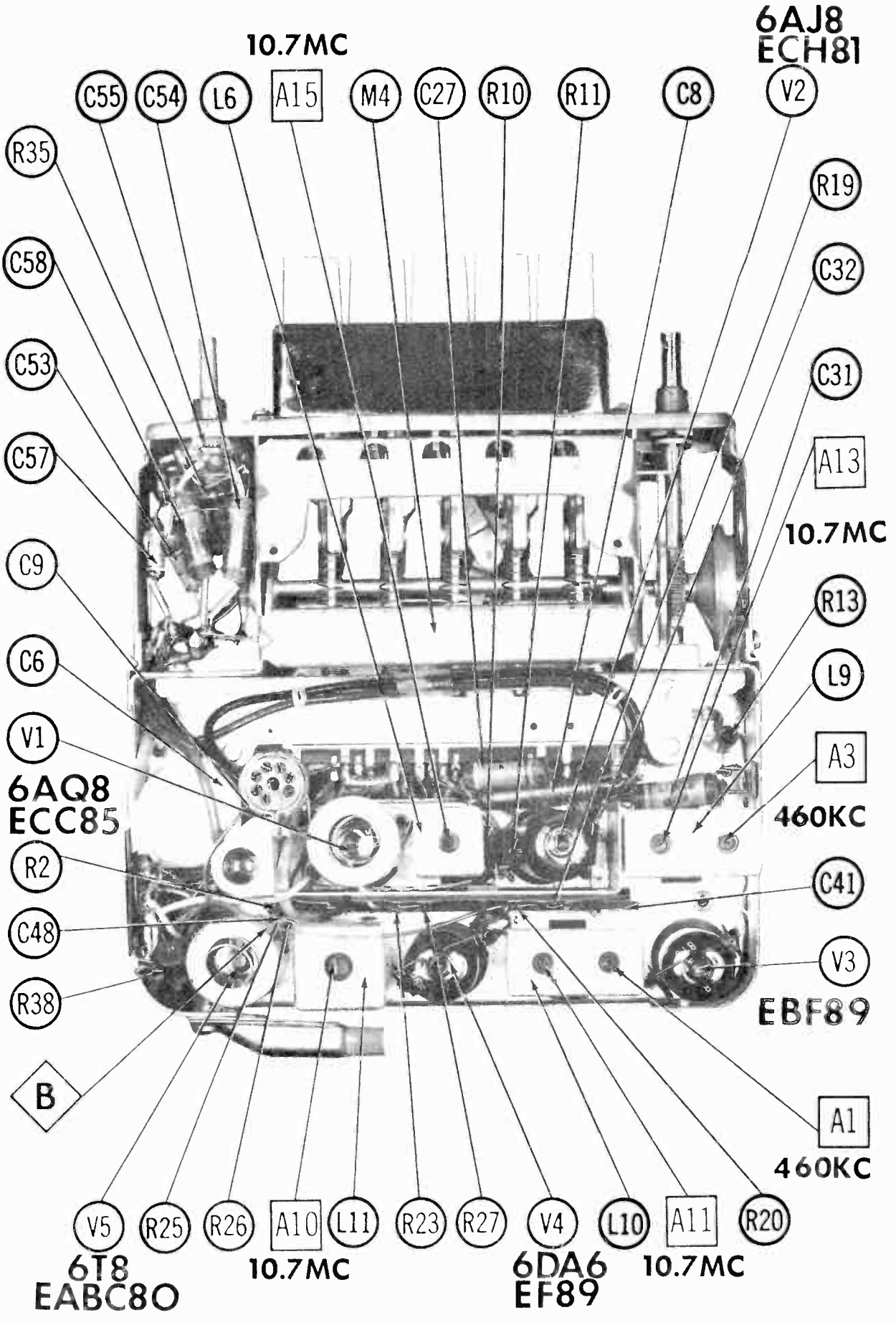


CHASSIS TOP VIEW

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING 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.

AM ALIGNMENT

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.01mfd	High side to pin 2 (grid) of 6AJ8/ECH81 (V2). Low side to chassis.	460KC (400~ Mod)	AM	Tuning gang fully open	Across voice coil	A1, A2, A3, A4	Adjust for maximum output.
2.	Fig. 1	Thru dummy to antenna receptacle	1630KC	"	"	"	A5	"
3.	"	"	510KC	"	Tune to 510KC signal	"	A6	"
4.	"	"	562KC	"	Tune to 562KC signal	"	A7, A8	"

FM IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM

Connect two matched 100K (±1%) resistors in series from point (A) to chassis. 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
5.	.01mfd	High side to pin 2 (grid) of 6DA6/EF89 (V4). Low side to chassis.	10.7MC (Unmod)	FM	Point of non-interference	DC probe to point (A). Low side to chassis.	A9	Adjust for maximum deflection.
6.	"	"	"	"	"	DC probe to point (B). Common to point (C).	A10	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.
7.	"	High side to pin 2 (grid) of 6AJ8/ECH81 (V2). Low side to chassis.	"	"	"	DC probe to point (A). Low side to chassis.	A11, A12, A13, A14	Adjust for maximum deflection.
8.		Across antenna receptacle	"	"	"	DC probe to point (A). Low side to chassis.	A15, A16	"

FM IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE

Use frequency modulated signal with 60~ modulation and 450KC sweep. Use 120~ 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
5.	.01mfd	High side to pin 2 (grid) of EF89/ (V4). Low side to chassis.	10.7MC (450KC Swp)	FM	Point of non-interference.	Vert. Amp. to point (A). Low side to chassis.	A9	Disconnect stabilizing capacitor C5. Adjust for curve of maximum amplitude and symmetry similar to Fig. 2.
6.	"	"	"	"	"	Vert. Amp. to point (B). Low side to chassis.	A10	Reconnect C5. Adjust so that 10.7MC occurs at center of crossover lines similar to Fig. 3. SLIGHTLY retouch A9 for maximum amplitude and straightness of crossover lines.
7.	"	High side to pin 2 (grid) of ECH81 (V2). Low side to chassis.	"	"	"	Vert. Amp. to point (A). Low side to chassis.	A11, A12, A13, A14	Disconnect C5. Adjust for curve of maximum amplitude and symmetry similar to Fig. 2.
8.		Across antenna receptacle	"	"	"	"	A15, A16	Adjust for curve of maximum amplitude and symmetry similar to Fig. 2. Reconnect C5.

FM RF ALIGNMENT

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
9.		Across antenna receptacle in parallel with 180Ω carbon resistor.	86MC	FM	Tuning gang fully closed	DC probe to point (A). Common to chassis.	A17	Adjust for maximum deflection.
10.		"	91MC	"	Tune for 91MC signal	"	A18	Adjust for maximum deflection.

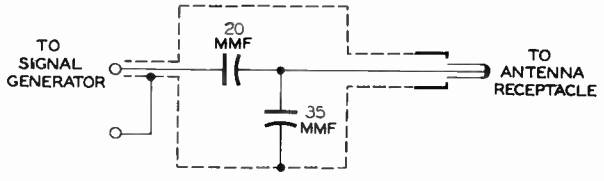


FIG.

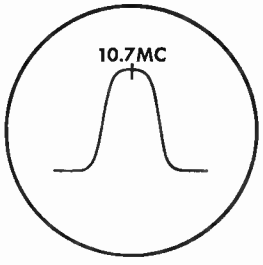


FIG. 2

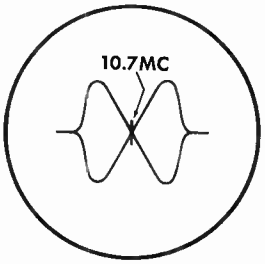
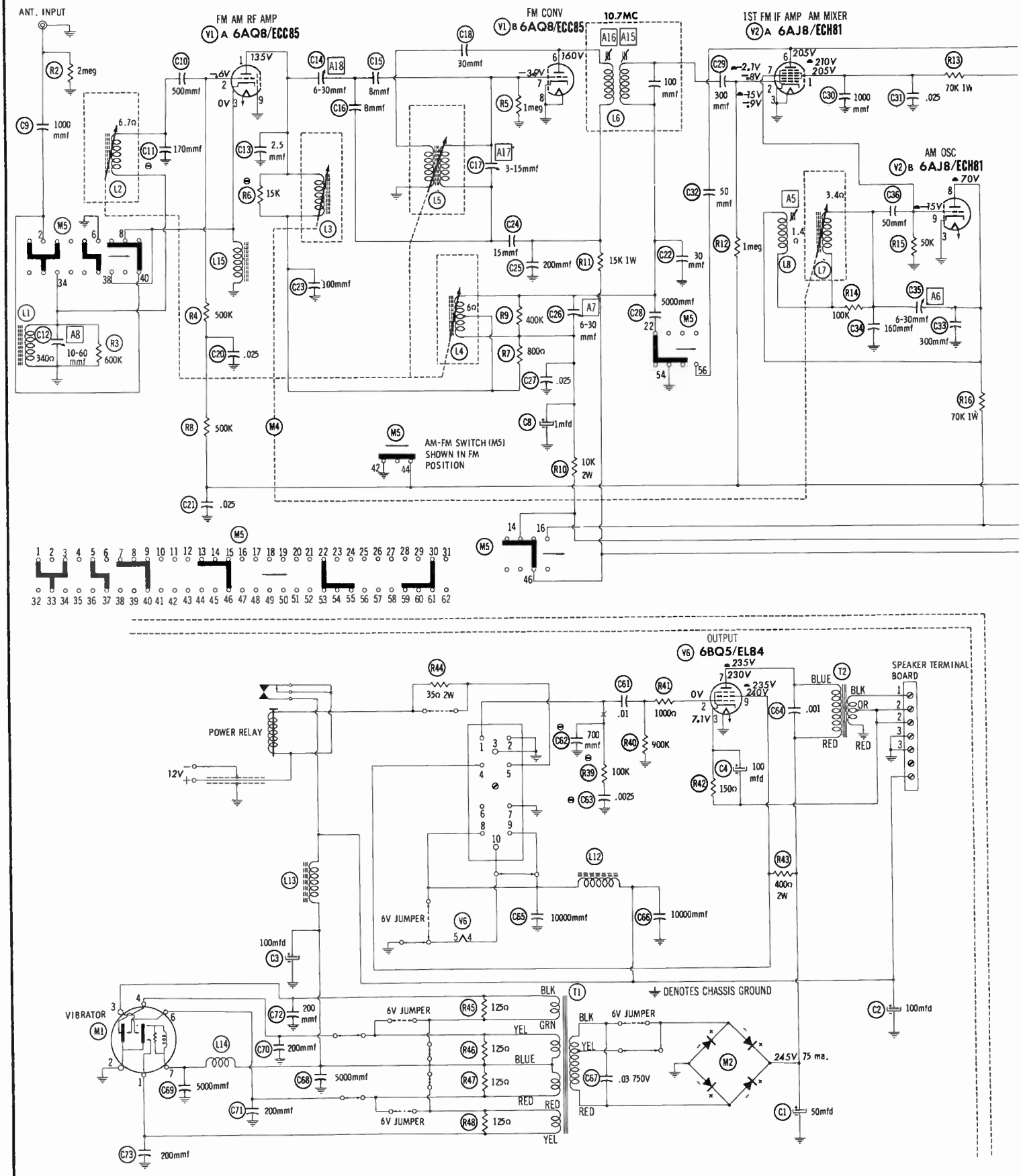
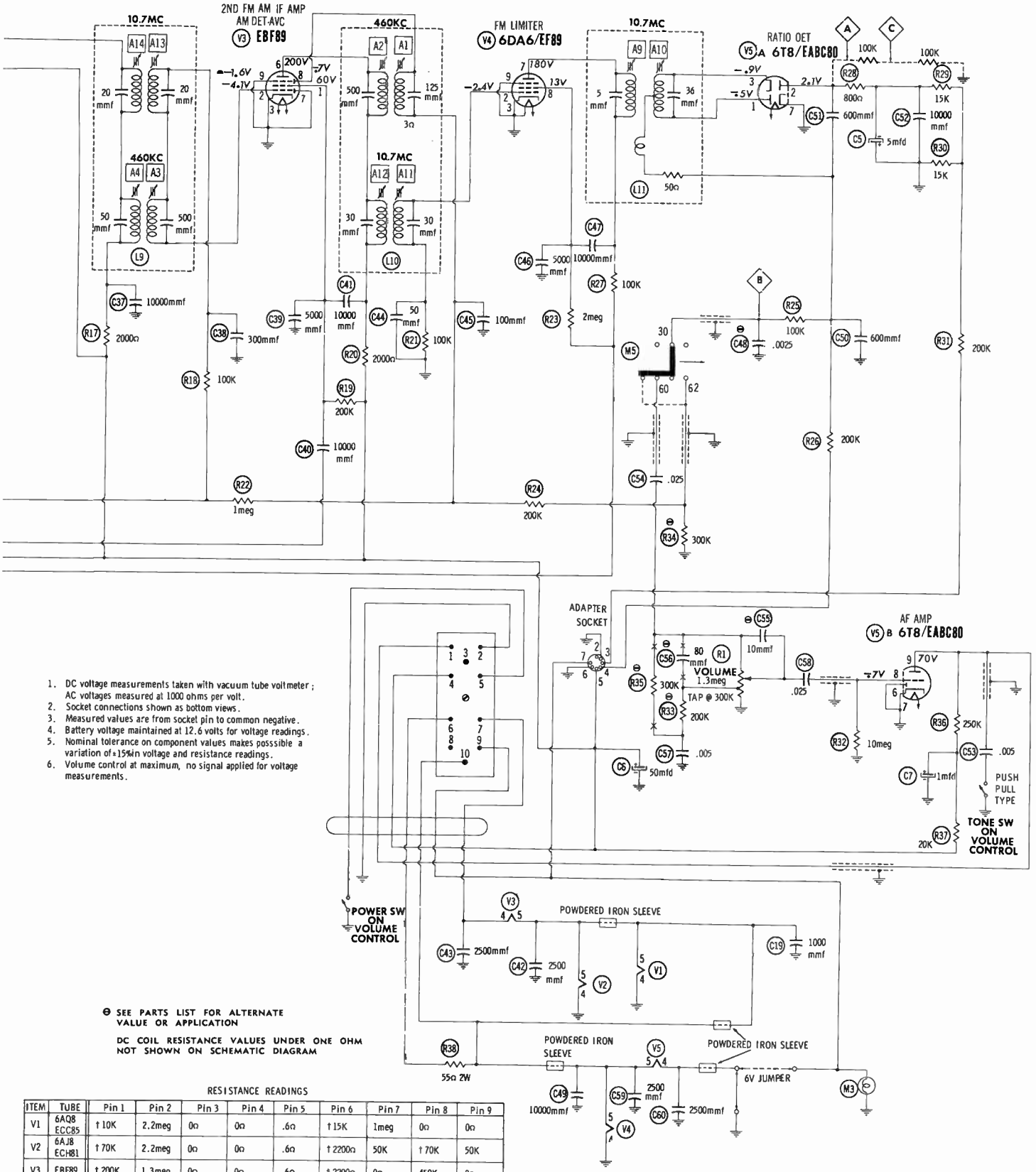


FIG. 3



A PHOTOFACT STANDARD NOTATION SCHEMATIC
Howard W. Sams & Co., Inc. 1958



1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured at 1000 ohms per volt.
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes posssible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

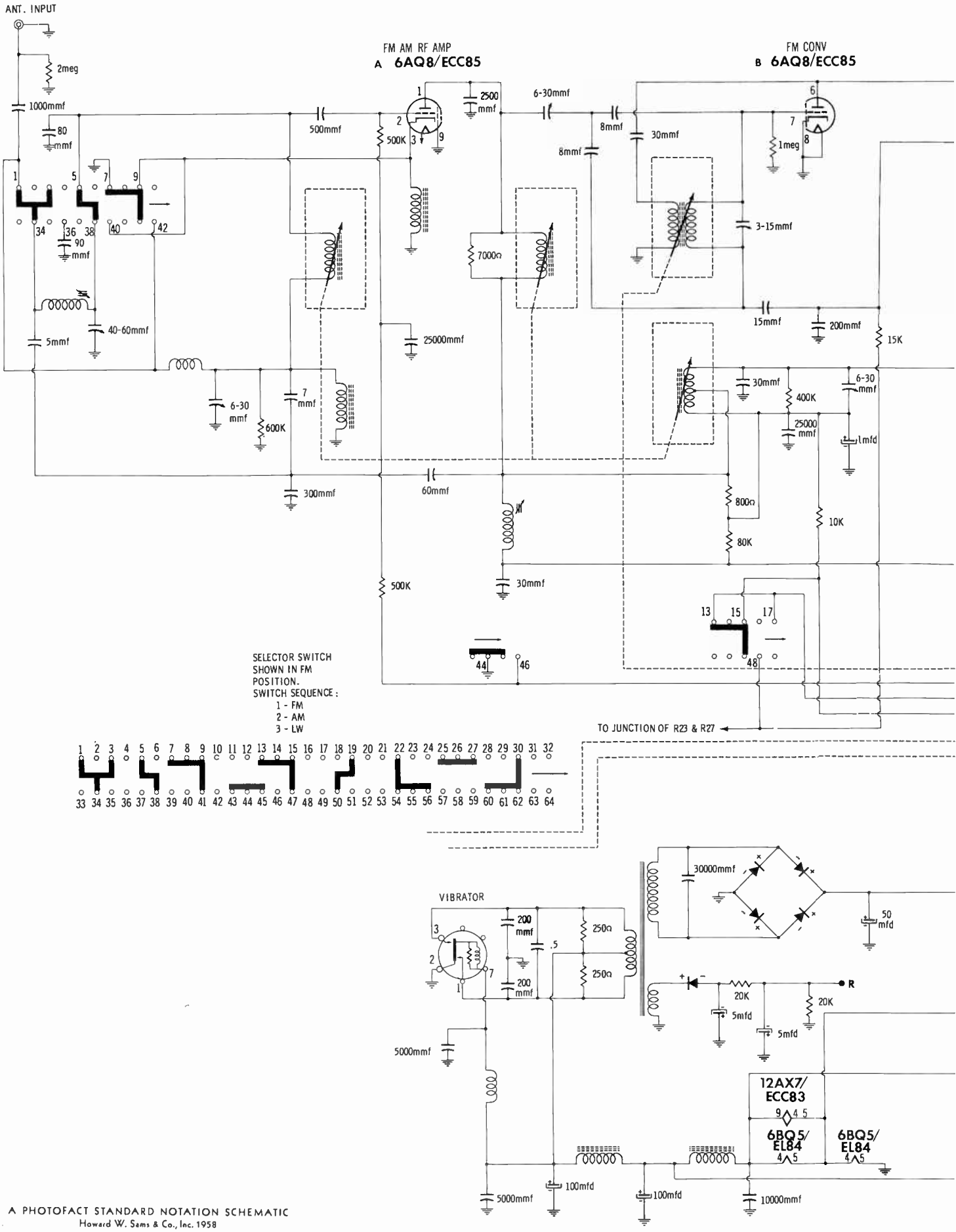
Θ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

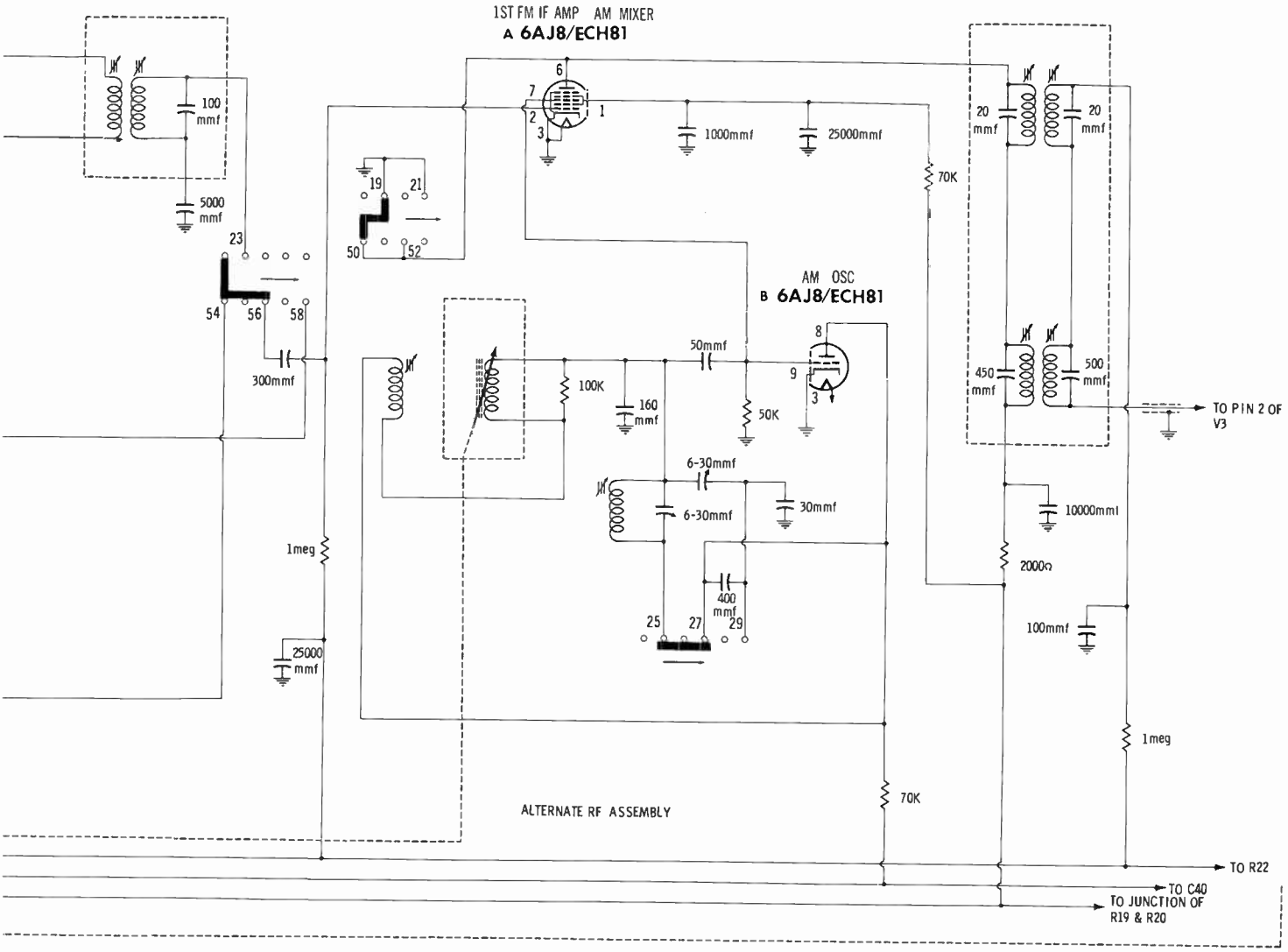
RESISTANCE READINGS

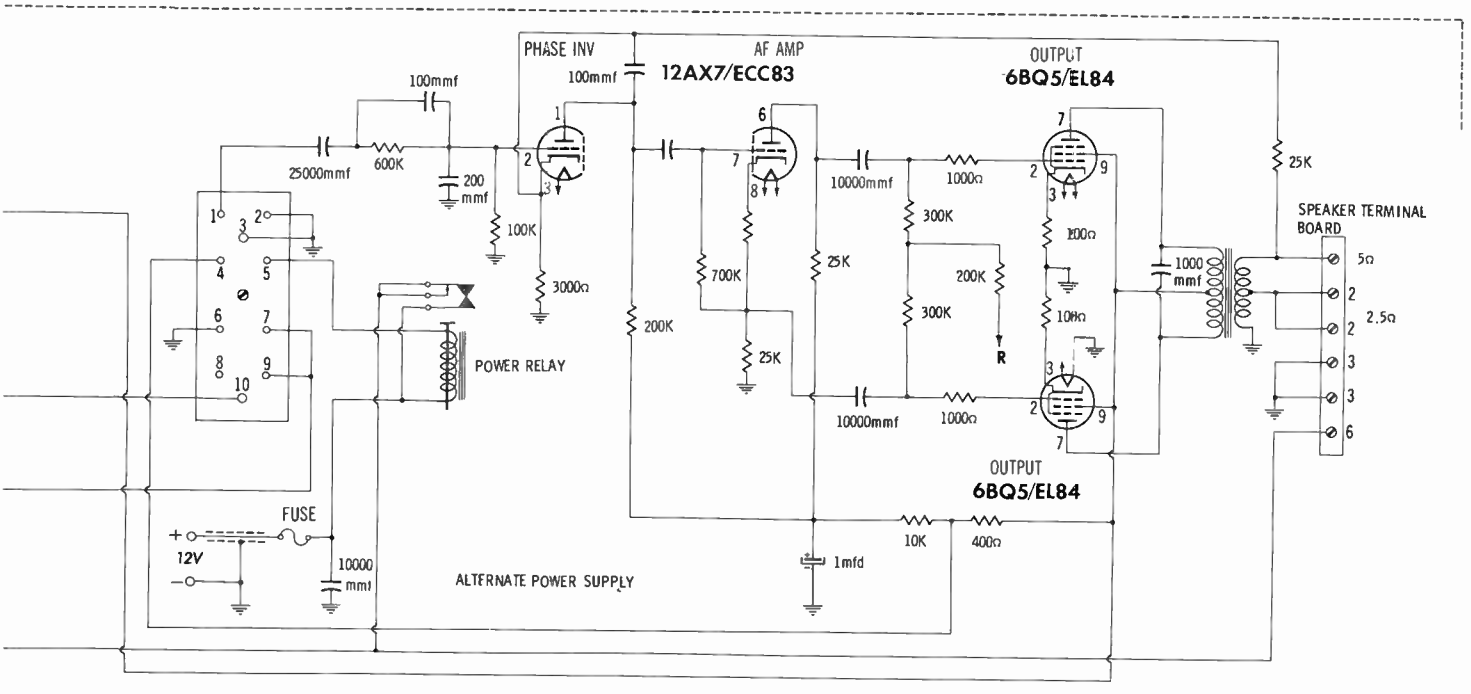
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	6AQ8 ECC85	†10K	2.2meg	0Ω	0Ω	.6Ω	†15K	1meg	0Ω	0Ω
V2	6AJ8 ECH81	†70K	2.2meg	0Ω	0Ω	.6Ω	†2200Ω	50K	†70K	50K
V3	EBF89	†200K	1.3meg	0Ω	0Ω	.6Ω	†2200Ω	0Ω	450K	0Ω
V4	6DA6 EF89	0Ω	100K	0Ω	0Ω	.6Ω	0Ω	†100K	†2meg	0Ω
V5	6T8 EABC80	INF	30K	INF	.6Ω	1.4Ω	0Ω	0Ω	10meg	†250K
V6	6BQ5 EL84	NC	900K	150Ω	.6Ω	1.2Ω	NC	†280Ω	NC	†400Ω

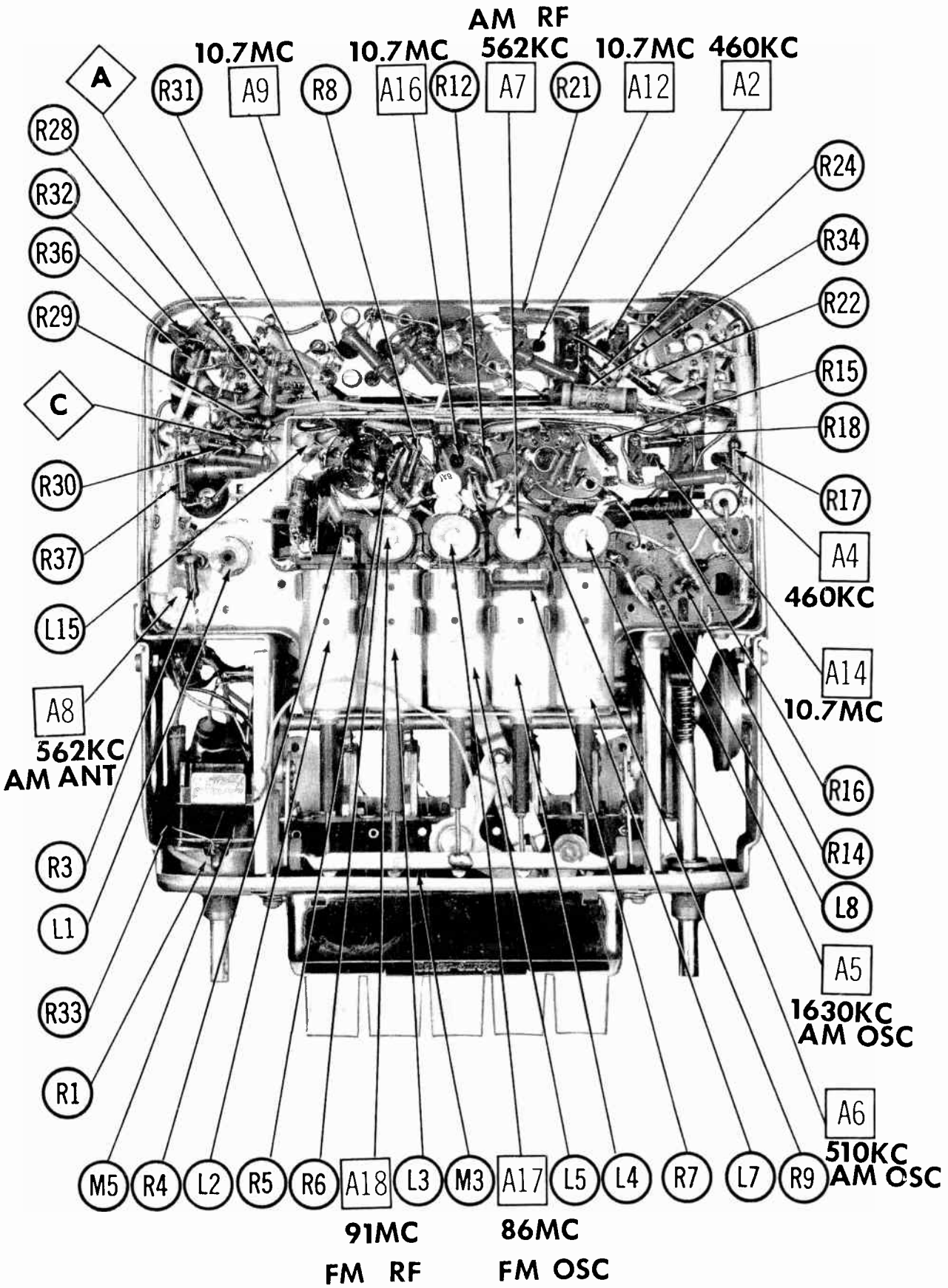
ALL MEASUREMENTS TAKEN IN "FM" POSITION UNLESS OTHERWISE DESIGNATED
- MEASURED IN "AM" POSITION
NC NO CONNECTION



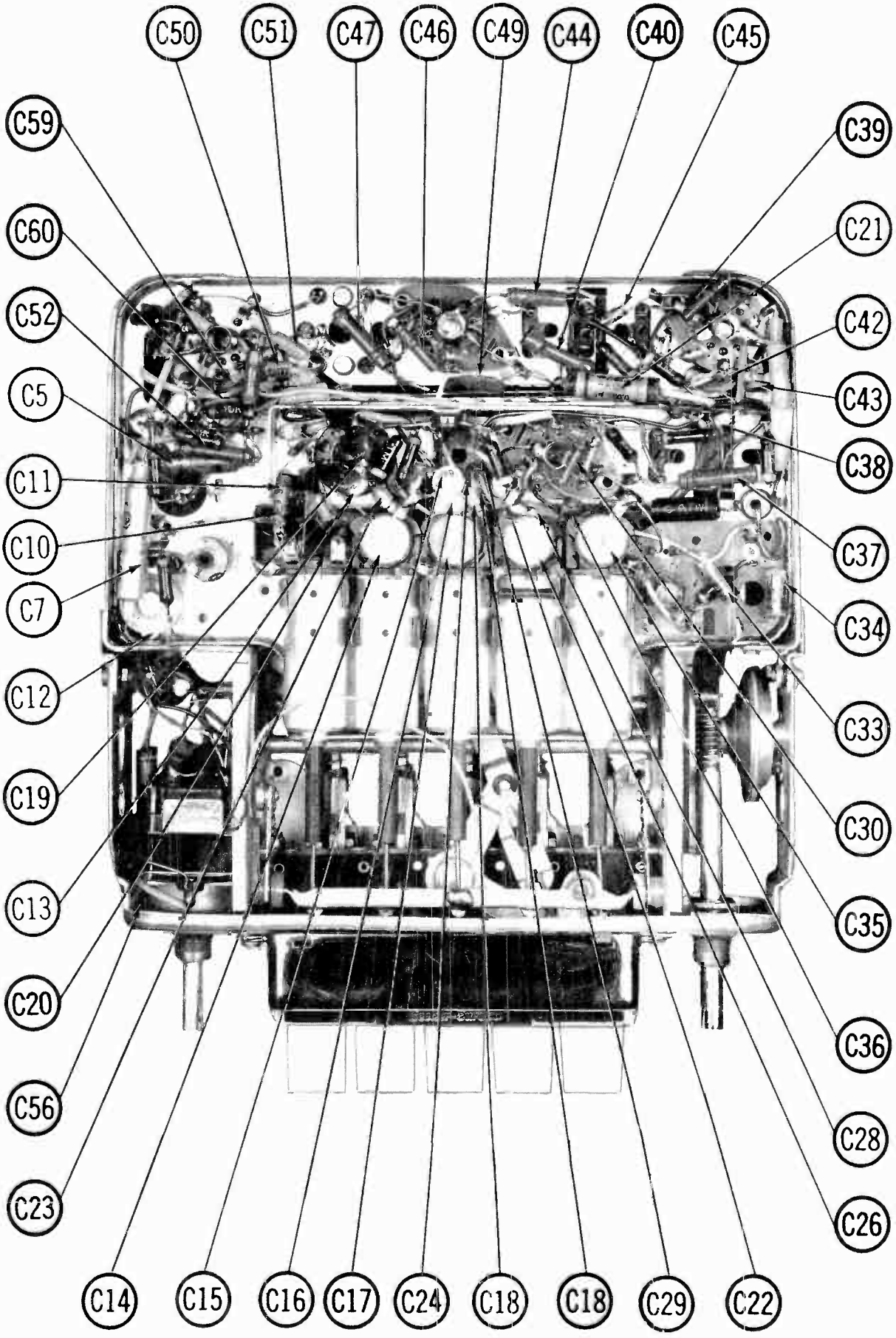
A PHOTOFACT STANDARD NOTATION SCHEMATIC
Howard W. Sams & Co., Inc. 1958



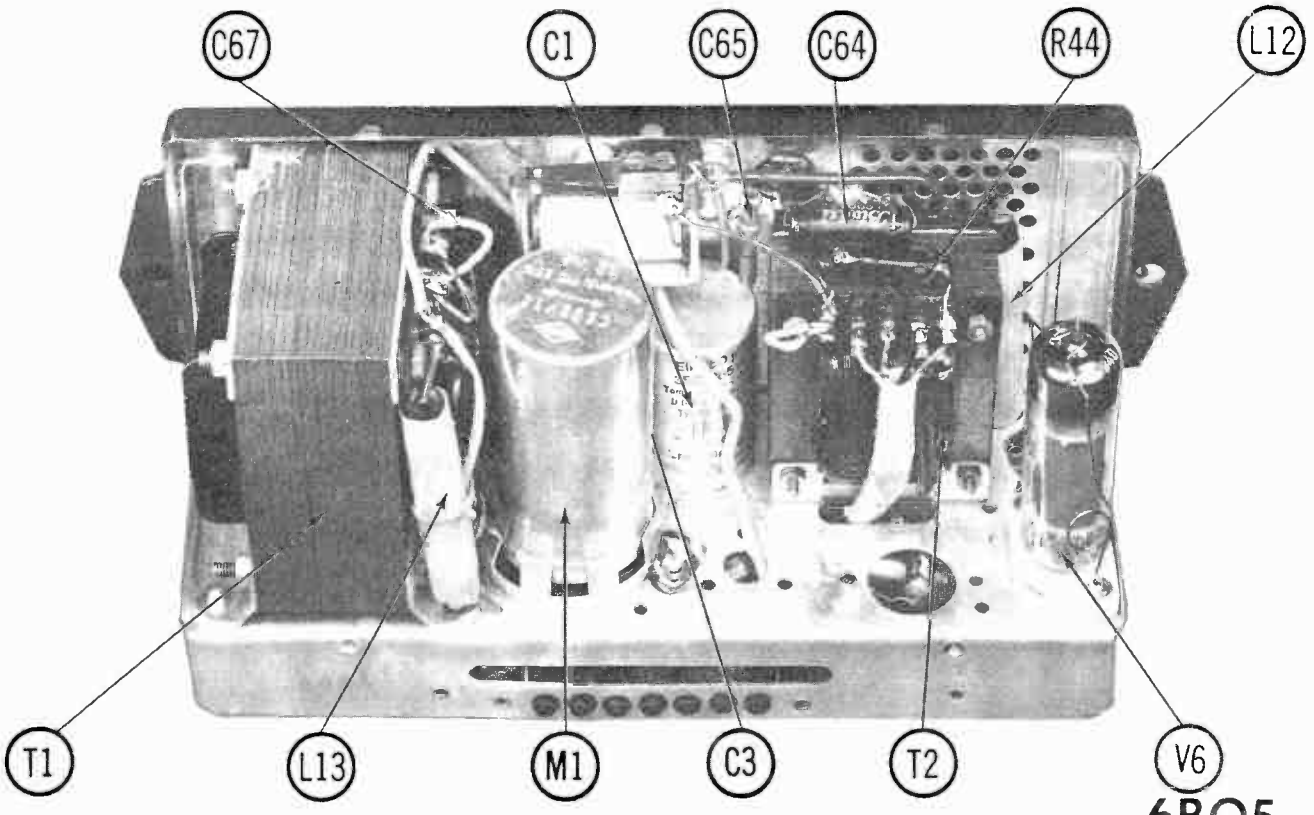




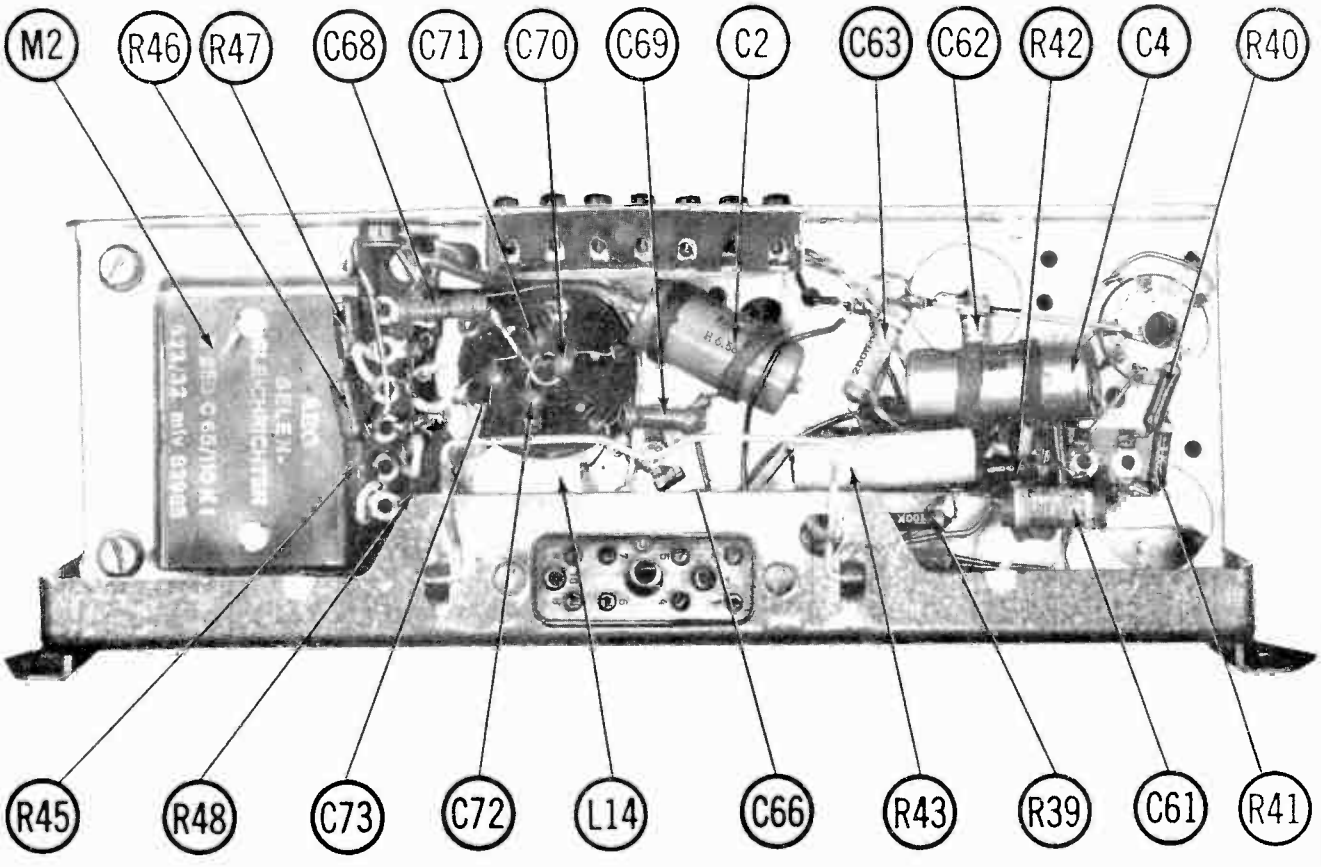
CHASSIS-BOTTOM VIEW



CHASSIS BOTTOM VIEW-CAPACITOR IDENTIFICATION



POWER CHASSIS - TOP VIEW



POWER CHASSIS - BOTTOM VIEW

PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE
V1	FM AM RF Amp.-FM Conv.	6AQ8/ECC85
V2	1st FM IF Amp.-AM Mixer-AM Oscillator	6AJ8/ECH81
V3	2nd FM AM IF Amp. - AM Det. - AVC	EBF89
V4	FM Limiter	6DA6/EF89
V5	Ratio Det. - AF Amp.	6T8/EABC80
V6	Output	6BQ5/EL84

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP.	RATING VOLT.	REPLACEMENT DATA BECKER PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1	50	385							R2652 *
C2	100	25		PRS25V100	BBR100-25	TC2501	TD-100-25	MTH-2510	TVA-1207
C3	100	25		PRS25V100	BBR100-25	TC2501	TD-100-25	MTH-2510	TVA-1207
C4	100	25		PRS25V100	BBR100-25	TC2501	TD-100-25	MTH-2510	TVA-1207
C5	5	40		PRS50V5	BBR5-50	TC30	TD-5-50	MT-0504	TVA-1303
C6	50	385							
C7	1	385		PRS450V1	BR145			MMT-4501	R2622 *
C8	1	385		PRS450V1	BR145			MMT-4501	R2622 *

* Non Catalog Item

FIXED CAPACITORS

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

ITEM No.	RATING CAP.	RATING VOLT	REPLACEMENT DATA BECKER PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	NOTES
C9	1000			1468-001	D6-102	1W5D1	ED-1000	MC255	1FM-21	
C10	500			1468-0005	D6-501	5W5T5	ED-500	MC245	1FM-35	
C11	170									①
C12	10-60									
C13	2.5									
C14	6-30									
C15	8					C10V8C				
C16	8					C10V8C				
C17	3-15									
C18	30									
C19	1000			BPD-001	DD-102	BYA6D1	ED-1000	DC521	5HK-D1	
C20	.025	125		P288N-025		CUB4S22		GEM-4125	4TM-S25	
C21	.025	125		P288N-025		CUB4S22		GEM-4125	4TM-S25	
C22	30			1468-00003	DD-300	5W5Q3	ED-30		1FM-43	
C23	100			1468-0001	D6-101	5W5T1	ED-100	MC235	1FM-31	
C24	15			1468-000015	D6-150	5W5Q15	ED-15	UC-5415	1FM-415	
C25	200			1468-0002	D6-201	5W5T2	ED-200	MC237	1FM-32	
C26	6-30									
C27	.025	500		P688N-025		CUB4S22		GEM-4125	6TM-S25	
C28	5000			SI 5000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C29	300			1468-0003	D6-301	5W5T3	ED-300	MC241	1FM-33	
C30	1000			SI 1000	D6-102	LT6D1	GP-1000	UC-521	5HK-D1	
C31	.025	500		P688N-025		CUB4S22		GEM-6125	6TM-S25	
C32	50			1468-00005	D6-500	5W5Q5	ED-50	MC225	1FM-45	
C33	300			1468-0003	D6-301	5W5T3	ED-300	MC241	1FM-33	
C34	160					5W5T16			1FM-316	
C35	6-30									
C36	50			1468-00005	D6-500	5W5Q5	ED-50	MC225	1FM-45	
C37	10000			SI 10000	D6-103	LT6S1	GP-10000	DC511	5HK-S1	
C38	300			1468-0003	D6-301	5W5T3	ED-300	MC241	1FM-33	
C39	5000			SI 5000	D6-502	LT6D5	GP-5000	UC-525	5HK-D5	
C40	10000			SI 10000	D6-103	LT6S1	GP-10000	DC511	5HK-S1	
C41	10000			SI 10000	D6-103	LT6S1	GP-10000	DC511	5HK-S1	
C42	2500			BPD-0025	DD-252	BYA10D25	ED-0025	UC-5225	5HK-D25	
C43	2500			BPD-0025	DD-252	BYA10D25	ED-0025	UC-5225	5HK-D25	
C44	50			1468-00005	D6-501	5W5Q5	ED-50	MC225	1FM-45	
C45	100			1468-0001	D6-101	5W5T1	ED-100	MC235	1FM-31	

PARTS LIST AND DESCRIPTIONS (Continued)

CAPACITORS (cont)

ITEM No.	RATING CAP.	RATING VOLT	REPLACEMENT DATA BECKER PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	NOTES
C46	5000			SI 5000	D6-502	LT6D5	GP-5000	UC-525	5HK-D5	
C47	10000			SI 10000	D6-103	SI 10000	GP-10000	DC511	5HK-S1	
C48	.0025	125			D6-252	CUB6D22	GP-2500	GEM-6225	6TM-D25	②
C49	10000			SI 10000	DD-103	LT6S1	ED-01	DC511	5HK-S1	
C50	600				D6-601	1W5T6			1FM-36	
C51	600				D6-601	1W5T6			1FM-36	
C52	10000			SI 10000	D6-103	LT6S1	GP-10000	DC511	5HK-S1	
C53	.005	500		P688N-005	D6-502	CUB6D5	GP-5000	GEM-625	6TM-D5	
C54	.025	125		P288N-025		CUB4S22		GEM-4125	4TM-S25	
C55	10			1468-00001	D6-100	5W5Q1	ED-10	MC215	1FM-41	③
C56	80									④
C57	.005	125		P288N-005	D6-502	CUB6D5	GP-5000	GEM-425	6TM-D5	
C58	.025	125		P288N-025		CUB4S22		GEM-4125	4TM-S25	
C59	2500			BPD-0025	DD-252	BYA10D25	ED-0025	UC-5225	5HK-D25	
C60	2500			BPD-0025	DD-252	BYA10D25	ED-0025	UC-5225	5HK-D25	
C61	.01	600		P688N-01	D6-103	CUB6S1	GP-10000	GEM-611	6TM-S1	
C62	700					1W5T7				④
C63	.0025	500		P688N-0025	D6-252	CUB6D22	ED-0025	GEM-6225	6TM-D25	④
C64	.001	750		P1088N-001		CUB10D1		GEM-1021	10TM-D1	
C65	10000			SI 10000	D6-103	LT6S1	GP-10000	DC511	5HK-S1	
C66	10000			SI 10000	D6-103	LT6S1	GP-10000	DC511	5HK-S1	
C67	.03	750		P1088N-03		CUB10S3		GEM-1013	10TM-S3	
C68	5000			SI 5000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C69	5000			SI 5000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C70	200			BPD-0002	DD-201	L10T2	ED-200	UC-532	5GA-T2	
C71	200			BPD-0002	DD-201	L10T2	ED-200	UC-532	5GA-T2	
C72	200			BPD-0002	DD-201	L10T2	ED-200	UC-532	5GA-T2	
C73	200			BPD-0002	DD-201	L10T2	ED-200	UC-532	5GA-T2	

① Not used in Model MUK.
③ Some versions may use 2500mmf in this application.
③ Some versions may use 100mmf in this application.
④ Not used in some versions.

CONTROLS

ITEM No.	RATING RESISTANCE	RATING WATTS	REPLACEMENT DATA BECKER PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	INSTALLATION NOTES
R1A	1.3meg	½						Volume, Tap ② 300K
B	Switch							Tone
C	Switch							On-Off

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING OHMS	RATING WATT	BECKER PART No.	NOTES
R2	2meg			
R3	600K			
R4	500K			
R5	1meg			
R6	15K			①
R7	800Ω			
R8	500K			
R9	400K			
R10	10K	2		
R11	15K	1		
R12	1meg			
R13	70K	1		
R14	100K			
R15	50K			
R16	70K	1		

ITEM No.	RATING OHMS	RATING WATT	BECKER PART No.	NOTES
R17	2000Ω			
R18	100K			
R19	200K			
R20	2000Ω			
R21	100K			
R22	1meg			
R23	2meg			
R24	200K			
R25	100K			
R26	200K			
R27	100K			
R28	800Ω			
R29	15K			
R30	15K			
R31	200K			

PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS (cont)

ITEM No.	RATING OHMS	RATING WATT	BECKER PART No.	NOTES
R32	10meg			
R33	200K			②
R34	300K			③
R35	300K			④
R36	250K			
R37	20K			
R38	55Ω	2		
R39	100K			④
R40	900K			

ITEM No.	RATING OHMS	RATING WATT	BECKER PART No.	NOTES
R41	1000Ω			
R42	150Ω			
R43	400Ω	2		
R44	35Ω	2		
R45	125Ω			
R46	125Ω			
R47	125Ω			
R48	125Ω			

① Some versions may use 7000Ω in this application.
② Some versions may use 100K in this application.
③ Some versions may use 200K in this application.
④ Not used in some versions.

TRANSFORMER (VIBRATOR)

ITEM No.	RATING PRI. 1	PRI. 2	PRI. 3	SEC.	REPLACEMENT DATA BECKER PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
	12VDC OPERATION									
T1	12V ② 1.5A	24VCT ② 1.5A	12V ② 1.5A	220V Tap ② 200V ②.060A						
	6VDC OPERATION									
	3V ② .75A	12VCT ② 1.5A	3V ② .75A	220V Tap ② 200V ②.060A						

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	TURNS RATIO PRI.	SEC.	REPLACEMENT DATA BECKER PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
T2	34:	1								

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA BECKER PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Ram PART No.	NOTES
L1	AM Antenna Coil						
L2	AM Antenna Coil						
L3	FM RF Coil						
L4	AM Mixer Coil						
L5	FM Osc. Coil						
L6	1st FM IF						
L7	AM Osc. Coil						
L8	AM Osc. Coil						
L9	2nd FM IF 1st AM IF						
L10	3rd FM IF 3nd AM IF						
L11	Ratio Det.						
L12	Fil. Choke						
L13	Hash Choke						
L14	RF Choke						2.8 Microhenries
L15	Cathode Choke						

PARTS LIST AND DESCRIPTIONS (Continued)

VIBRATOR

ITEM No.	TYPE	INPUT VOLTS	FREQUENCY	REPLACEMENT DATA BECKER PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	RADIART PART No.	NOTES
M1	Interrupter	12VDC	115v	6302/12		G4502		

RECTIFIERS

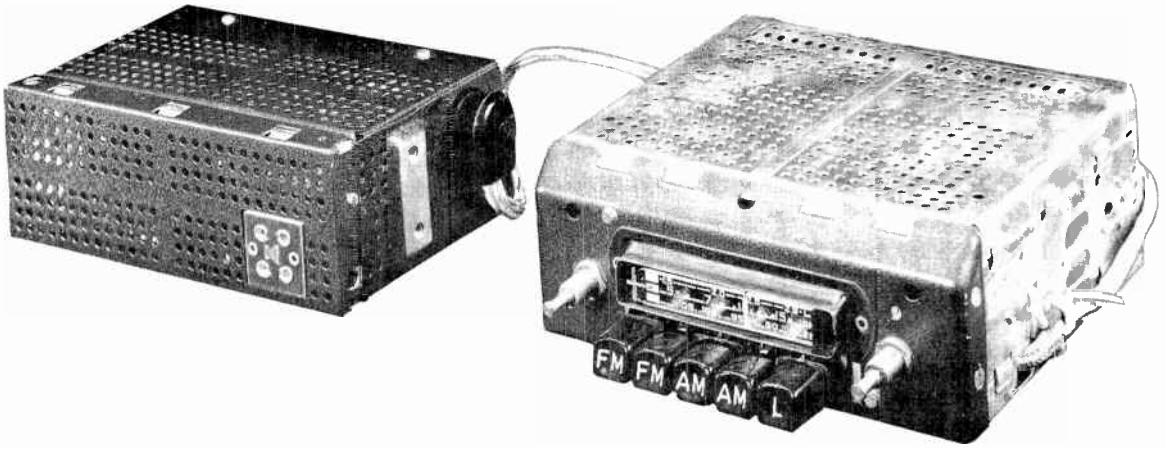
ITEM No.	RATING CURRENT (Measured)	REPLACEMENT DATA BECKER PART No.	FEDERAL PART No.	INTERNATIONAL PART No.	SARKES TARZIAN PART No.	NOTES
M2	.075A			60-9150 ①③	D-64 ①	① Selenium Type ② Silicon Type ③ Two Required

MISCELLANEOUS

ITEM No.	PART NAME	BECKER PART No.	NOTES
M3	Dial Lamp		12-14V .1A
M4	Tuner		Pushbutton, 5 Section, Variable Inductance
M5	Switch		AM-FM (Multiple Contact, Slide-Type)

WIRING DATA

General-use Unshielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors
Shielded Hook-up Wire ..... Use BELDEN No. 8885
Bonding Strap ..... Use BELDEN No. 8661



BLAUPUNKT MODELS
Frankfurt 12V, Frankfurt 6V

TRADE NAME	Blaupunkt Model Frankfurt	
SUPPLIER	Robert Bosch Corp., 40-25 Crescent St., Long Island City 1, N.Y.	
TYPE SET	Battery Operated Universal Type FM-BC-LW Automobile Receiver	
TUBES (Six)	Types 6AQ8/ECC85 FM RF Amp.-FM Conv., EF89 1st FM IF Amp.-AM RF Amp., 6AJ8/ECH81 2nd FM IF Amp.-AM Mixer-AM Osc., EF89 3rd FM-1st AM IF Amp., 6T8/EABC80 Ratio Det.-AM Det.-AVC-AF Amp., 6BQ5/EL84 Output	
POWER SUPPLY	12 Volt Storage Battery (12 Volt version) 6 Volt Storage Battery (6Volt versions)	RATING 3.8 Amp. @12.6 Volts DC 7.6 Amp. @6.3 Volts DC
TUNING RANGE	BROADCAST 550-1600KC FREQ. MOD. 88-105MC	LONG WAVE 150-300KC

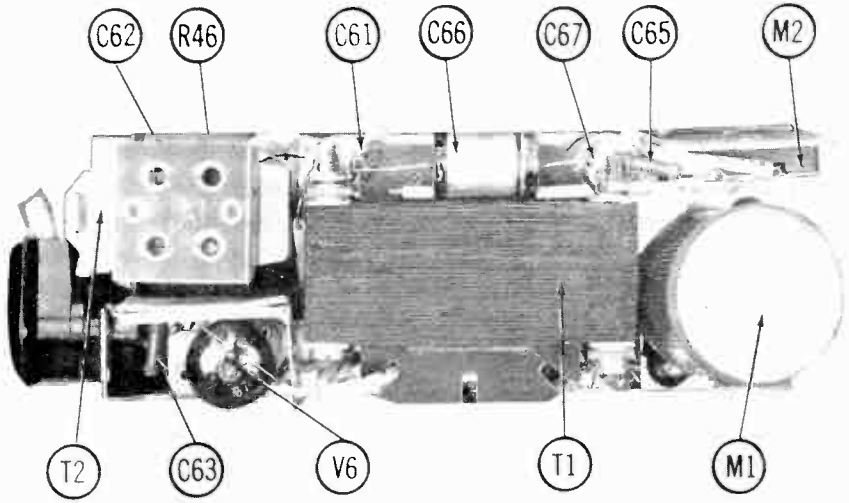
PUSHBUTTON ADJUSTMENT

NOTE: Pushbuttons can only be adjusted for the band designated on the button.

1. Allow receiver to warm up. Extend antenna.
2. Pull pushbutton out.
3. Tune manually to desired station.
4. Press pushbutton in firmly.

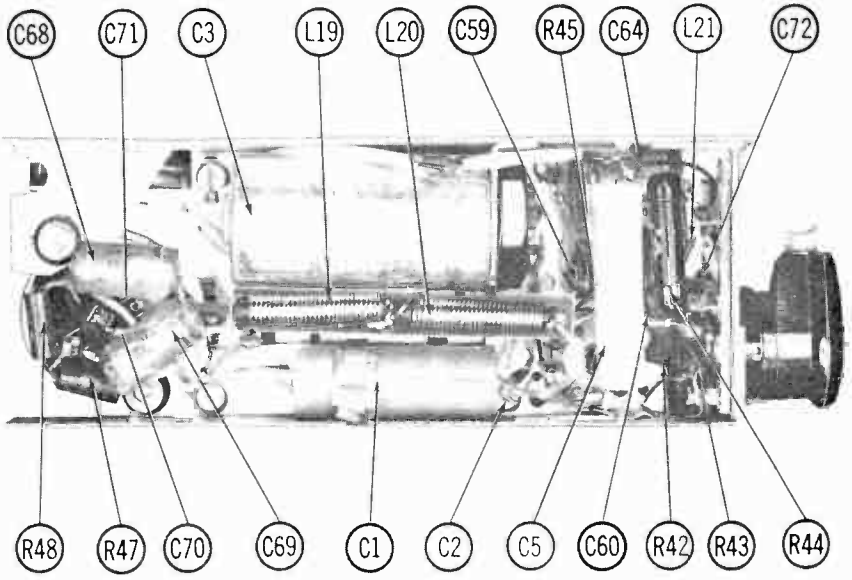
HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana

H359

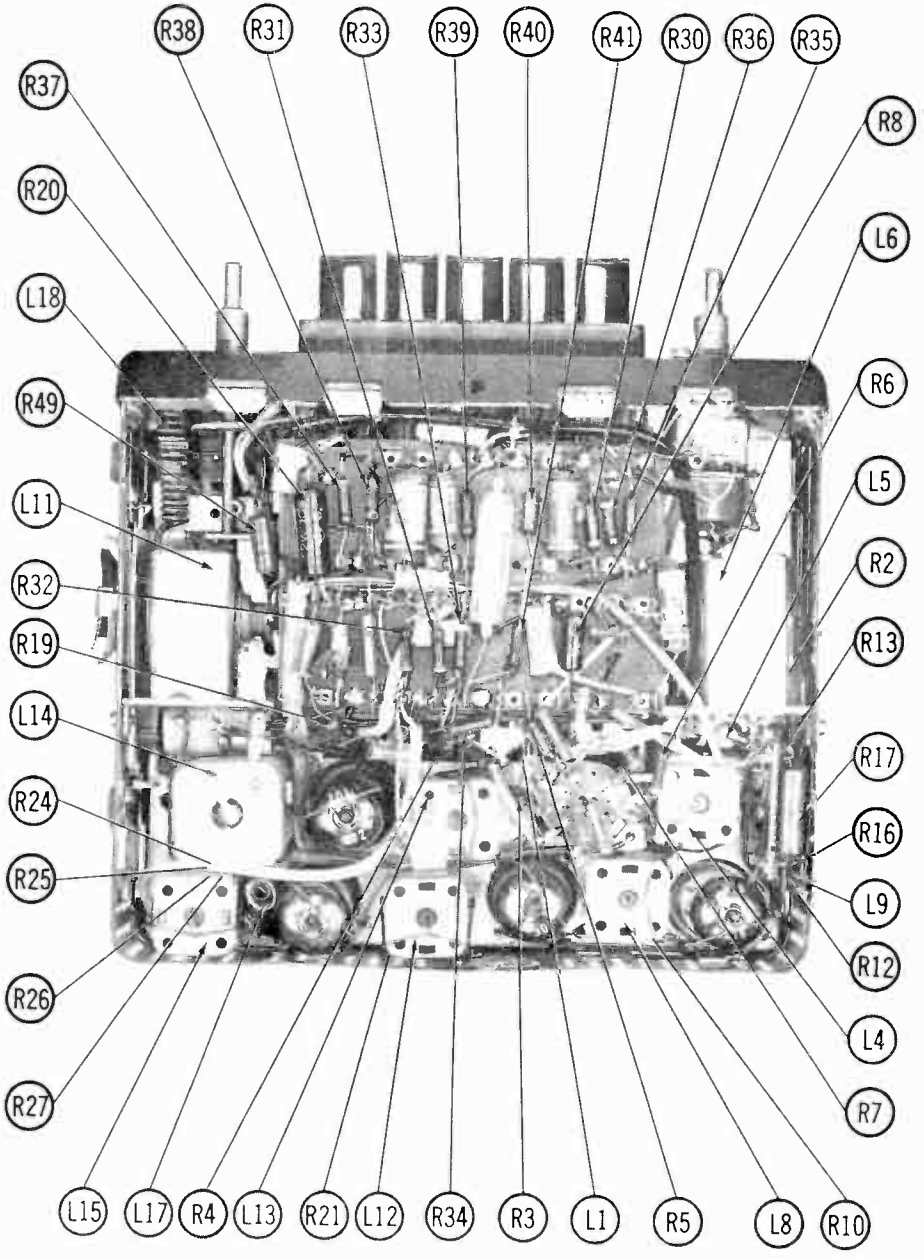


6BQ5
EL84

POWER SUPPLY CHASSIS-TOP VIEW



POWER SUPPLY CHASSIS-BOTTOM VIEW



CHASSIS TOP VIEW-RESISTOR AND INDUCTOR IDENT

PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE
V1	FM RF Amp. -FM Conv.	6AQ8/ ECC85
V2	1st FM IF Amp. -AM RF Amp.	EF89
V3	2nd FM IF Amp. -AM Mixer AM Oscillator	6AJ8/ ECH81
V4	3rd FM-1st AM IF Amp.	EF89
V5	Ratio Det. -AM Det. -AVC-AF Amplifier	6T8/ EABC80
V6	Output	6BQ5/ EL84

ELECTROLYTIC CAPACITORS

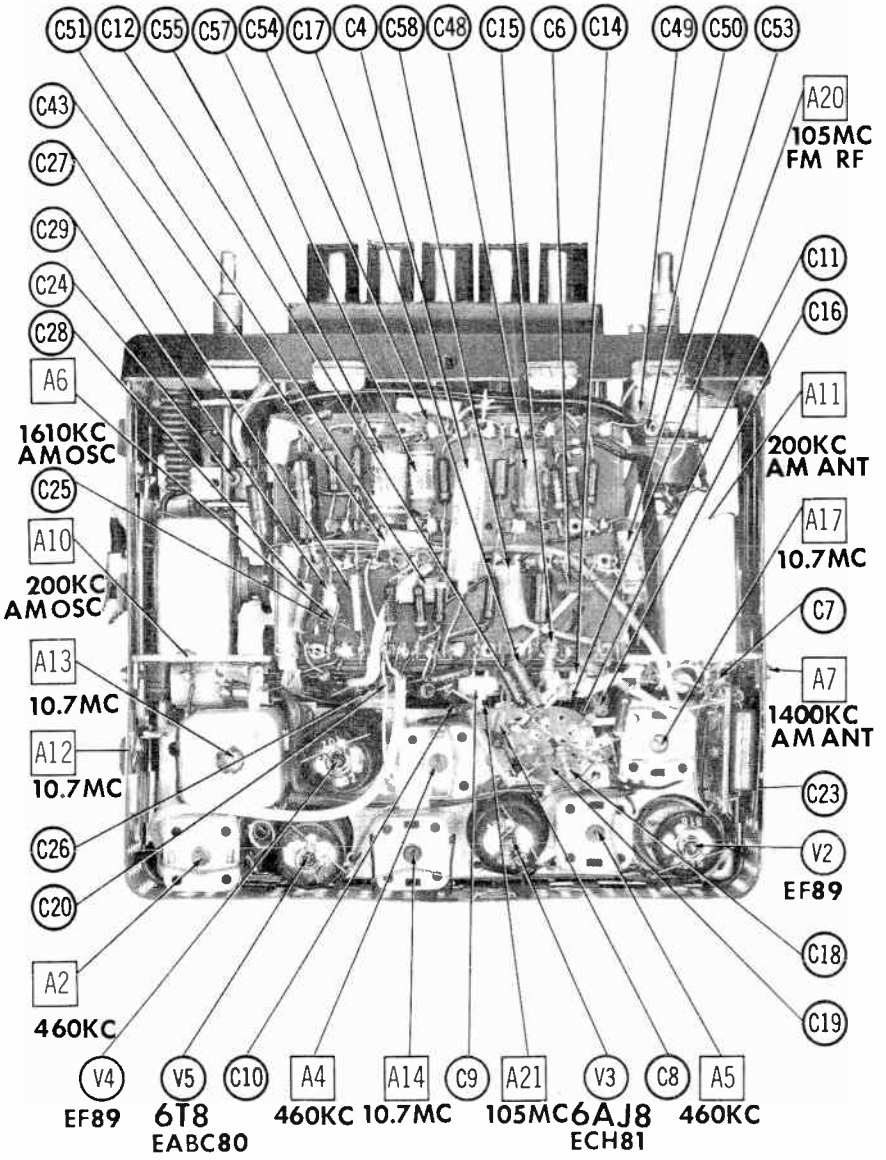
ITEM No.	RATING CAP.	RATING VOLT.	REPLACEMENT DATA BLAUPUNKT PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1	50	18		PRS25V50	BBR50-25	TC29	TD-50-25	MT-0250	TVA-1206
C2	50	18		PRS25V50	BBR50-25	TC29	TD-50 25	MT-0250	TVA-1206
C3A	32	385		PRS450V3030			TDLD-29	MTD-4530	TVA-2735
B	32	385							
C4	50	15		PRS25V50	BBR50-25	TC29	TD-50-25	MT-0250	TVA-1206
C5	50	15		PRS25V50	BBR50-25	TC29	TD-50-25	MT-0250	TVA-1206

FIXED CAPACITORS

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

ITEM No.	RATING CAP.	RATING VOLT	REPLACEMENT DATA BLAUPUNKT PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	NOTES
C6	40									
C7	10-60									
C8	500			BPD-0005	DD-501	L10T5	ED-500	UC-535	5GA-T5	
C9	2-8									
C10	5000			S15000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C11	10				TCZ-10			MCE215		2%
C12	7.5									① 2%
C13	15			S115	D6-150	LT6Q15	GP-15	UC-5415	5GA-Q15	
C14	2-8									
C15	20			S120	D6-200	LT6Q2	GP-20	UC-542	5GA-Q2	
C16	30			S130	DD-300	LT6Q3	GP-30	UC-543	5GA-Q3	
C17	175									
C18	5000			S15000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C19	5000			S15000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C20	80									
C21	5000			S15000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C22	300							MCE241		2%
C23	5000			S15000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C24	5000			S15000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C25	35									
C26	65									2%
C27	500							MCE245		2%
C28	1000			S11000	D6-102	LT6D1	GP-1000	UC-521	5GA-D1	
C29	500							MCE245		2%
C30	5000			S15000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C31	10000			S110000	D6-103	LT6S1	GP-10000	DC511	5HK-S1	
C32	100				TCZ-100			MCE235		2%
C33	5000			S15000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C34	5000			S15000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C35	500			BPD-0005	DD-501	L10T5	ED-500	UC-535	5GA-T5	
C36	5000			S15000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C37	10000			S110000	D6-103	LT6S1	GP-10000	DC511	5HK-S1	
C38	.05	250		P488N-05	DF-503	CUB4S5		GEM-415	4TM-S5	
C39	5000			S15000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C40	5000			S15000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C41	5000			S15000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C42	100			S1100	D6-101	LT6T1	GP-100	UC-531	5GA-T1	
C43	50			S150	D6-500	LT6Q5	GP-50	UC-545	5GA-Q5	
C44	1500			S11500	D6-152	LT6D15	GP-1500	UC-5215	5GA-D15	
C45	5000			S15000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C46	.5	250		P488N-5		CUB4P5		GEM-405	4TM-P5	
C47	5000			S15000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C48	.05	250		P488N-05	DF-503	CUB4S5		GEM-415	4TM-S5	
C49	50			S150	D6-500	LT6Q5	GP-50	UC-545	5GA-Q5	
C50	5000			S15000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C51	5000			S15000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C52	70									
C53	.025	250		P488N-025		CUB4S22		GEM-4122	4TM-S22	
C54	5000			S15000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C55	.05	250		P488N-05	DF-503	CUB4S5		GEM-415	4TM-S5	

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

CAPACITORS (cont)

ITEM No.	RATING CAP.	RATING VOLT	REPLACEMENT DATA BLAUPUNKT PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	NOTES
C56	5000			S15000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C57	.01	250		P488N-01	D6-103	CUB4S1	GP-10000	GEM-411	4TM-S1	
C58	5000			S15000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C59	.05	500		P688N-05	DF-503	CUB6S5		GEM-615	6TM-S5	
C60	5000									
C61	.025	500		P688N-025		CUB6S22		GEM-6122	6TM-S22	
C62	100			S1100	D6-101	LT6T1	GP-100	UC-531	5GA-T1	
C63	100			S1100	D6-101	LT6T1	GP-100	UC-531	5GA-T1	
C64	.5	500		P688N-5		CUB6P5		GEM-605	6TM-P5	
C65	100			S1100	D6-101	LT6T1	GP-100	UC-531	5GA-T1	
C66	.1	500		P688N-1	DF-104	CUB6P1		GEM-601	6TM-P1	
C67	.025	500		P688N-025		CUB6S22		GEM-6122	6TM-S22	
C68	.1	500		P688N-1	DF-104	CUB6P1		GEM-601	6TM-P1	
C69	.1	500		P688N-1	DF-104	CUB6P1		GEM-601	6TM-P1	
C70	100			S1100	D6-101	LT6T1	GP-100	UC-531	5GA-T1	
C71	100			S1100	D6-101	LT6T1	GP-100	UC-531	5GA-T1	
C72	5000			S15000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C73	.05	250		P488N-05	DF-503	CUB4S5		GEM-415	4TM-S5	

①Some version use 10mmf in this application.

CONTROLS

ITEM No.	RATING RESISTANCE	RATING WATTS	REPLACEMENT DATA BLAUPUNKT PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	INSTALLATION NOTES
R1A	1meg	½						Tone
B	1.3meg	½						Volume, Tap@250K
C	Switch							

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING OHMS	RATING WATT	BLAUPUNKT PART No.	NOTES
R2	100K			
R3	1meg			
R4	5000Ω			
R5	20Ω			
R6	250K			
R7	3000Ω			
R8	10K	1		Note 1
R9	250K			
R10	50K			
R11	1600Ω			
R12	5000Ω			
R13	50K			
R14	100K			
R15	5000Ω			
R16	16K	2		
R17	20K	2		
R18	50K			
R19	20K			
R20	30K	2		
R21	50K			
R22	5000Ω			
R23	100K			
R24	2000Ω			
R25	2000Ω			
R26	100Ω			
R27	20Ω			
R28	100K			
R29	50K			
R30	10K			
R31	200K			
R32	100K			
R33	2meg			
R34	10meg			
R35	10meg			
R36	2.5meg			
R37	250K			
R38	50K			
R39	10meg			
R40	400Ω			
R41	10Ω			
R42	1000Ω			
R43	500K			
R44	500Ω	2		
R45	200Ω			
R46	100Ω			
R47	200Ω	2		
R48	200Ω	2		
R49	50Ω	1		Note 2

Note 1. Some versions may use 30K in this application.
Note 2. Not used in 6 Volt version.

TRANSFORMER (VIBRATOR)

ITEM No.	RATING PRI.	RATING SEC. 1	RATING SEC. 2	RATING SEC. 3	REPLACEMENT DATA BLAUPUNKT PART No.	Holldorson PART No.	Merit PART No.	Stoncor PART No.	Thordorson PART No.	Triod PART No.
T1	12.6V @ 3.4A Tap @ 6V@1.9A	240V @.056A			TF722/4					

PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	TURNS RATIO PRI.	TURNS RATIO SEC.	REPLACEMENT DATA BLAUPUNKT PART No.	Holldorson PART No.	Merit PART No.	Stoncor PART No.	Thordorson PART No.	Triod PART No.	NOTES
T2	30:	1	TF27/54						

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA BLAUPUNKT PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Rom PART No.	NOTES
L1	FM Ant. Coil						
L2	FM RF Coil						
L3	FM Osc. Coil						
L4	1st FM IF						
L5	AM Ant. Coil						
L6	AM Ant. Coil						
L7	AM Ant. Coil						
L8A	2nd FM IF						
B	IF Trap						460KC
L9	RF Choke						
L10	AM Osc. Coil						
L11	AM Osc. Coil						
L12	3rd FM IF						
L13	1st AM IF		16-6765				
L14	Ratio Det.						
L15	2nd AM IF						
L16	Filament Choke						
L17	Filament Choke						
L18	"A" Lead Choke						
L19	Hash Choke						
L20	Hash Choke						
L21	RF Choke						

VIBRATOR

ITEM No.	TYPE	INPUT VOLTS	FREQUENCY	REPLACEMENT DATA BLAUPUNKT PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	RADIART PART No.	NOTES
M1	Interrupter	12.6V	115v	1844/5Z				Used in 12 volt versions
	Interrupter	6.3V	115v	1844/6Z				Used in 6 volt versions

RECTIFIERS

ITEM No.	RATING CURRENT (Measured)	REPLACEMENT DATA BLAUPUNKT PART No.	FEDERAL PART No.	INTERNATIONAL PART No.	SARKES TARZIAN PART No.	NOTES
M2	.056A	B250C125				

FUSES

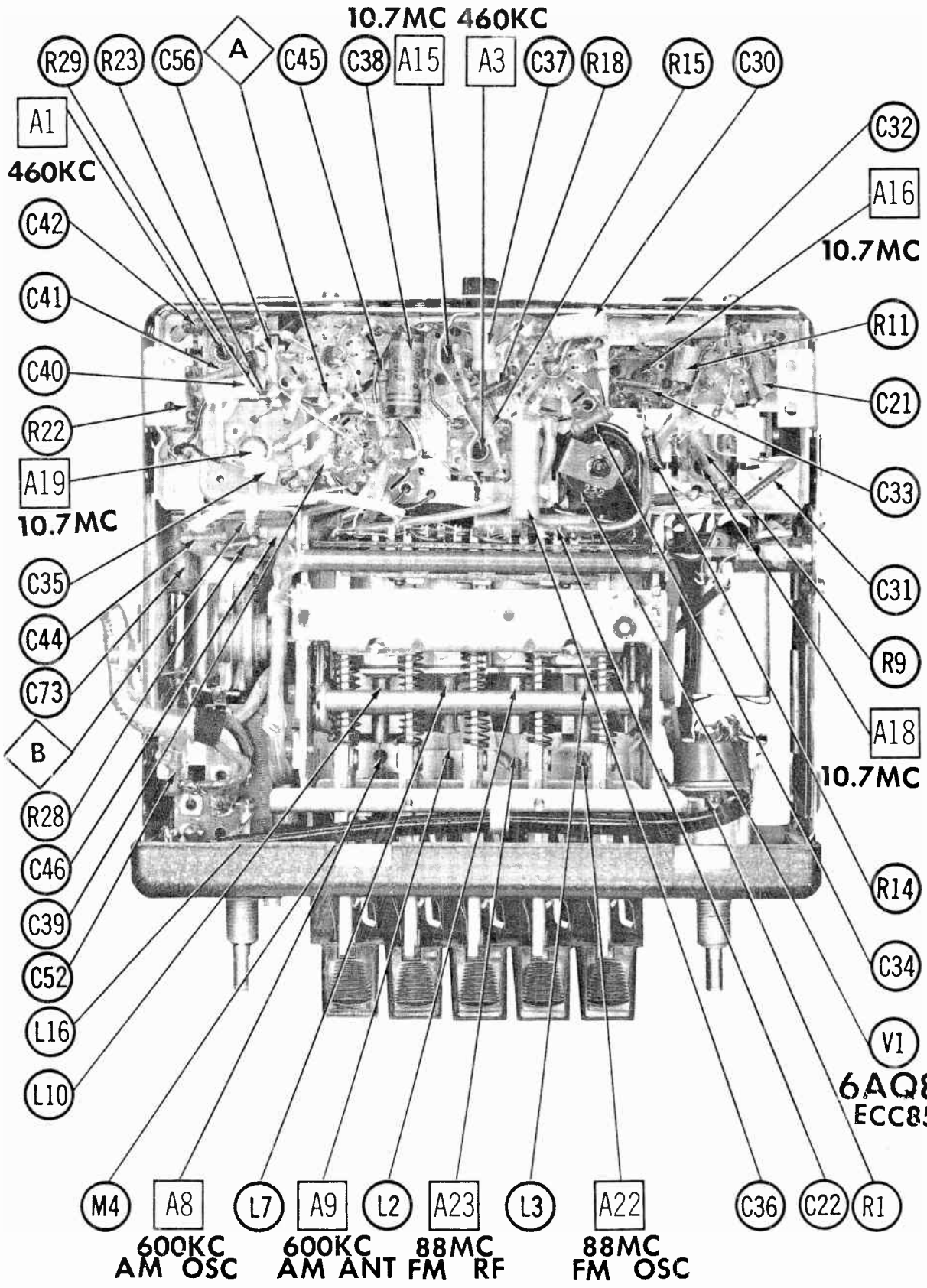
ITEM No.	TYPE	RATING	REPLACEMENT DATA BLAUPUNKT PART No. FUSE	BLAUPUNKT PART No. HOLDER	LITTELFUSE PART No. FUSE	LITTELFUSE PART No. HOLDER	BUSS PART No. FUSE	BUSS PART No. HOLDER
M3		8A						

MISCELLANEOUS

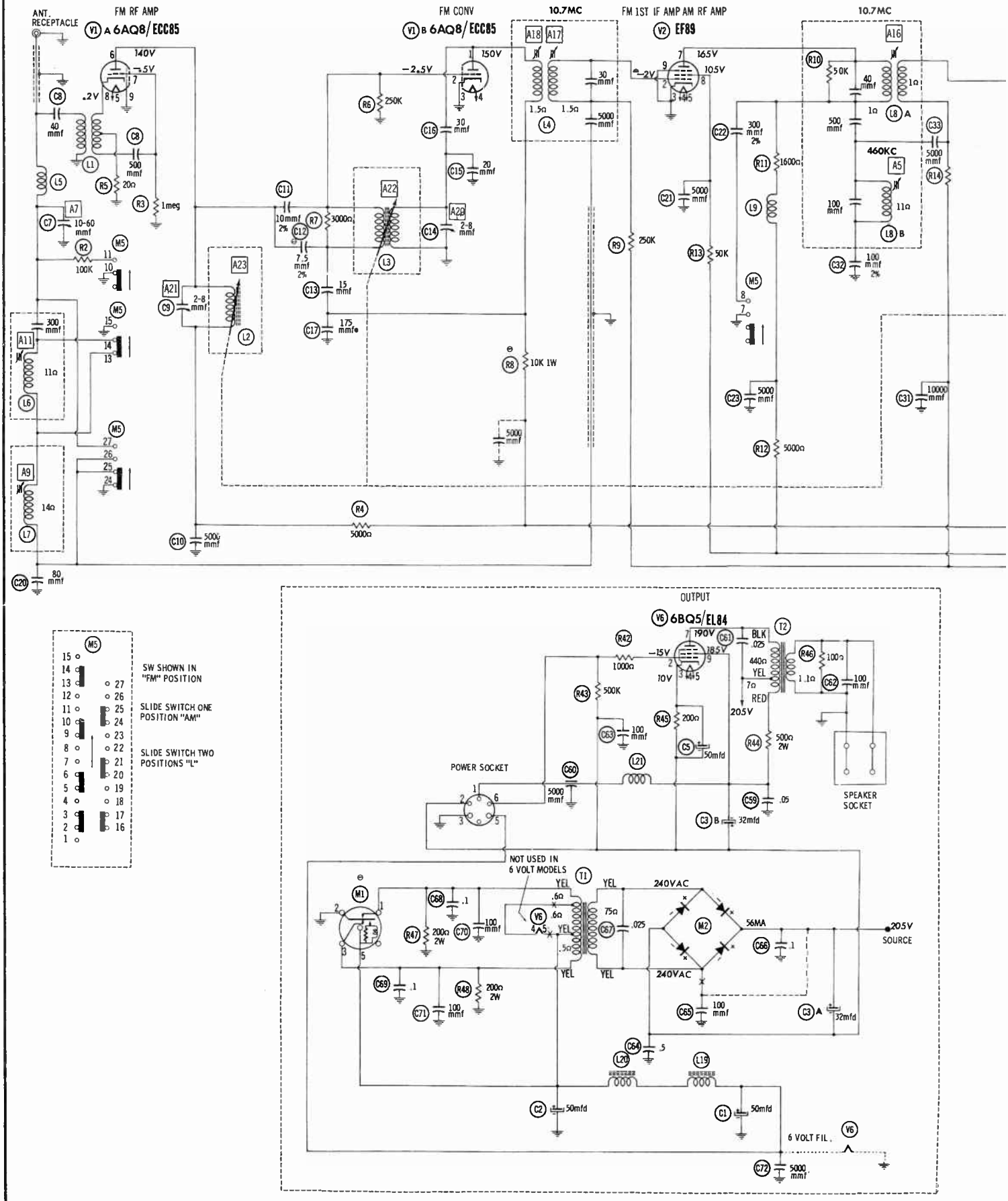
ITEM No.	PART NAME	BLAUPUNKT PART No.	NOTES
M4	Dial Lamp		12-14V .1A (12Volt Versions)
	Dial Lamp		6-8V .1A (6Volt Versions)
M5	Switch		Station Selector and Function Selector

WIRING DATA

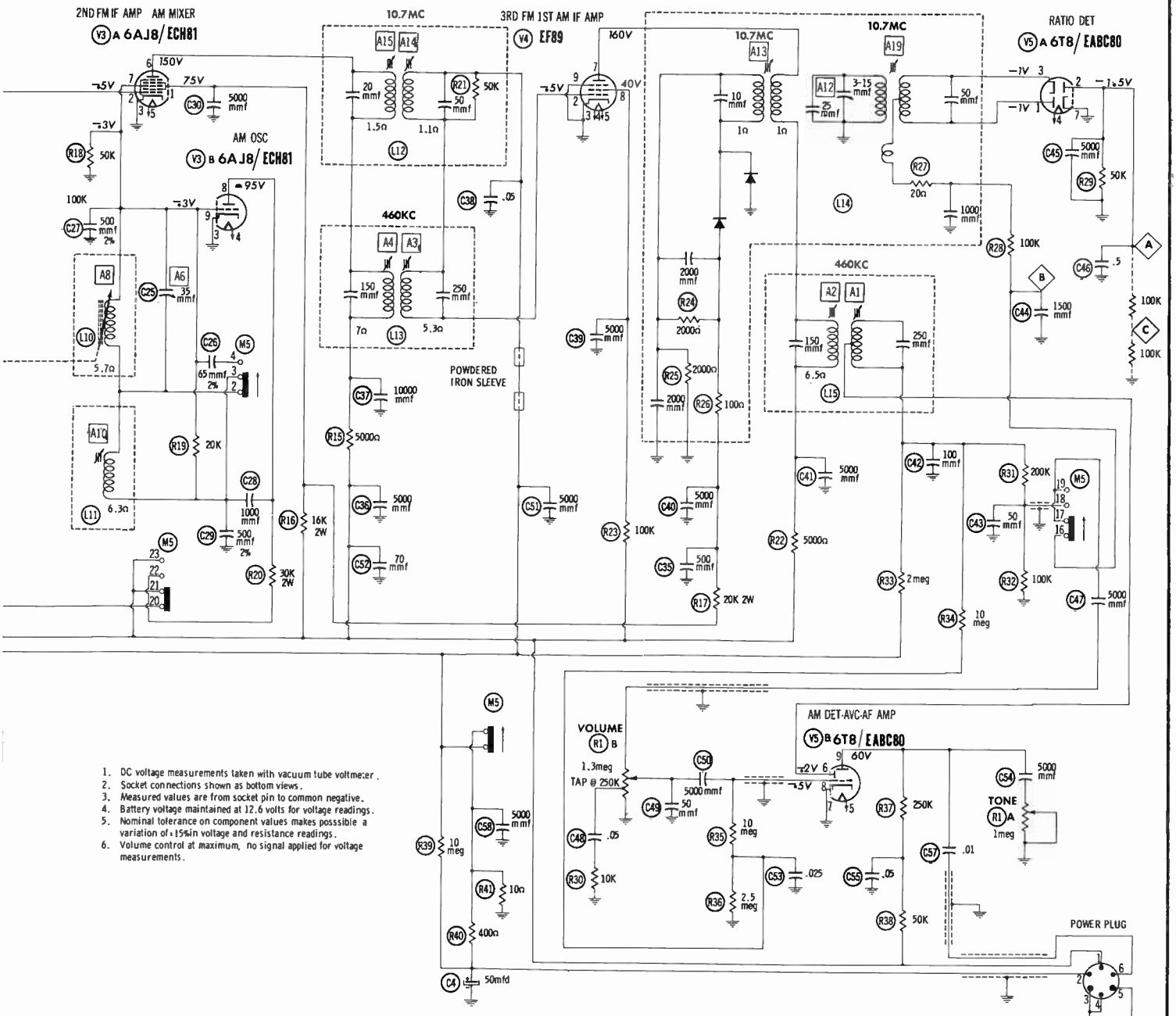
General-use Shielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors
Shielded Hook-up Wire ..... Use BELDEN No. 8885
Bonding Strap ..... Use BELDEN No. 8661



CHASSIS BOTTOM VIEW



A PHOTOFACT STANDARD NOTATION SCHEMATIC
Howard W. Sams & Co., Inc. 1958



1. DC voltage measurements taken with vacuum tube voltmeter.
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes posssible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	6AQ8 ECC85	†10K	250K	0Ω	2Ω	1Ω	†5500Ω	1meg	20Ω	0Ω
V2	EF89	0Ω	250K	0Ω	0Ω	1Ω	0Ω	†6800Ω	†50K	0Ω
V3	6AJ8 ECH81	†16K	100K	0Ω	2Ω	1Ω	†53MΩ	50K	†30K	50K
V4	EF89	0Ω	16Ω	0Ω	1Ω	0Ω	0Ω	†5300Ω	†100K	0Ω
V5	6T8 EABC80	INF	50K	INF	1Ω	0Ω	230K	0Ω	12meg	†300K
V6	6BQ5 EL84	NC	500K	600Ω	2Ω	2Ω	NC	†440Ω	NC	†500Ω

ALL MEASUREMENTS TAKEN IN "FM" POSITION UNLESS OTHERWISE DESIGNATED
† MEASURED FROM OUTPUT OF M2
- MEASURED IN "AM" POSITION
NC NO CONNECTION

Θ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

ALIGNMENT INSTRUCTIONS

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.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.05mfd	High side to pin 2 (grid) of ECH81 (V3). Low side to chassis.	460KC (400% Mod)	AM	550KC	Across Voice coil	A1, A2 A3, A4	Adjust for maximum output
2.	Fig. 1	Thru dummy to antenna receptacle.	460KC	AM	550KC	Across Voice coil.	A5	Adjust for MINIMUM output
3.	Fig. 1	Thru dummy to antenna receptacle.	1610KC	AM	Tuning gang fully open.	Across Voice coil	A6	Adjust for maximum output
4.	Fig. 1	Thru dummy to antenna receptacle.	1400KC	AM	1400KC	Across Voice coil.	A7	Adjust for maximum output
5.	Fig. 1	Thru dummy to antenna receptacle.	600KC	AM	600KC	Across Voice coil	A8, A9	Adjust for maximum output
6.	Fig. 1	Thru dummy to antenna receptacle.	200KC	LW	200KC	Across Voice coil	A10, A11	Adjust for maximum output

FM IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM

Connect two matched 100K (± 1%) resistors in series form point (A) to chassis. 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
7.	200mmf.	High side to pin 2 (grid) of ECH81 (V3). Low side to chassis.	10.7MC (Unmod.)	FM	90MC	DC probe to point (A). Common to chassis.	A12, A13 A14, A15	Adjust for maximum deflection.
8.	Fig. 1	Thru dummy to antenna receptacle.	10.7MC	FM	90MC	DC probe to point (A). Common to chassis.	A16, A17 A18	Adjust for maximum deflection.
9.	Fig. 1	Thru dummy to antenna receptacle.	10.7MC	FM	90MC	DC probe to point B Common to point (C).	A19	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.

FM IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE

Use frequency modulated signal with 60% modulation and 450KC sweep. Use 120% sawtooth voltage in scope for horizonial deflection.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT SCOPE	ADJUST	REMARKS
7.	200mmf	High side to pin 2 (grid) of ECH81 (V3). Low side to chassis.	10.7MC (450KC Sweep)	FM	90MC	Vert Amp to point (A). Low side to Chassis.	A12, A13 A14, A15	Adjust for curve of maximum amplitude and symmetry similar to Fig. 2
8.	Fig. 1	Thru dummy to antenna receptacle	10.7MC	FM	90MC	Vert Amp to point (A). Low side to Chassis.	A16, A17 A18	Adjust for curve of maximum amplitude and symmetry similar to Fig. 2
9.	Fig. 1	Thru dummy to antenna receptacle.	10.7MC	FM	90MC	Vert Amp to point (B). Low side to Chassis.	A19	Adjust so that 10.7MC occurs at center of crossover lines similar to Fig. 3 SLIGHTLY retouch A12 for maximum amplitude and straightness of cross-over lines.

FM RF ALIGNMENT

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
10.	Fig. 1	Thru dummy to antenna receptacle	105MC (Unmod.)	FM	105MC	DC probe to point (A). Common to chassis.	A20, A21	Adjust for maximum deflection.
11.	Fig. 1	Thru dummy to antenna receptacle.	88MC	FM	88MC	DC probe to point (A). Common to chassis.	A22, A23	Adjust for maximum deflection.

With radio installed in car and antenna fully extended, tune in a weak station near 600KC and adjust A7 for maximum volume.

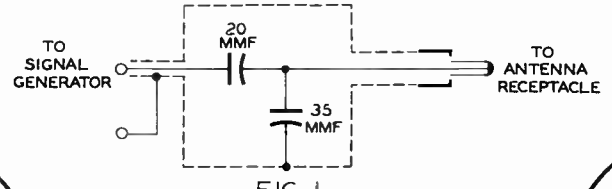


FIG. 1

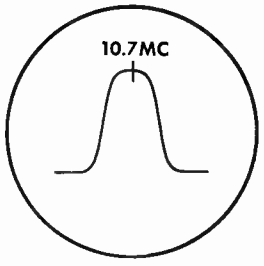


FIG. 2

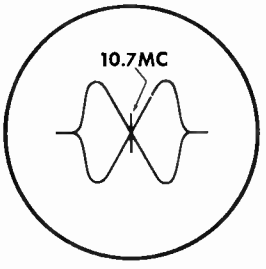
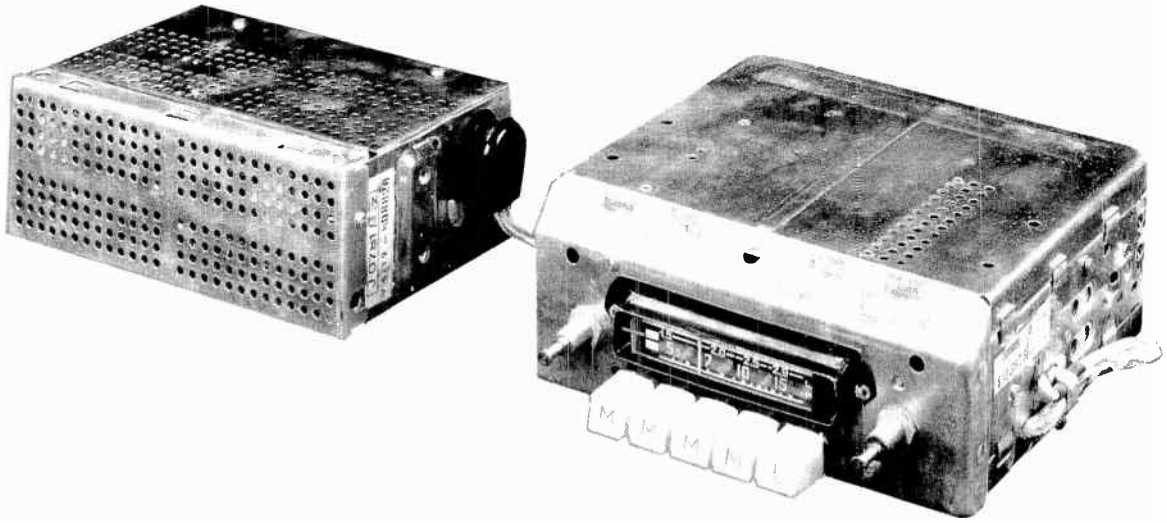


FIG. 3



TRADE NAME	Blaupunkt Model Hamburg
SUPPLIER	Robert Bosch Corp., 40-25 Crescent St., Long Island City, N.Y.
TYPE SET	Battery Operated Universal AM Automobile Receiver
TUBES (Five)	Types EF89 RF Amplifier, 6AJ8/ECH81 Mixer-Osc., EF89 IF Amplifier, EBF89 Det.-AVC-AF Amp. 6BQ5/EL84 Output
POWER SUPPLY	12 Volt Storage Battery (12 Volt Versions) RATING 3 Amp@12.6 Volts DC 6 Volt Storage Battery (6 Volt Versions) 6 Amp@6.3 Volts DC
TUNING RANGE—BROADCAST	540-1610KC LONG WAVE 150-300KC

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING 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.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.05mfd	High side to pin 2 (grid) of 6AJ8/ECH81 (V2). Low side to chassis.	460KC (400~ Mod)	BC	550KC	Across Voice Coil	A1, A2 A3, A4	Adjust for maximum output.
2.	Fig. 1.	Thru Dummy to antenna receptacle.	1610KC	"	Tuning gang fully open	"	A5, A6	"
3.	"	"	1400KC	"	1400KC	"	A7	"
4.	"	"	600KC	"	600KC	"	A8, A9	"
5.	"	"	1400KC	"	1400KC	"	A10,	"
6.	"	"	200KC	LW	200KC		A11, A12 A13	"

With radio installed in car and antenna fully extended, tune in a weak station near 600KC and adjust A7 for maximum output.

PUSHBUTTON ADJUSTMENT

1. Allow receiver to warm up.
2. Pull pushbutton out.
3. Tune manually to desired station
4. Press pushbutton in firmly.

("M" buttons for standard broadcast, "L" button for long wave)

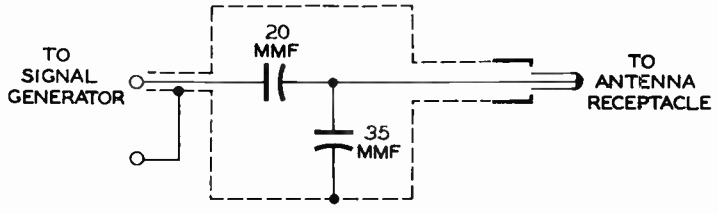
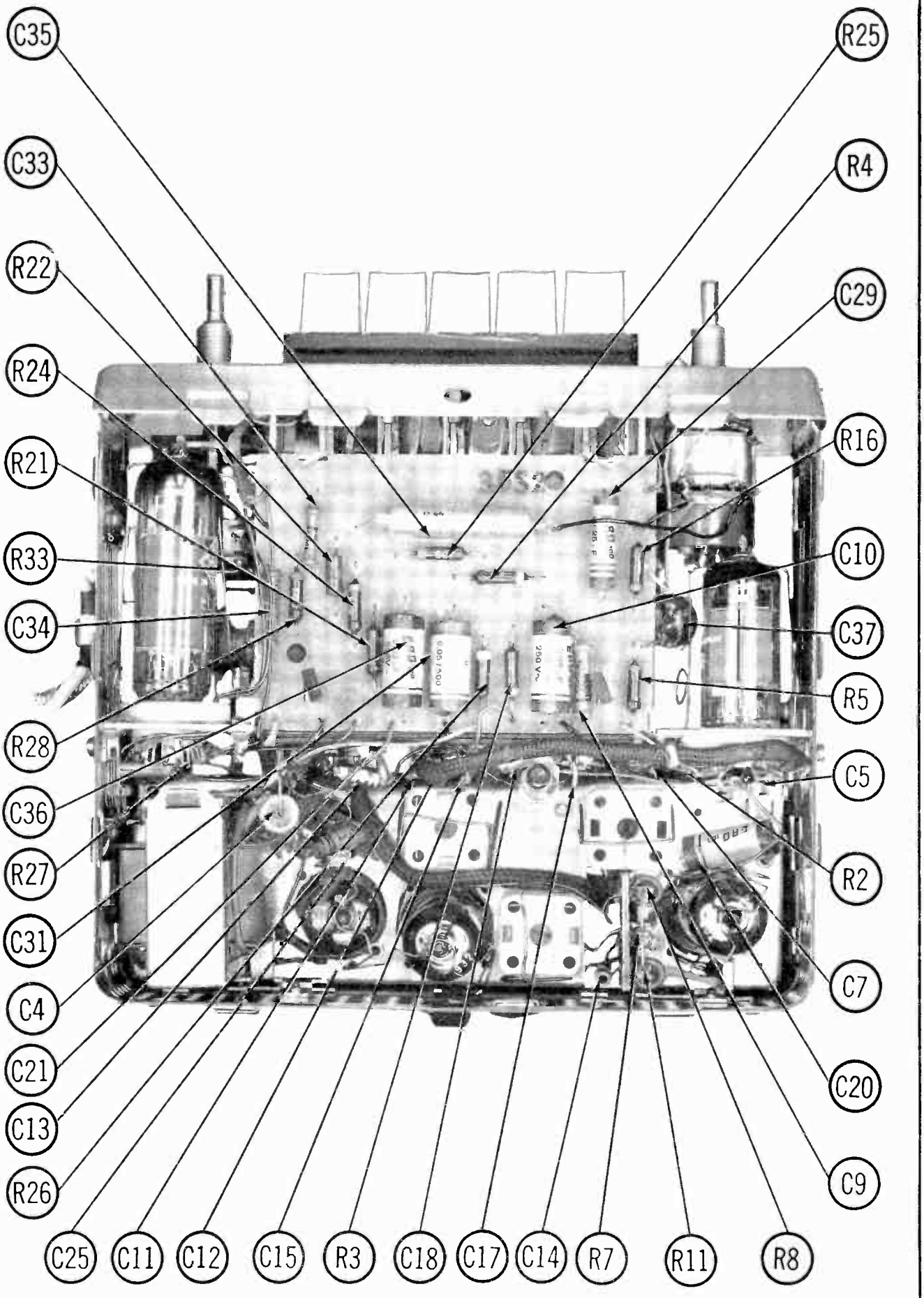
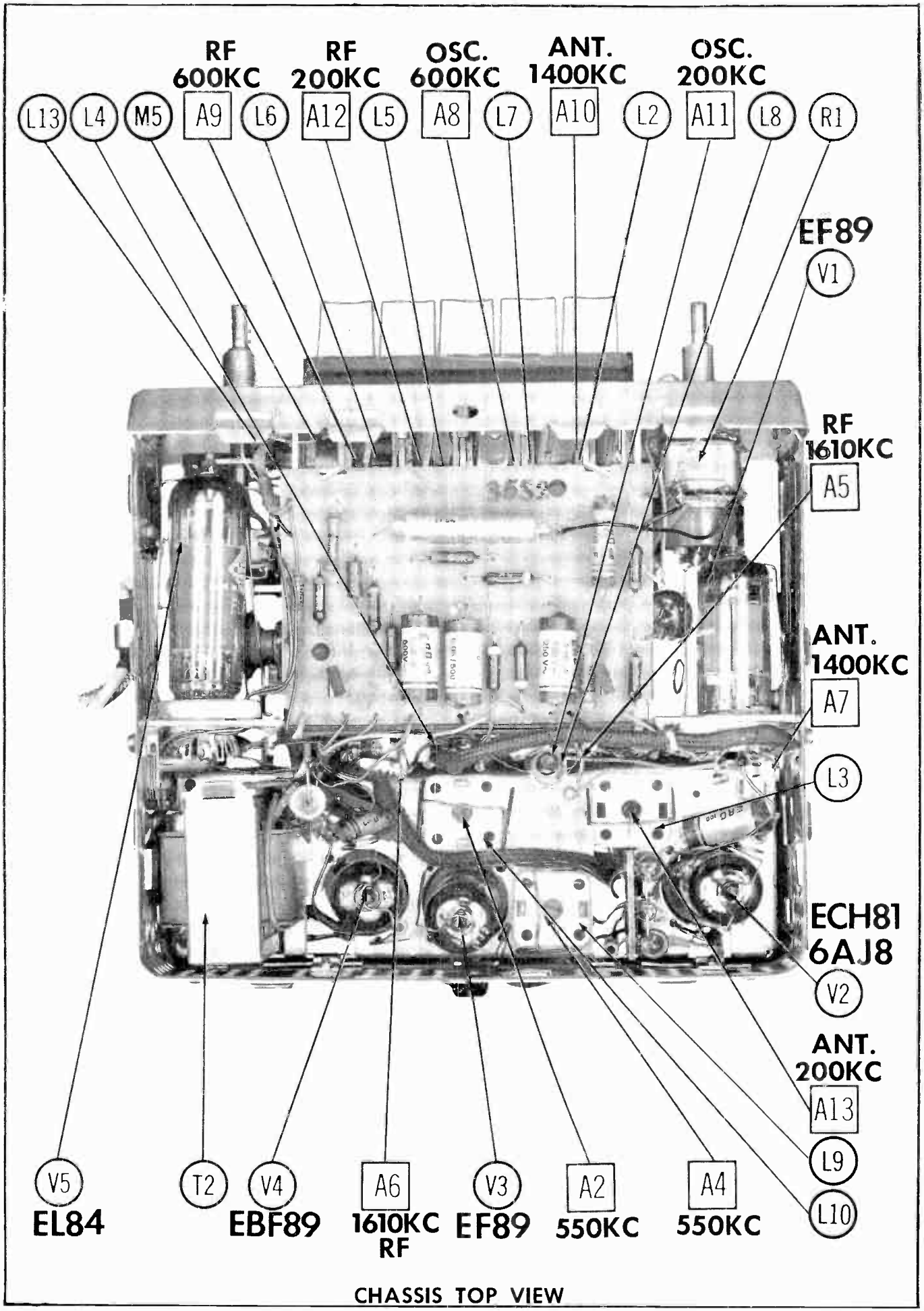


FIG. 1

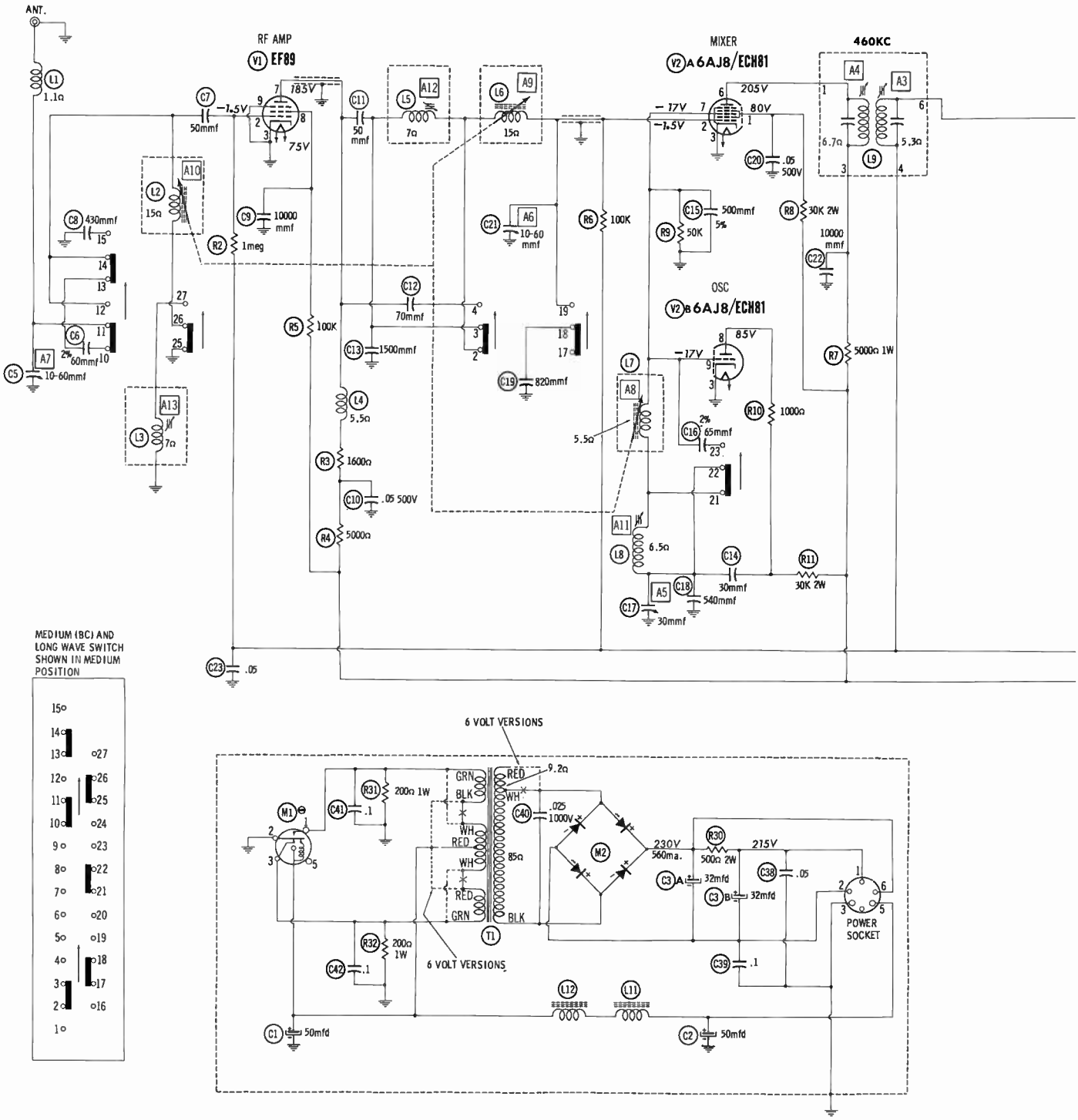
H370



CHASSIS TOP VIEW



CHASSIS TOP VIEW

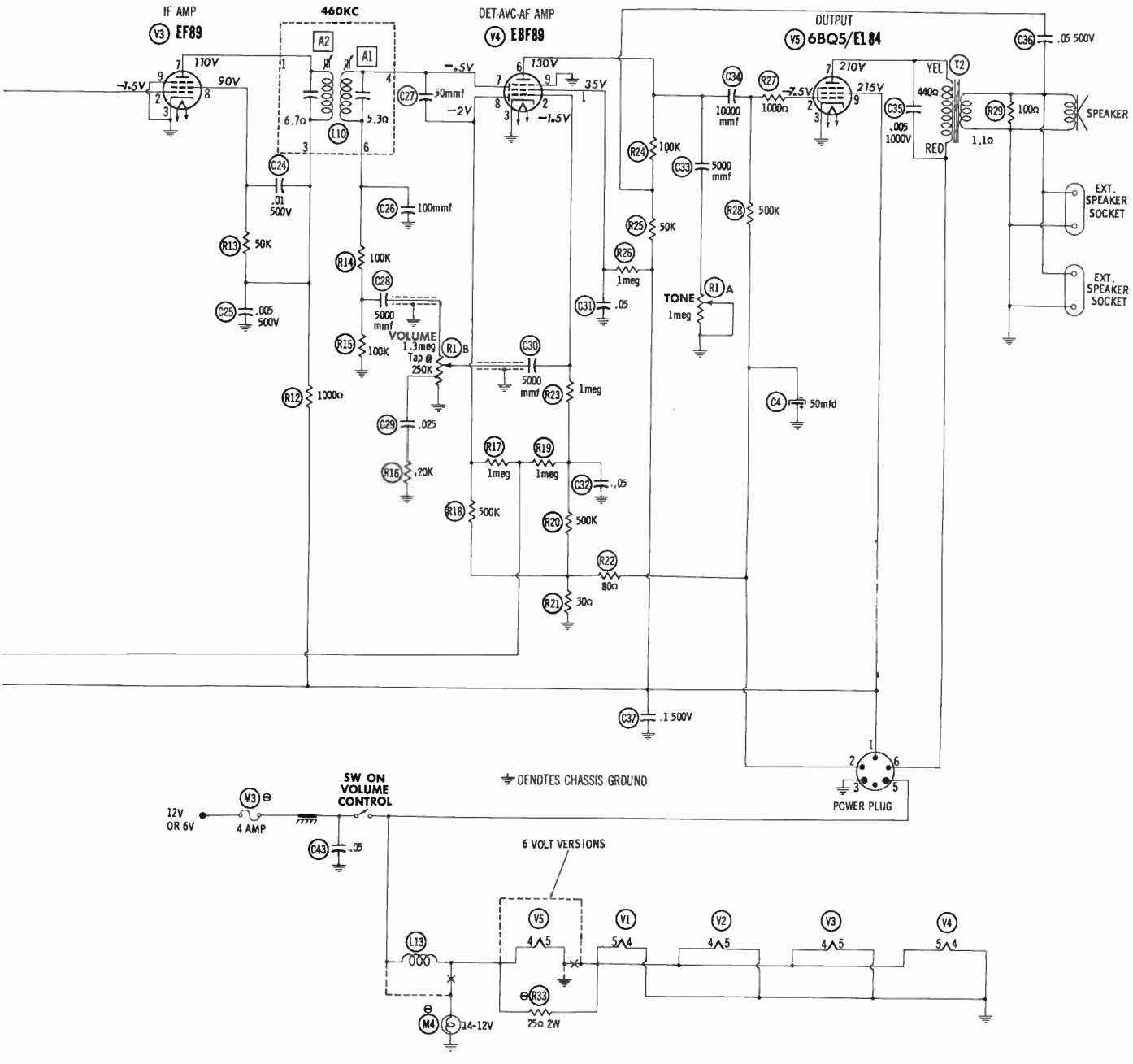


Θ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured at 1000 ohms per volt.
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

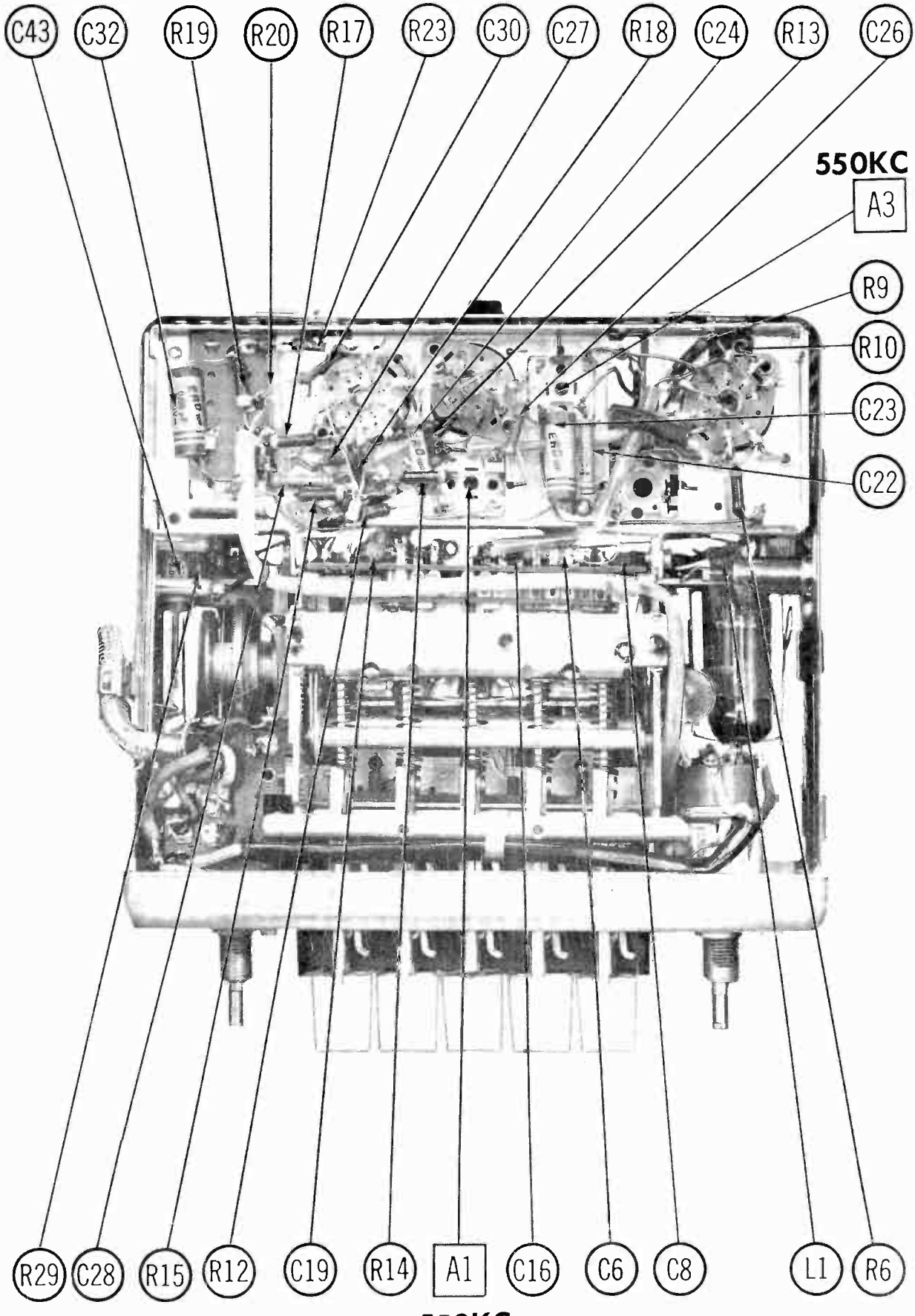
A PHOTOFACT STANDARD NOTATION SCHEMATIC



RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	EF89	0Ω	1.7meg	0Ω	0Ω	1Ω	0Ω	†7100Ω	†100K	0Ω
V2	ECH81 6AJ8	†30K	830K	0Ω	1Ω	0Ω	†5500Ω	50K	†31K	50K
V3	EF89	0Ω	730K	0Ω	1Ω	0Ω	0Ω	†1500Ω	†51K	0Ω
V4	EBF89	†1meg	1.4meg	0Ω	0Ω	1Ω	†150K	200K	420K	0Ω
V5	EL84 6BQ5	NC	500K	0Ω	1Ω	2.2Ω	NC	†440Ω	0Ω	†500Ω

† MEASURED FROM OUTPUT OF M2
NC NO CONNECTION



CHASSIS BOTTOM VIEW

PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE
V1	RF Amplifier	EF89
V2	Mixer-Oscillator	6AJ8/ECH81
V3	IF Amplifier	EF89

ITEM No.	USE	TYPE
V4	Det. -AVC-AF Amp.	EBF89
V5	Output	6BQ5/EL84

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	BLAUPUNKT PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1	50	18		PRS25V50	BBR50-25	TC29	TD-50-25	MT-0250	TVA-1206
C2	50	18		PRS25V50	BBR50-25	TC29	TD-50-25	MT-0250	TVA-1206
C3A	32	385		PRS450V3030			TDLD-29	MTD-4530	TVA-2735
B	32	385							
C4	50	15		PRS25V50	BBR50-25	TC29	TD-50-25	MT-0250	TVA-1206

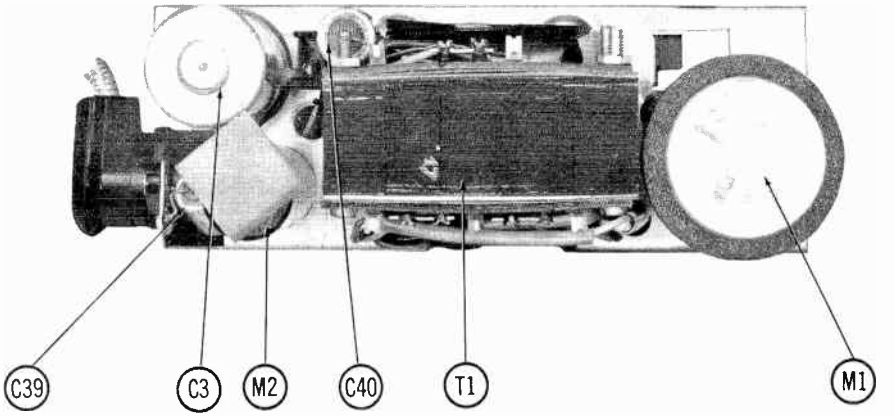
FIXED CAPACITORS

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

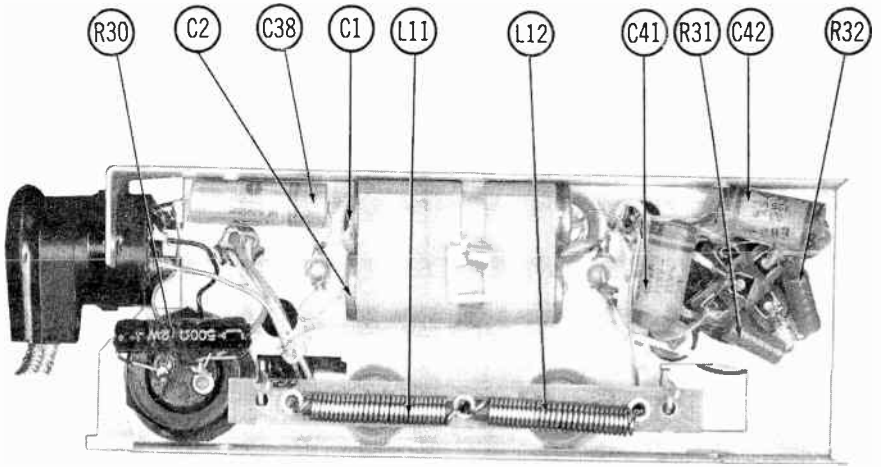
ITEM No.	RATING		REPLACEMENT DATA							NOTES
	CAP.	VOLT	BLAUPUNKT PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	
C5	10-60									
C6	60									2%
C7	50			SI50	D6-500	LT6Q5	GP-50	UC-545	5GA-Q5	
C8	430									
C9	10000			SI10000	D6-103	LT6S1	GP-10000	DC511	5HK-S1	
C10	.05	500		P688N-05	DF-503	CUB6S5		GEM-615	6TM-S5	
C11	50			SI50	D6-500	LT6Q5	GP-50	UC-545	5GA-Q5	
C12	70									
C13	1500			1467-0015	D6-152	1W5D15	ED-1500	MC256	1FM215	
C14	30			SI30	D6-300	LT6Q3	GP-30	UC-543	5GA-Q3	
C15	500					5F5T5	ED-500	MCE-245	MS35	5%
C16	65									2%
C17	30			SI30	D6-300	LT6Q3	GP-30	UC-543	5GA-Q3	
C18	540									
C19	820									
C20	.05	500		P688N-05	DF-503	CUB6S5		GEM-615	6TM-S5	
C21	10-60									
C22	10000			SI10000	D6-103	LT6S1	GP-10000	DC511	5HK-S1	
C23	.05	250		P488N-05	DF-503	CUB4S5		GEM-415	4TM-S5	
C24	.01	500		P688N-01	D6-103	CUB6S1	GP-10000	GEM-611	6TM-S1	
C25	.005	500		P688N-005	D6-502	CUB6D5	GP-5000	GEM-625	6TM-D5	
C26	100			SI100	D6-101	LT6T1	GP-100	UC-531	5GA-T1	
C27	50			SI50	D6-500	LT6Q5	GP-50	UC-545	5GA-Q5	
C28	5000			SI5000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C29	.025	250		P488N-025		CUB6S22		GEM-4125	6TM-S22	
C30	5000			SI5000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C31	.05	500		P688N-05	DF-503	CUB6S5		GEM-615	6TM-S5	
C32	.05	250		P488N-05	DF-503	CUB4S5		GEM-415	4TM-S5	
C33	5000			SI5000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C34	10000			SI10000	D6-103	LT6S1	GP-10000	DC511	5HK-S1	
C35	.005	1000		P1088N-005		CUB10D5		GEM-1025	10TM-D5	
C36	.05	500		P688N-05	DF-503	CUB6S5		GEM-615	6TM-S5	
C37	.1	500		P688N-01	DF-104	CUB6P1		GEM-601	6TM-P1	
C38	.05	350		P488N-05	DF-503	CUB4S5		GEM-415	4TM-S5	
C39	.1	125		P288N-1	DF-104	CUB2P1		GEM-201	2TM-P1	
C40	.025	1000		P1088N-025		CUB10S22		GEM-10125	10TM-S22	
C41	.1	125		P288N-1	DF-104	CUB2P1		GEM-201	2TM-P1	
C42	.1	125		P288N-1	DF-104	CUB2P1		GEM-201	2TM-P1	
C43	.05	250		P488N-05	DF-503	CUB4S5		GEM-415	4TM-S5	

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	BLAUPUNKT PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1A	1meg	½						Tone
B	1.3meg	½						Volume Tap@250K
C	Switch							Power On-Off



POWER CHASSIS-TOP VIEW



POWER CHASSIS-BOTTOM VIEW

PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING OHMS	RATING WATT	BLAUPUNKT PART No.	NOTES
R2	1meg			
R3	1600Ω			
R4	5000Ω			
R5	100K			
R6	100K			
R7	5000Ω	1		
R8	30K	2		
R9	50K			
R10	1000Ω			
R11	30K	2		
R12	1000Ω			
R13	50K			
R14	100K			
R15	100K			
R16	20K			
R17	1meg			
R18	500K			
R19	1meg			
R20	500K			
R21	30Ω			
R22	80Ω			
R23	1meg			
R24	100K			
R25	50K			
R26	1meg			
R27	1000Ω			
R28	500K			
R29	100Ω			
R30	500Ω	2		
R31	200Ω	1		
R32	200Ω	1		
R33	25Ω	2		Note 1

Note 1. Shorted in 6 Volt versions.

TRANSFORMER (VIBRATOR)

ITEM No.	RATING PRI.	RATING SEC. 1	RATING SEC. 2	REPLACEMENT DATA BLAUPUNKT PART No.	Halldorson PART No.	Merit PART No.	Rom PART No.	Stancor PART No.	Thordorson PART No.	Triad PART No.
T1	12.6V ⓐ1A	240V ⓐ 056A		TF722/10Z						

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	TURNS RATIO PRI.	TURNS RATIO SEC.	REPLACEMENT DATA BLAUPUNKT PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
T2	30:	1	TF27/52						

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA BLAUPUNKT PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Ram PART No.	NOTES
L1	Ant. Loading		19-1005	BC-566	4612		9.5 Microhenries
L2	Ant. Coil						
L3	Ant. Coil						
L4	RF Choke						
L5	RF Coil						
L6	RF Coil						
L7	Osc. Coil						
L8	Osc. Coil.						
L9	Input IF						
L10	Output IF						
L11	Hash Choke						
L12	Hash Choke						
L13	Fil. Choke						

PARTS LIST AND DESCRIPTIONS (Continued)

RECTIFIERS

ITEM No.	RATING CURRENT (Measured)	REPLACEMENT DATA BLAUPUNKT PART No.	FEDERAL PART No.	INTERNATIONAL PART No.	SARKES TARZIAN PART No.	NOTES
M2	.056A	XZ737, 2xL				

VIBRATOR

ITEM No.	TYPE	INPUT VOLTS	FREQUENCY	REPLACEMENT DATA BLAUPUNKT PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	RADIART PART No.	NOTES
M1	Interrupter	12.6V	115∿	SM702/2Z①				①12.6 Volt Versions
	Interrupter	6.3V	115∿	SM702/1Z②				② 6.3 Volt Versions

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA BLAUPUNKT PART No. FUSE	BLAUPUNKT PART No. HOLDER	LITTELFUSE PART No. FUSE	LITTELFUSE PART No. HOLDER	BUSS PART No. FUSE	BUSS PART No. HOLDER
M3		4A①						

① 6 Volt Versions Use 8A

MISCELLANEOUS

ITEM No.	PART NAME	BLAUPUNKT PART No.	NOTES
M4	Dial Lamp		14-12V .1A (6-8V. 1A for 6Volt Versions.)

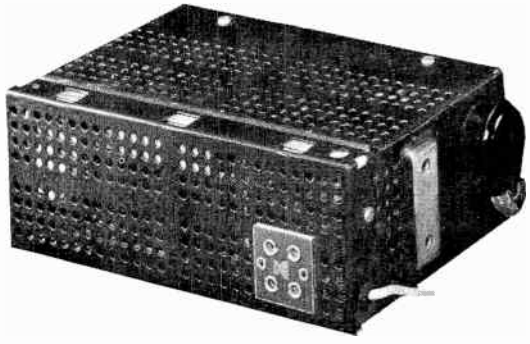
WIRING DATA

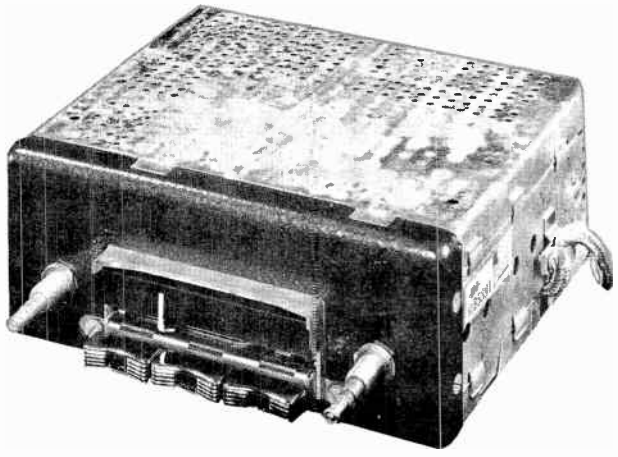
General-use Shielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors
Shielded Hook-up Wire ..... Use BELDEN No. 8885
Bonding Strap ..... Use BELDEN No. 8661

DIAL LAMP REPLACEMENT

Tune the receiver to the low frequency end of the dial. Press the dial scale latch spring (located on the right of the scale frame) to the left. Remove the dial scale. Remove lamp socket by lifting up with a screwdriver.

BLAUPUNKT
MODELS KOLN-12V, KOLN-6V

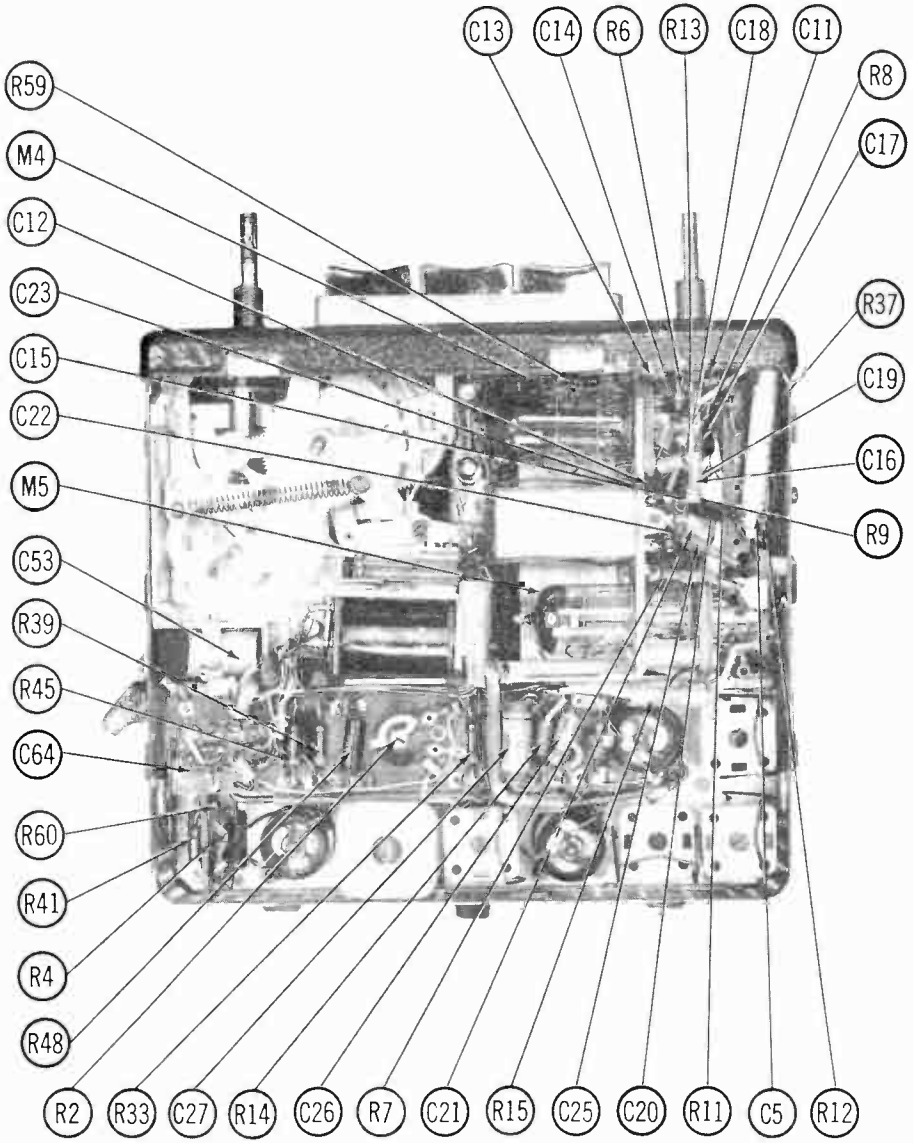




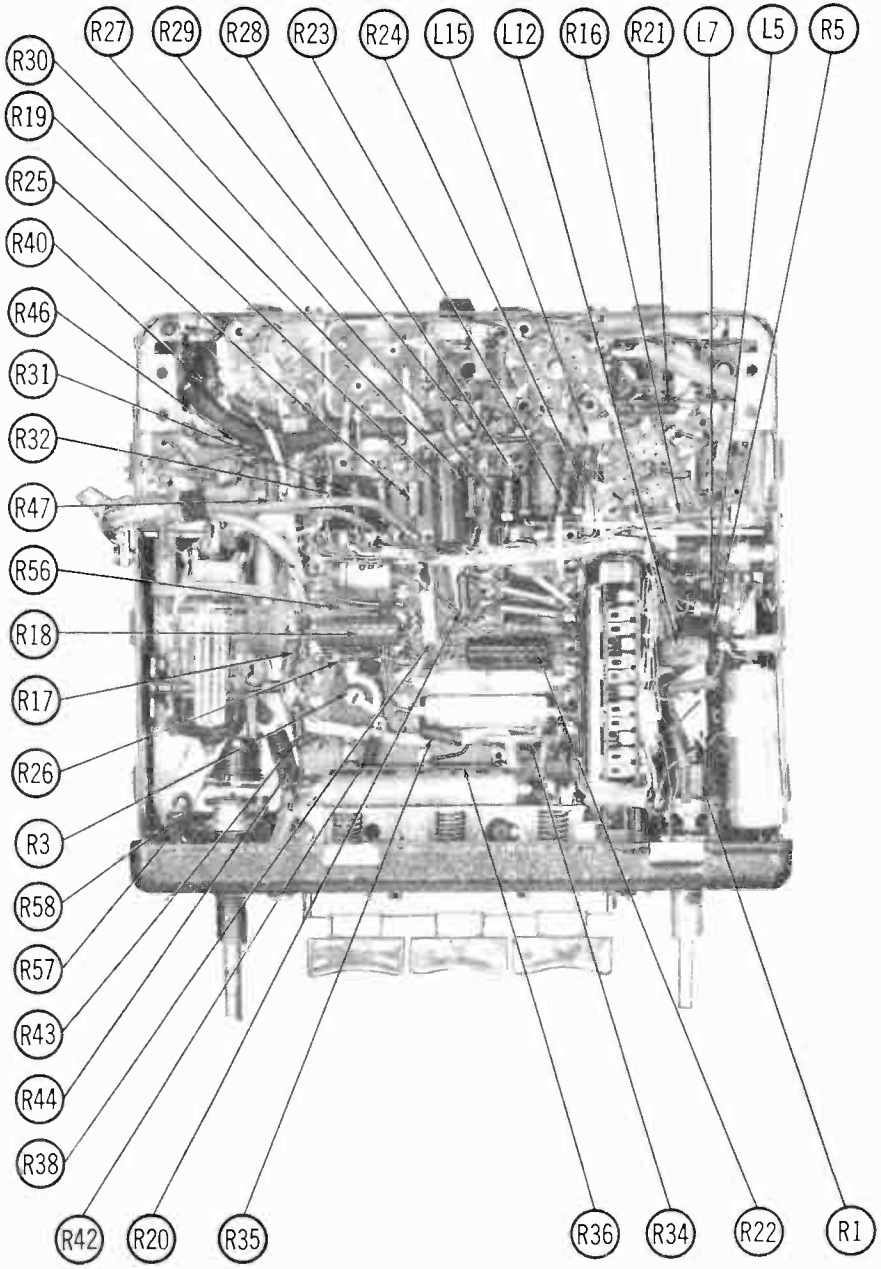
BLAUPUNKT
MODELS KOLN-12V, KOLN-6V

TRADE NAME	Blaupunkt Model Koln		
SUPPLIER	Robert Bosch Corp., 40-25 Crescent St., Long Island City 1, N. Y.		
TYPE SET	Battery Operated Universal Type FM-BC-LW Automobile Receiver		
TUBES (Seven)	Types 6AQ8/ECC85 FM RF Amp. - FM Conv., 6AD6/EF89 1st FM IF Amp. - AM RF Amp., 6AJ8/ECH81 2nd FM IF Amp. - AM Mixer-AM Osc., EBF89 3rd FM-1st AM IF Amp., 6T8/EABC80 Ratio Det. - AM Det. - AVC-AF Amp., 6AQ8/ECC85 Trigger, 6BQ5/EL84 Output		
POWER SUPPLY	12 Volt Storage Battery (12 Volt versions) 6 Volt Storage Battery (6 Volt versions)	RATING	3.8 Amp. @ 12.6 Volts DC 7.6 Amp. @ 6.3 Volts DC
TUNING RANGE	BROADCAST 500KC-1650KC FREQ. MOD. 88MC-108MC	LONG WAVE	150KC-295KC

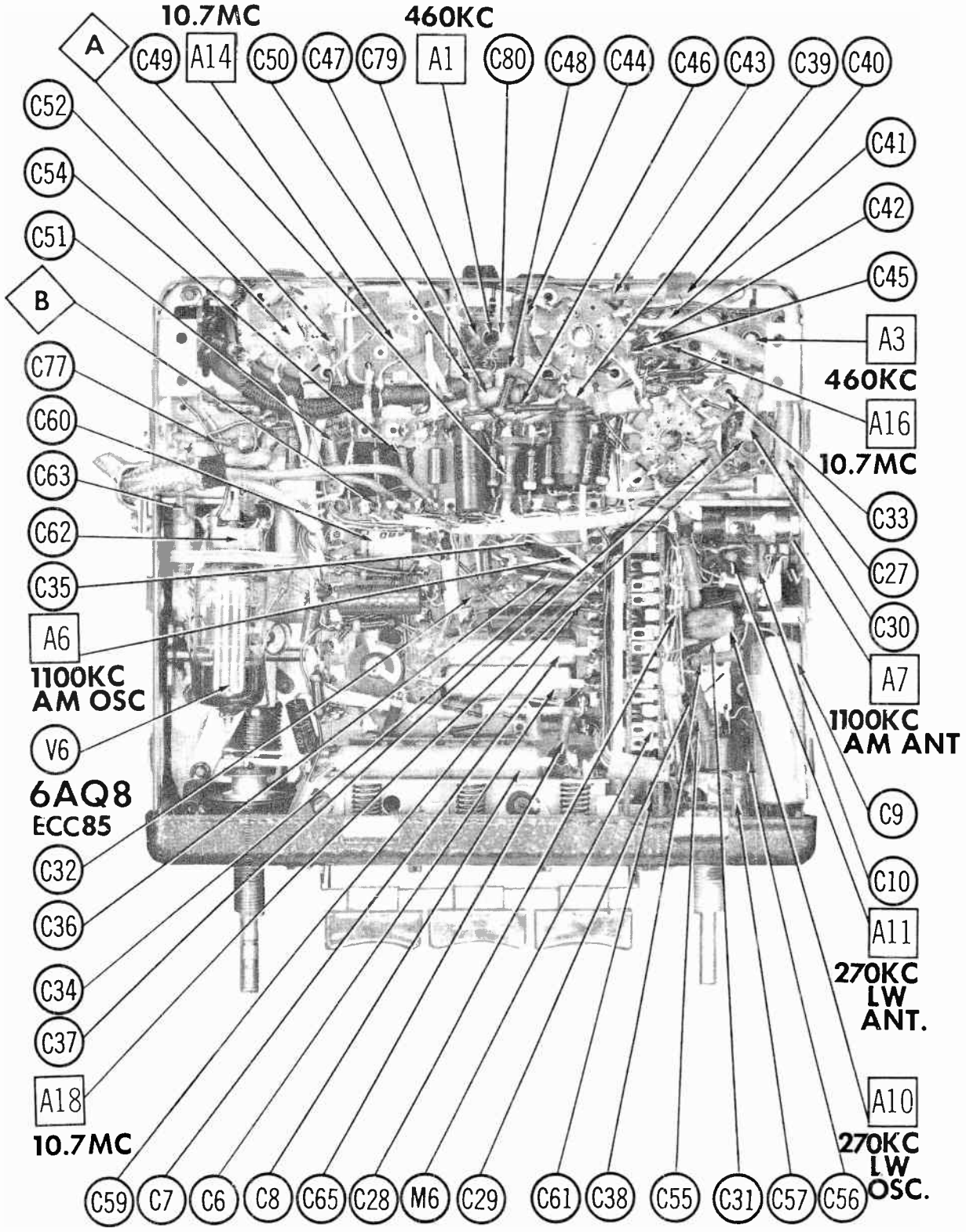
HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana



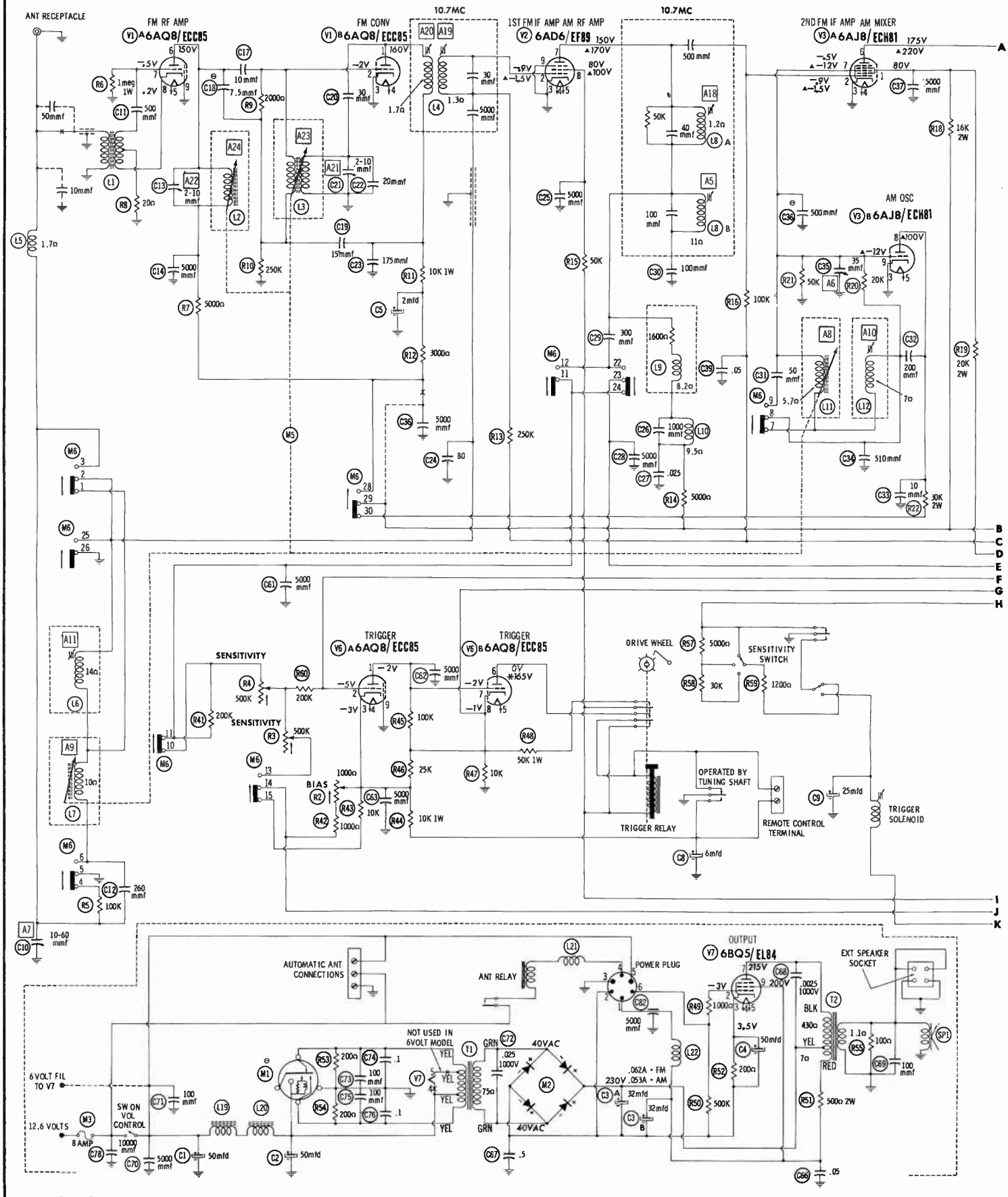
CHASSIS TOP VIEW — CAPACITOR & RESISTOR IDENT

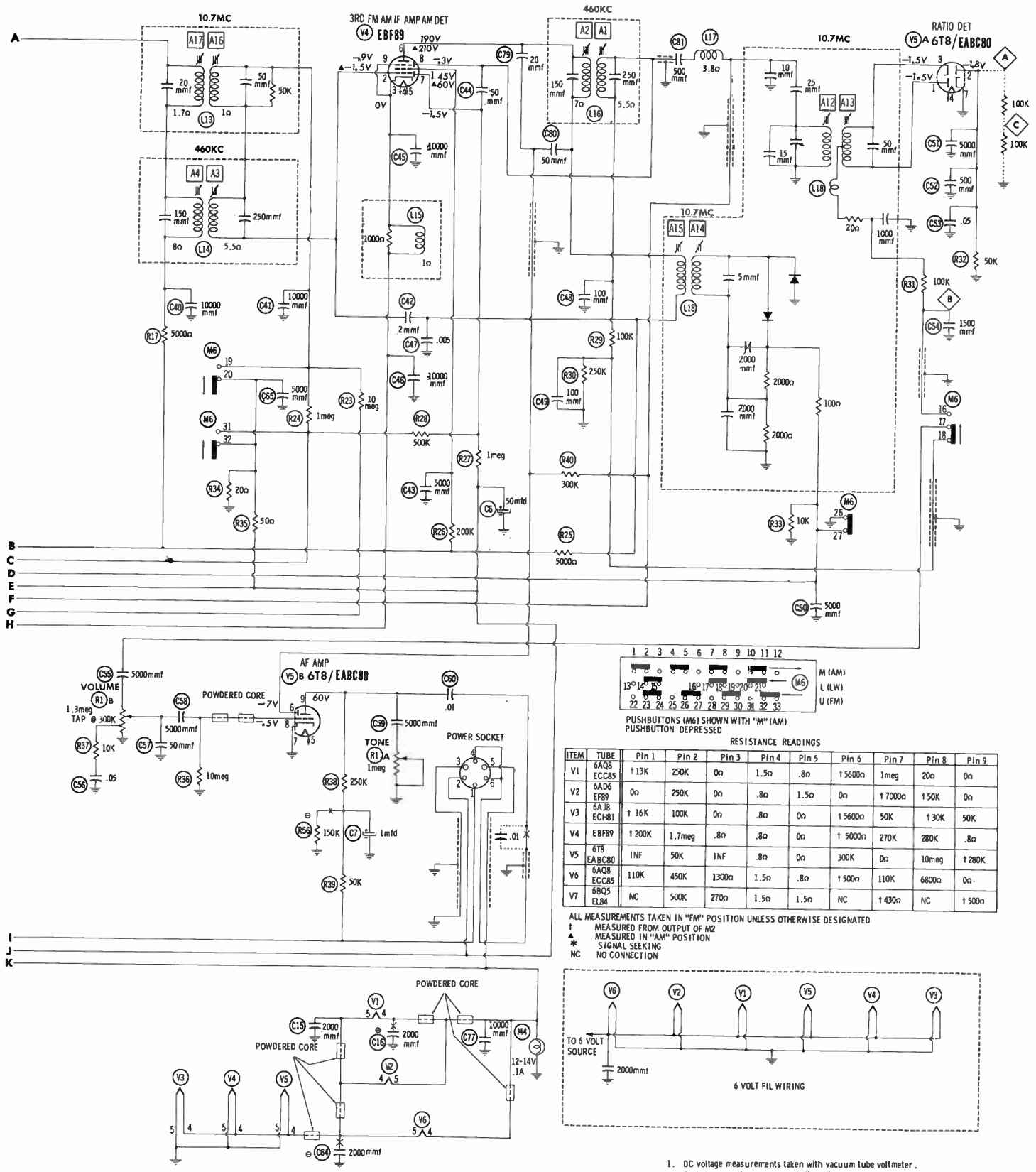


CHASSIS BOTTOM VIEW-RESISTOR AND INDUCTOR IDENT



CHASSIS BOTTOM VIEW-CAPACITOR AND ALIGNMENT IDENTIFICATION





RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	6AQ8 ECC85	†13K	250K	0Ω	1.5Ω	.8Ω	†5600Ω	1meg	20Ω	0Ω
V2	6AD6 EF89	0Ω	250K	0Ω	.8Ω	1.5Ω	0Ω	†7000Ω	†50K	0Ω
V3	6AJ8 ECH81	† 16K	100K	0Ω	.8Ω	0Ω	†5600Ω	50K	†30K	50K
V4	EBF89	†200K	1.7meg	.8Ω	.8Ω	0Ω	† 5000Ω	270K	280K	.8Ω
V5	6T8 EABC80	INF	50K	INF	.8Ω	0Ω	300K	0Ω	10meg	†280K
V6	6AQ8 ECC85	110K	450K	1300Ω	1.5Ω	.8Ω	†500Ω	110K	6800Ω	0Ω
V7	6BQ5 EL84	NC	500K	270Ω	1.5Ω	1.5Ω	NC	†430Ω	NC	†500Ω

ALL MEASUREMENTS TAKEN IN "FM" POSITION UNLESS OTHERWISE DESIGNATED
† MEASURED FROM OUTPUT OF M2
▲ MEASURED IN "AM" POSITION
* SIGNAL SEEKING
NC NO CONNECTION

⊖ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

1. DC voltage measurements taken with vacuum tube voltmeter.
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING 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.

AM ALIGNMENT

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	Fig. 1	High side to pin 2 (grid) of 6AJ8/ECH81 (V3). Low side to chassis.	460KC (400~ Mod)	AM	Tuning gang fully open	Across voice voice coil	A1, A2 A3, A4	Adjust for maximum output.
2.	"	Thru dummy to antenna receptacle	"	"	"	"	A5	Adjust for MINIMUM output.
3.	"	"	1100KC	"	1100KC	"	A6, A7	Adjust for maximum output.
4.	"	"	550KC	"	550KC	"	A8, A9	Adjust for maximum output.
5.	"	"	270KC	"	270KC	"	A10, A11	Adjust for maximum output.

FM IF ALIGNMENT USING AM SIGNAL GENERATOR & VTVM

Connect two matched 100K (±1%) resistors in series from point (A) to chassis. 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
6.	200mmfd	High side to pin 2 (grid) of 6AQ8/ECC85 (V1). Low side to chassis.	10.7MC (Unmod.)	FM	Point of non-interference	DC probe to point (A). Common to chassis.	A12	Adjust for maximum deflection
7.	"	"	"	"	"	DC probe to point (B). Common to point (C).	A13	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.
8.	"	"	"	"	"	DC probe to point (A). Common to chassis.	A14, A15, A16, A17, A18, A19, A20	Adjust for maximum deflection.

FM IF ALIGNMENT FM SIGNAL GENERATOR & OSCILLOSCOPE

Use frequency modulated signal with 60~ modulation and 450KC sweep. Use 120~ 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
6.	200mmfd	High side to pin 2 (grid) of 6AQ8/ECC85 (V1). Low side to chassis.	10.7MC (450KC Swp)	FM	Point of non-interference	Vert. amp. to point (A). Low side to chassis.	A12	Adjust for curve of maximum amplitude and symmetry similar to Fig. 2.
7.	200mmfd	"	"	"	"	Vert. amp. to point B . Low side to chassis.	A13	Adjust so that 10.7MC occurs at center of crossover lines similar to Fig. 3. SLIGHTLY retouch A12 for maximum amplitude and straightness of crossover lines.
8.	"	"	"	"	"	Vert. amp. to point (A). Low side to chassis.	A14, A15, A16, A17, A18, A19, A20	Adjust for curve of maximum amplitude and symmetry similar to Fig. 2.

FM RF ALIGNMENT

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
9.	Fig. 1	Thru dummy to antenna receptacle	105MC (Unmod)	FM	105MC	DC probe to point (A). Common to chassis.	A21, A22	Adjust for maximum deflection.
10.	"	"	90MC	"	90MC	"	A23, A24	Adjust for maximum deflection. Repeat steps 9 & 10 until no further improvement is noted.

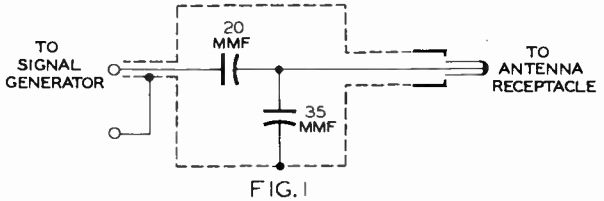


FIG. 1

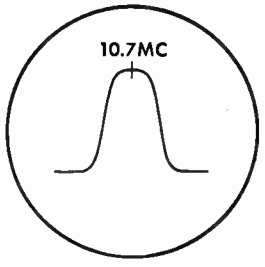


FIG. 2

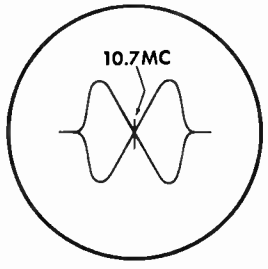


FIG. 3

PARTS LIST AND DESCRIPTIONS
TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE
V1	FM RF Amp. - FM Conv.	6AQ8/ECC85
V2	1st FM IF Amp. - AM RF Amplifier	6AD6/EF89
V3	2nd FM IF Amp. - AM Mixer-AM Osc.	6AJ8/ECH81
V4	3rd FM - 1st AM IF Amp.	EBF89
V5	Ratio Det. - AM Det. - AVC - AF Amp.	6T8/EABC80
V6	Trigger	6AQ8/ECC85
V7	Output	6BQ5/EL84

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP.	RATING VOLT.	REPLACEMENT DATA BLAUPUNKT PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1	50	18		PRS25V50	BBR50-25	TC29	TD-50-25	MT-0250	TVA-1206
C2	50	18		PRS25V50	BBR50-25	TC29	TD-50-25	MT-0250	TVA-1206
C3A	32	385			B0430			D-255	R2600 *
B	32	385							
C4	50	15		SRE25V50	BBR50-25	TC29	ML50-15		TE-1160
C5	2	385							R2623 *
C6	50	15		SRE25V50	BBR50-25	TC29	ML50-15		TE-1160
C7	1	385							R2622 *
C8	6	275			BBR6-300				R2624 *
C9	25	18		PRS25V25	BBR25-25	TC26	TD-25-25	MT-0225	TVA-1205

* Non Catalog Item

FIXED CAPACITORS

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

ITEM No.	RATING CAP.	RATING VOLT	REPLACEMENT DATA BLAUPUNKT PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	NOTES
C10	10-60									
C11	500			BPD-0005	DD-501	L10T5	ED-500	UC-535	5GA-T5	
C12	260									
C13	2-10									
C14	5000			SI 5000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C15	2000			SI 2000	D6-202	LT6D2	GP-2000	UC-522	5GA-D2	
C16	2000			SI 2000	D6-202	LT6D2	GP-2000	UC-522	5GA-D2	①
C17	10			SI 10	D6-100	LT6Q1	GP-10	UC-541	5GA-Q1	
C18	7.5									②
C19	15			SI 15	D6-150	LT6Q15	GP-15	UC-5415	5GA-Q15	
C20	30			SI 30	D6-300	LT6Q3	GP-30	UC-543	5GA-Q3	
C21	2-10									
C22	20			SI 20	D6-200	LT6Q2	GP-20	UC-542	5GA-Q2	
C23	175									
C24	80									
C25	5000			SI 5000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C26	1000			SI 1000	D6-102	LT6D1	GP-1000	UC-521	5GA-D1	
C27	.025	500		P688N-025	DD-203	CUB6S22		GEM-6125	6TM-S22	
C28	5000			SI 5000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C29	300			SI 300	D6-301	LT6T3	GP-300	UC-533	5GA-T3	
C30	100			SI 100	D6-101	LT6T1	GP-100	UC-531	5GA-T1	
C31	50			SI 50	D6-500	LT6Q5	GP-50	UC-545	5GA-Q5	
C32	200			D1-0002	D6-201	LT6T2	GP-200	UC-532	5GA-T2	
C33	10			SI 10	D6-100	LT6Q1	GP-10	UC-541	5GA-Q1	
C34	510									
C35	35									
C36	500									③
C37	5000			SI 5000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C38	5000			SI 5000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C39	.05	250		P488N-05	DF-503	CUB4S5		GEM-415	4TM-S5	
C40	10000			SI 10000	D6-103	LT6S1	GP-10000	DC511	5GA-S1	
C41	10000			SI 10000	D6-103	LT6S1	GP-10000	DC511	5GA-S1	
C42	2			NPO-SI 2.2	TCZ-2R2	C10V2C	TCO-2.2		5TCCB-V22	
C43	5000			SI 5000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C44	50			SI 50	D6-500	LT6Q5	GP-50	UC-545	5GA-Q5	
C45	10000			SI 10000	D6-103	LT6S1	GP-10000	DC511	5GA-S1	
C46	10000			SI 10000	D6-103	LT6S1	GP-10000	DC511	5GA-S1	
C47	.005	500		P688N-005	D6-502	CUB6D5	GP-5000	GEM-625	6TM-D5	
C48	100			SI 100	D6-101	LT6T1	GP-100	UC-531	5GA-T1	
C49	100			SI 100	D6-101	LT6T1	GP-100	UC-531	5GA-T1	
C50	5000			SI 5000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	

PARTS LIST AND DESCRIPTIONS (Continued)
CAPACITORS (cont)

ITEM No.	RATING CAP.	RATING VOLT	REPLACEMENT DATA BLAUPUNKT PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	NOTES
C51	5000			SI 5000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C52	500			SI 500	D6-501	LT6T5	GP-500	UC-535	5GA-T5	
C53	.05	250		P488N-05	DF-503	CUB4S5		GEM-415	4TM-S5	
C54	1500			SI 1500	D6-152	LT6D15	GP-1500	UC-5215	5GA-D15	
C55	5000			SI 5000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C56	.05	250		P488N-05	DF-503	CUB4S5		GEM-415	4TM-S5	
C57	50			SI 50	D6-500	LT6Q5	GP-50	UC-545	5GA-Q5	
C58	5000			SI 5000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C59	5000			SI 5000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C60	.01	500		P688N-01	D6-103	CUB6S1	GP-10000	GEM-611	6TM-S1	
C61	5000			SI 5000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C62	5000			SI 5000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C63	5000			SI 5000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C64	2000			SI 2000	D6-202	LT6D2	GP-2000	UC-522	5GA-D2	①
C65	5000			SI 5000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C66	.05	500		P688N-05	DF-503	CUB6S5		GEM-615	6TM-S5	
C67	.5	250		P488N-5		CUB4P5		GEM-405	4TM-P5	
C68	.0025	1000		P1088N-0022		CUB10D22		GEM-10225	10TM-D22	
C69	100			SI 100	D6-101	LT6T1	GP-100	UC-531	5GA-T1	
C70	5000			SI 5000	D6-502	LT6D5	GP-5000	UC-525	5GA-D5	
C71	100			SI 100	D6-101	LT6T1	GP-100	UC-531	5GA-T1	
C72	.025	1000		P1088N-025		CUB10S22		GEM-10125	10TM-S22	
C73	100			SI 100	D6-101	LT6T1	GP-100	UC-531	5GA-T1	
C74	.1	250		P488N-1	DF-104	CUB4P1		GEM-401	4TM-P1	
C75	100			SI 100	D6-101	LT6T1	GP-100	UC-531	5GA-T1	
C76	.1	250		P488N-1	DF-104	CUB4P1		GEM-401	4TM-P1	
C77	10000			SI 10000	D6-103	LT6S1	GP-10000	DC511	5GA-S1	
C78	10000			SI 10000	D6-103	LT6S1	GP-10000	DC511	5GA-S1	
C79	20			BPD-00002	DD-200	L10Q2	ED-20	UC-542	5GA-Q2	
C80	50									
C81	500			BPD-0005	DD-501	L10T5	ED-0005	UC-535	5GA-T5	
C82	5000									

① Not used in some versions.
② Some versions may use 19mmf in this application.
③ Some versions may use 480mmf in this application.

CONTROLS

ITEM No.	RATING RESISTANCE	RATING WATTS	REPLACEMENT DATA BLAUPUNKT PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	INSTALLATION NOTES
R1A	1meg	1/2						Tone
B	1.3meg	1/2						Volume, Tap ⑧ 300K
C	Switch							
R2	1000Ω	1/4						Blae
R3	500K	1/4						Sensitivity
R4	500K	1/4						Sensitivity

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING OHMS	RATING WATT	BLAUPUNKT PART No.	NOTES
R5	100K			
R6	1meg			
R7	5000Ω	1		
R8	20Ω			
R9	2000Ω			
R10	250K			
R11	10K	1		
R12	3000Ω			
R13	250K			
R14	5000Ω			
R15	50K			
R16	100K			
R17	5000Ω			
R18	16K	2		

ITEM No.	RATING OHMS	RATING WATT	BLAUPUNKT PART No.	NOTES
R19	20K	2		
R20	20K			
R21	50K			
R22	30K	2		
R23	10meg			
R24	1meg			
R25	5000Ω			
R26	200K			
R27	1meg			
R28	500K			
R29	100K			
R30	250K			
R31	100K			
R32	50K			

PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS (cont)

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING OHMS	RATING WATT	BLAUPUNKT PART No.	NOTES
R33	10K			
R34	20Ω			
R35	50Ω			
R38	10meg			
R37	10K			
R38	250K			
R39	50K			
R40	300K			
R41	200K			
R42	1000Ω			
R43	10K			
R44	10K	1		
R45	100K			
R48	25K			
R47	10K			
R48	50K	1		
R49	1000Ω			
R50	500K			
R51	500Ω	2		
R52	200Ω			
R53	200Ω			
R54	200Ω			
R55	100Ω			
R56	150K			Note 1
R57	5000Ω			
R58	30K			
R59	1200Ω			
R60	200K			

Note 1. Not used in some versions.

TRANSFORMER (VIBRATOR)

ITEM No.	RATING PRI.	RATING SEC. 1	RATING SEC. 2	RATING SEC. 3	REPLACEMENT DATA BLAUPUNKT PART No.	Holldorson PART No.	Merit PART No.	Stancor PART No.	Thordorson PART No.	Triod PART No.
T1	12.6V ② 1.5A Tap ② 6.3V ② 2.3A	240V ② .053A			TF-722/9Z					

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	TURNS RATIO PRI.	TURNS RATIO SEC.	REPLACEMENT DATA BLAUPUNKT PART No.	Holldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triod PART No.	NOTES
T2	30:	1	TF27/53Z						

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA BLAUPUNKT PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Rom PART No.	NOTES
L1	FM Ant. Trans.						
L2	FM RF Coil						
L3	FM Osc. Coil						
L4	1st FM IF						
L5	AM Ant. Coil						
L8	AM Ant. Coil						
L7	AM Ant. Coil						
L8A	2nd FM IF						
B	IF Trap						
L9	RF Choke						Wound on 1600Ω resistor
L10	RF Choke						
L11	AM Osc. Coil						
L12	AM Osc. Coil						

PARTS LIST AND DESCRIPTIONS (Continued)

COILS (RF-IF) (cont)

ITEM No.	USE	REPLACEMENT DATA BLAUPUNKT PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Rom PART No.	NOTES
L13	3rd FM IF						
L14	1st AM IF						
L15	RF Choke						Wound on 1000Ω resistor
L18	2nd AM IF						
L17	RF Choke						
L18	Ratio Det.						
L19	Hash Choke						
L20	Hash Choke						
L21	RF Choke						
L22	RF Choke						

VIBRATOR

ITEM No.	TYPE	INPUT VOLTS	FREQUENCY	REPLACEMENT DATA BLAUPUNKT PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	RADIART PART No.	NOTES
M1	Interrupter	12.6V	115v	844/2Z ①				① 12 Volt versions
	Interrupter	6.3V	115v	844/1Z ②				② 6 Volt versions

RECTIFIER

ITEM No.	RATING CURRENT (Measured)	REPLACEMENT DATA BLAUPUNKT PART No.	FEDERAL PART No.	INTERNATIONAL PART No.	SARKES TARZIAN PART No.	NOTES
M2	.062A	B250C125			D-56 ①	① Silicon Type

FUSE

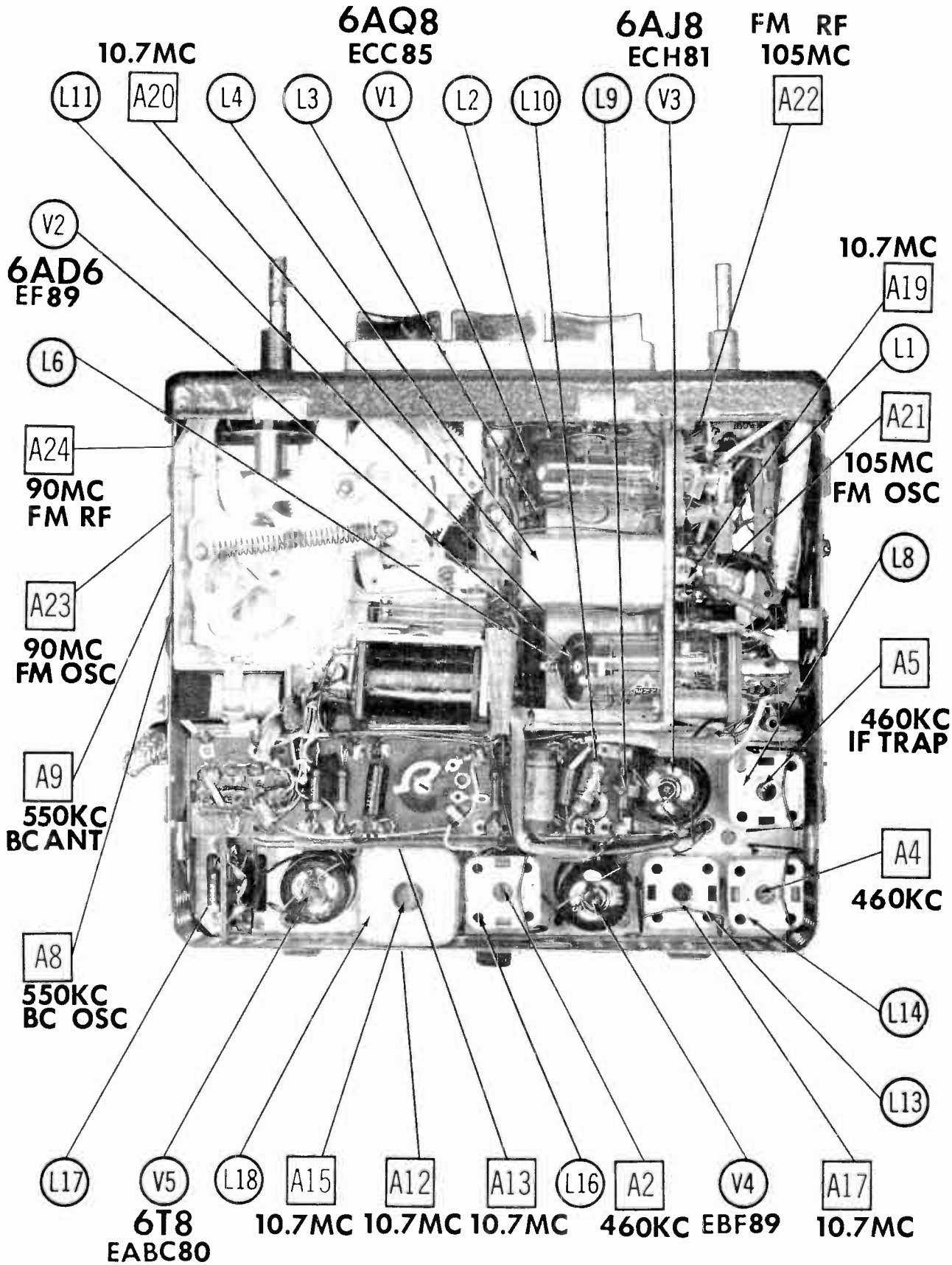
ITEM No.	TYPE	RATING	REPLACEMENT DATA BLAUPUNKT PART No. FUSE	BLAUPUNKT PART No. HOLDER	LITTELFUSE PART No. FUSE	LITTELFUSE PART No. HOLDER	BUSS PART No. FUSE	BUSS PART No. HOLDER
M3		8A						

MISCELLANEOUS

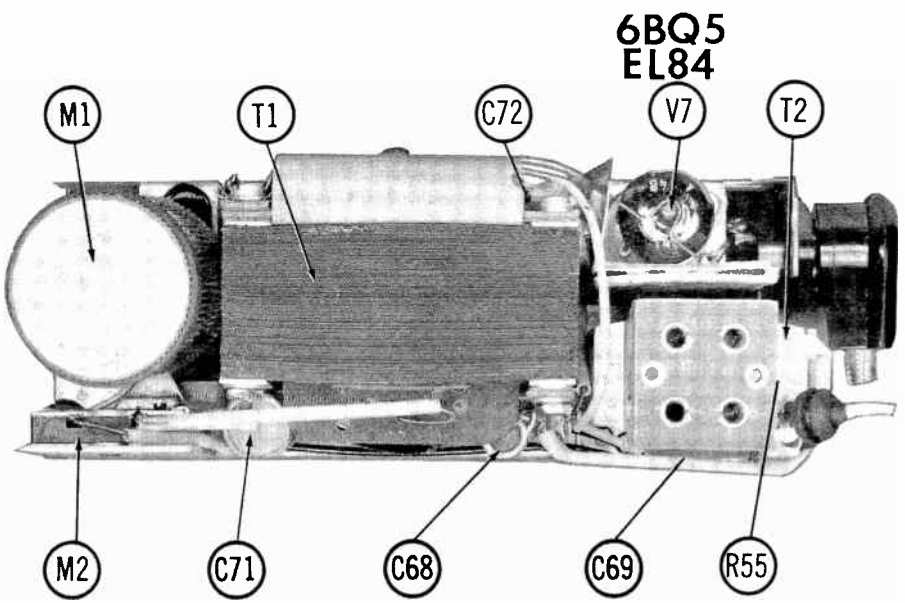
ITEM No.	PART NAME	BLAUPUNKT PART No.	NOTES
M4	Dial Lamp		12-14V 0.1 Amp.
M5	Tuning Unit		FM-AM (Slug Tuning Type)
M6	Switch		FM-BC-LW (Multiple Contact Slide Type)

WIRING DATA

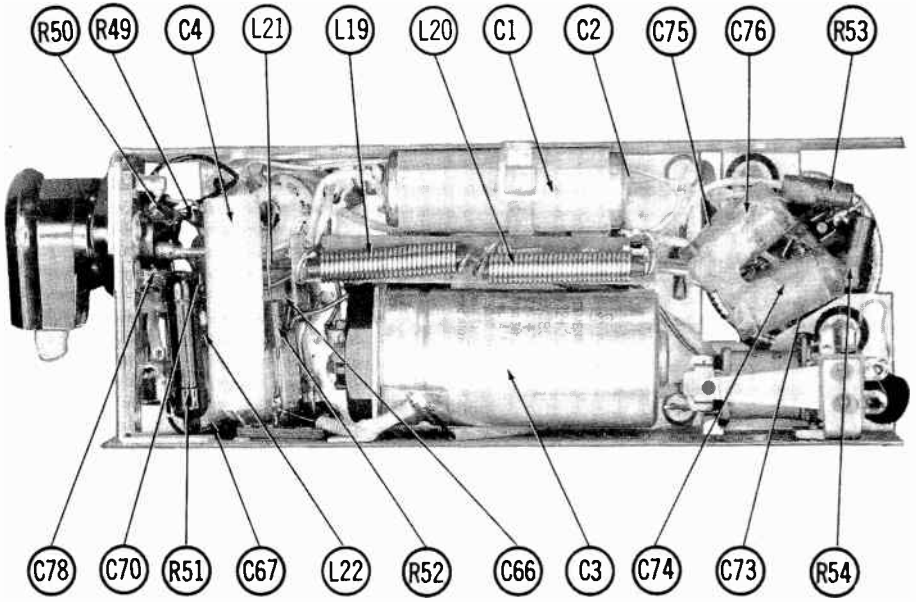
General-use Unshielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors
Shielded Hook-up Wire ..... Use BELDEN No. 8885
Bonding Strap ..... Use BELDEN No. 8661



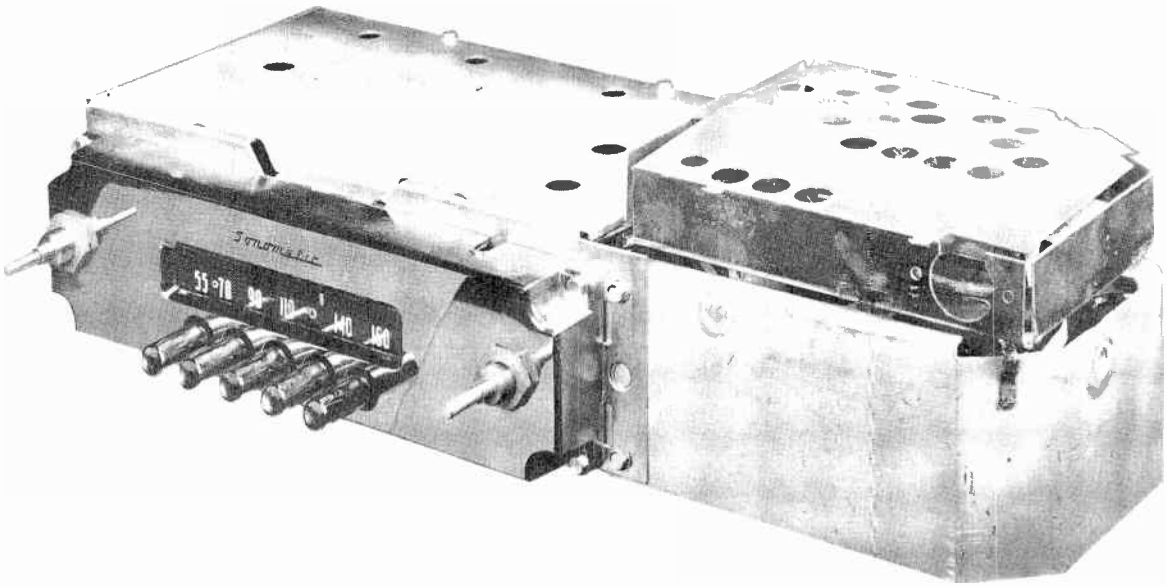
CHASSIS TOP VIEW — TUBE, INDUCTOR & ALIGNMENT IDENTIFICATION



POWER CHASSIS — TOP VIEW



POWER CHASSIS — BOTTOM VIEW



TRADE NAME	Buick Model 981902 (For 1958 Buick Automobiles)
MANUFACTURER	Delco Radio Div., G. M. Corp., Kokomo, Indiana
TYPE SET	Battery Operated Custom Built AM Automobile Receiver
TUBES (Seven)	Types 12BA6 RF Amplifier, 12BE6 Converter, 12BA6 IF Amplifier, 12BF6 Det. - AVC - AF Amp., (2) 12V6GT Output, 0Z4 Rectifier
POWER SUPPLY	12 Volt Storage Battery
RATING	3.2 Amp. @ 12.6 Volts DC
TUNING RANGE—BROADCAST	550 - 1600KC

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING 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.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.1mfd	High side to pin 7 (grid) of 12BE6 (V2). Low side to chassis.	262KC (400~ Mod)	High frequency end stop	Across voice coil	A1, A2, A3, A4	Adjust for maximum output.
2.	82mmf	High side to antenna terminal. Low side to chassis.	1615KC	"	"	A5, A6, A7	Rear of Osc. coil core (A10) should be 1 5/8" from mounting end of coil form. Adjust A5, A6, A7 for max. output.
3.	"	"	600KC	Tune to 600KC signal	"	A8, A9, A10	Adjust for maximum output.
4.	"	"	1615KC	High frequency end stop	"	A6, A7	"
5.	With radio installed in car and antenna fully extended, tune in a weak station near 1000KC and adjust A7 for maximum output.						

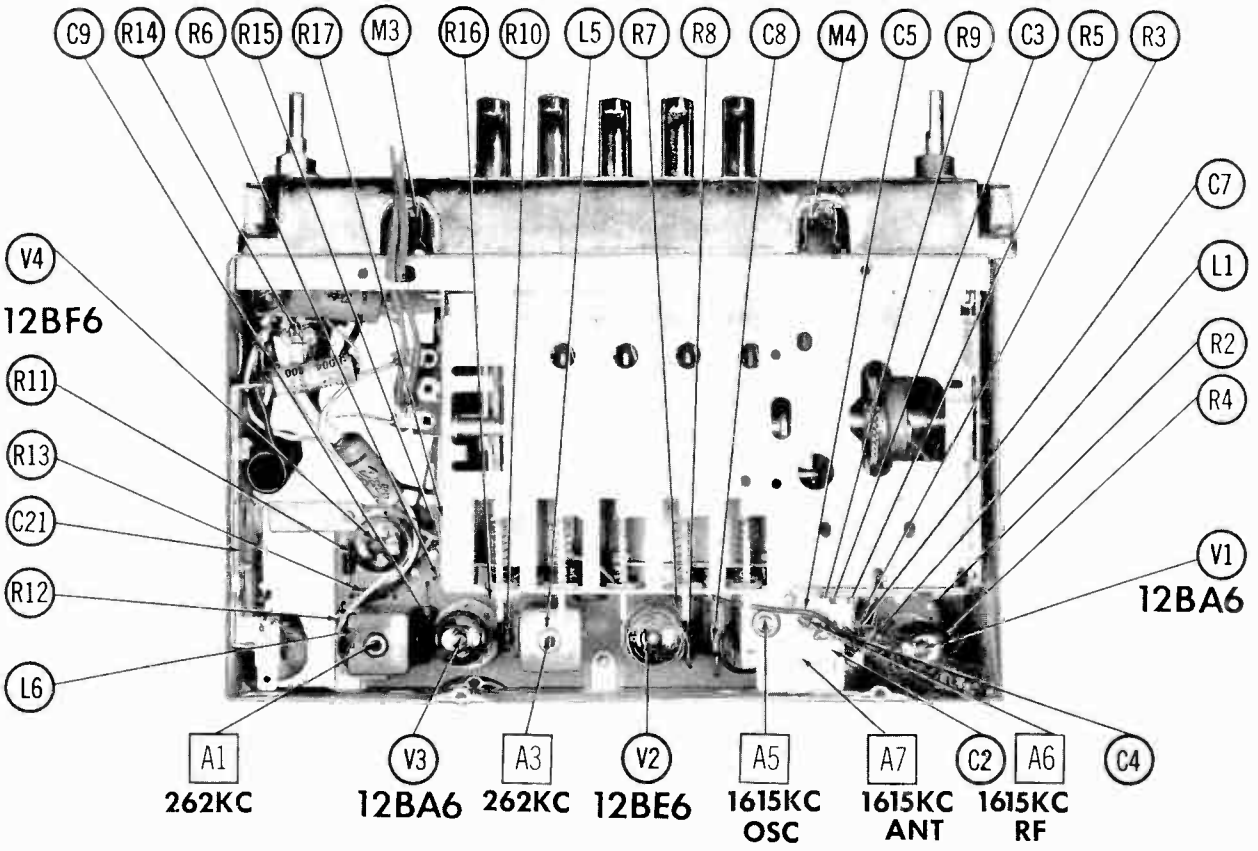
POINTER ADJUSTMENT

With radio tuned to a 600KC signal, adjust pointer adjusting screw so that pointer coincides with 600KC dial mark.

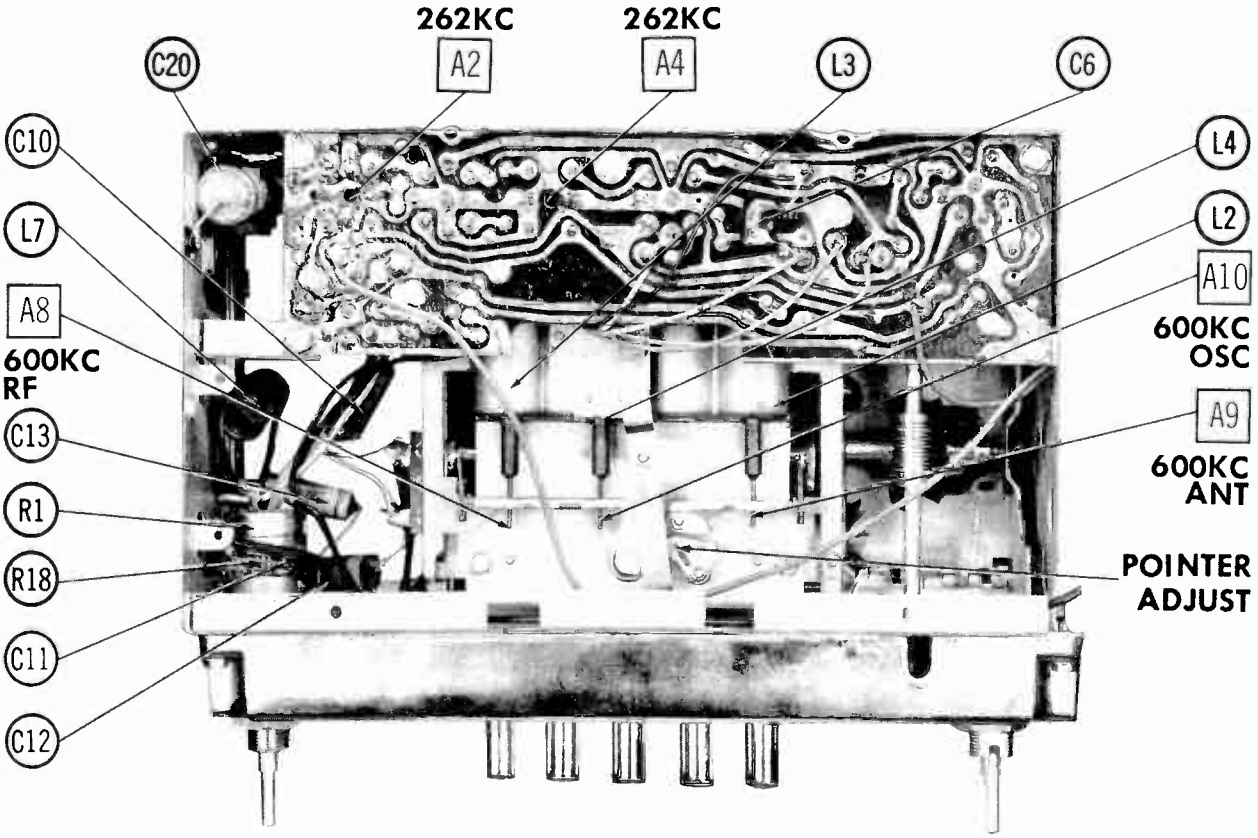
PUSHBUTTON ADJUSTMENT

1. Pull pushbutton to the left and out.
2. Tune manually to desired station.
3. Press pushbutton in firmly.
4. Repeat for remaining pushbuttons.

HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana



TUNER CHASSIS - TOP VIEW



TUNER CHASSIS - BOTTOM VIEW

PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier	12BA6	
V2	Converter	12BE6	
V3	IF Amplifier	12BA6	
V4	Det.-AVC-AF Amplifier	12BF6	

ITEM No.	USE	TYPE	NOTES
V5	Output	12V6GT	
V6	Output	12V6GT	
V7	Rectifier	0Z4	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	DELCO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	■20	400	6322	AFH3-120	C0990	FP345. 8	TMT-106	T-550	TVL-3678
B	▲20	400							
C	20	25							

FIXED CAPACITORS

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

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT	DELCO PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
C2A	7-69		7269079						
B	36								
C3	.047	200	6612	P288N-047	DF-503	CUB2S47	GEM-4147	2TM-S47	
C4	15		6361	BPD-000015	DD-150	L10Q15	UC-5315	5GA-Q15	
C5A			7268828						
B									
C									
D									
C6	200		7270129	1469-0002		1R5T2	MCE237	MS-32	5%
C7	39		6366	DI 000039	DD-390	L10Q39	UC-5439	5GA-Q39	
C8	.047	400	6612	P488N-047	DF-503	CUB4S47	GEM-4147	4TM-S47	
C9	22		6363	1468-000022	DD-220	L10Q22	UC-5422	5GA-Q22	
C10	.002	600	6628	P688N-002	D6-202	CUB6D2	GEM-622	6TM-D2	
C11	100		6371	BPD-0001	DD-101	L10T1	UC-531	5GA-T1	
C12	.015	600	7237719	P688N-015	DD16-153	CUB6S15	GEM-6115	6TM-S15	
C13	.004	600	6630	P688N-004	D6-402	CUB6D4	GEM-624	6TM-D4	
C14	.2	400	6614	P488N-22		CUB4P22	GEM-4022	4TM-P22	
C15	100		7265995	BPD-0001	DD-101	L10T1	UC-531	5GA-T1	
C16	.003	1000	6563	P1088N-003	DD16-302	CUB10D3	GEM-1023	10TM-D3	
C17	.007	1600	6567	P1688N-007	DD16-702	CUB16D7	GEM-1627	MB-D7	
C18	.47	100	6692	P288N-47		CUB2P47	GEM-2047	2TM-P47	
C19	.1	200	6690	P288N-1	DF-104	CUB2P1	GEM-201	2TM-P1	
C20	.47	100	6692	P288N-47		CUB2P47	GEM-2047	2TM-P47	
C21			1221054						

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	DELCO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1A	500K		7271329	F1-41 †	‡RTV-657C		■UE3818S	Tone
B	1meg			R2-58				Volume, Tap ⓐ 250K
C	Switch			KB-4 or KR-4*				

■ "STA-LOC" Equivalent, FL55A, OS1625, RU16T254, IS2250, US-41
† Use AK-28 Adaptor bushing.
* Use KR-4 on CRL "Red Label" controls and KB-4 on "Blue Label" controls.
‡ Use XB-1 Adaptor bushing.

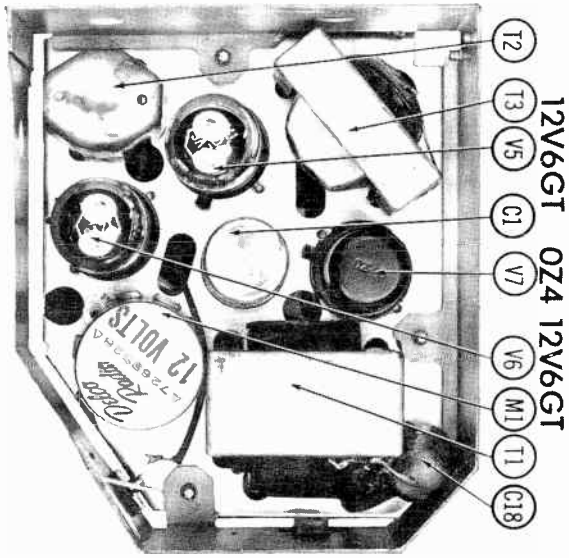
RESISTORS

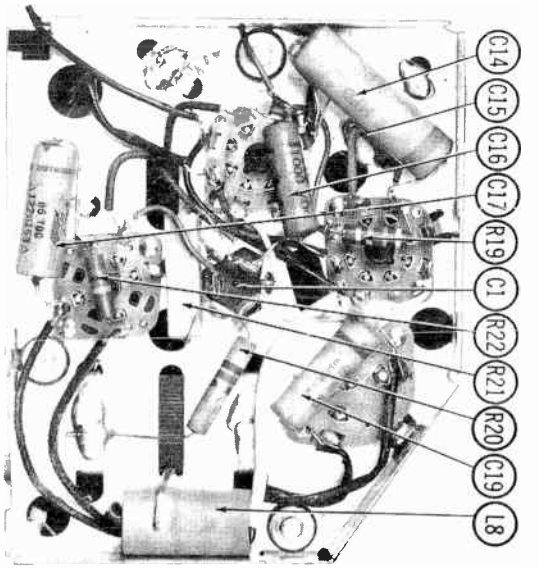
All wattages 1/2 watt, or less, unless otherwise listed.

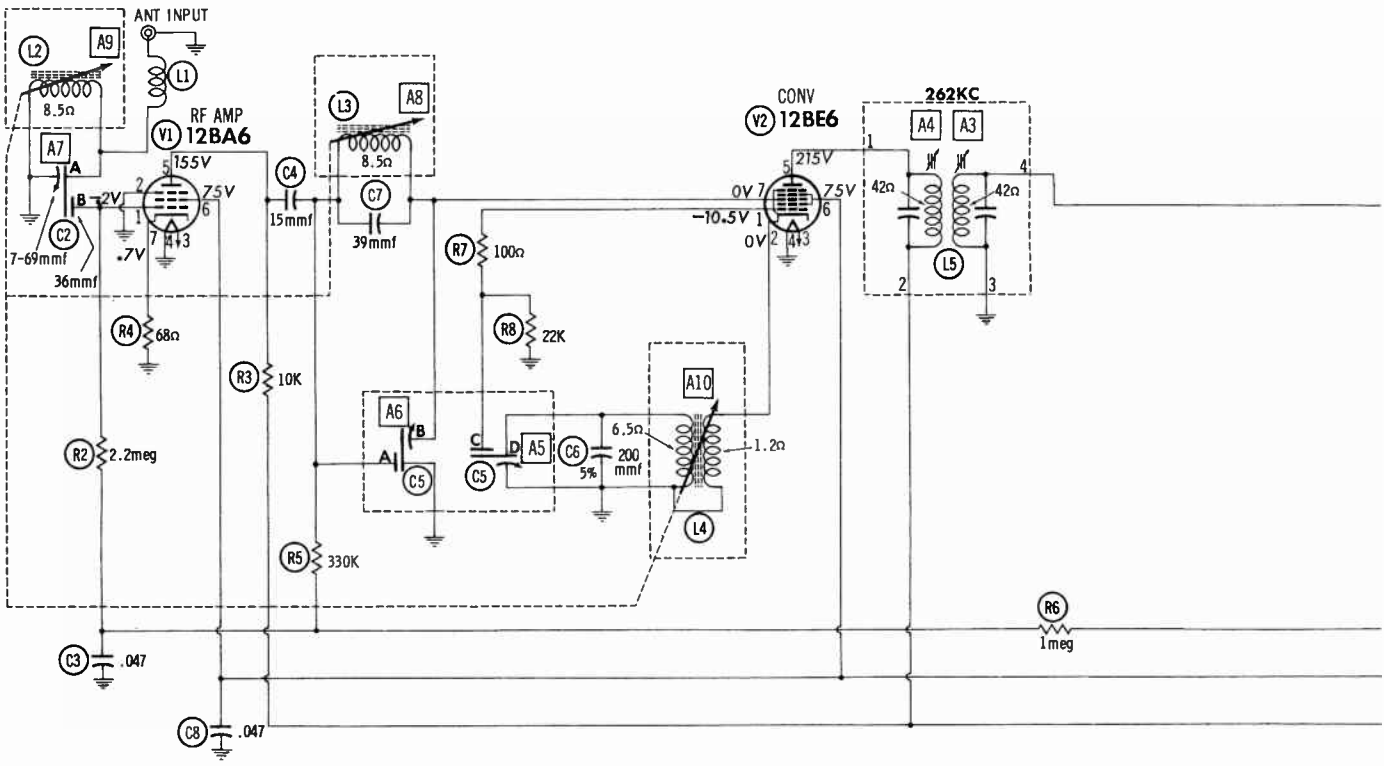
ITEM No.	RATING		DELCO PART No.	NOTES
	OHMS	WATT		
R2	2. 2meg		1239	
R3	10K		1174	
R4	68Ω		1111	
R5	330K		1229	
R6	1meg		1235	

ITEM No.	RATING		DELCO PART No.	NOTES
	OHMS	WATT		
R7	100Ω		1113	
R8	22K		1215	
R9	15K		1277	
R10	270Ω		1118	
R11	1meg		1235	

POWER CHASSIS







RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
V1	12BA6	4.2meg	0Ω	.9Ω	0Ω	†12K	†17K	68Ω	
V2	12BE6	22K	1.2Ω	.9Ω	0Ω	†1800Ω	†17K	2.3meg	
V3	12BA6	42Ω	0Ω	.9Ω	0Ω	†1800Ω	†17K	270Ω	
V4	12BF6	1meg	2900Ω	0Ω	.9Ω	1meg	300K	†49K	
V5	12V6GT	TP	.9Ω	†200Ω	†1800Ω	900Ω	NC	0Ω	360Ω
V6	12V6GT	NC	.9Ω	†200Ω	†1800Ω	900Ω	TP	0Ω	360Ω
V7	0Z4	0Ω	NC	230Ω	NC	210Ω	NC	TP	20K(Min)

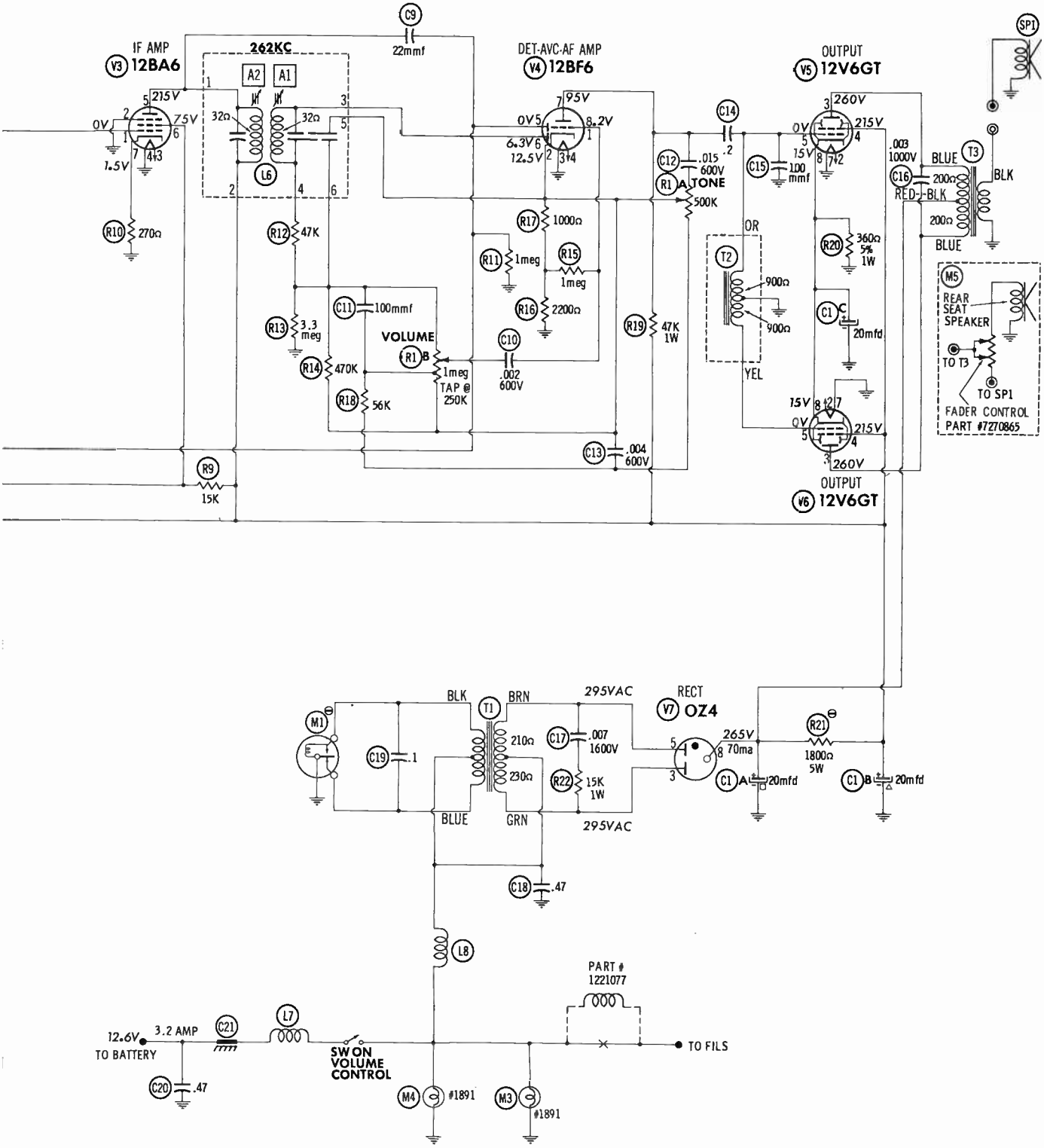
† MEASURED FROM PIN 8 OF V7
NC NO CONNECTION
TP TIE POINT

Θ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured at 1000 ohms per volt.
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes posssible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

A PHOTOFACT STANDARD NOTATION SCHEMATIC
Howard W. Sams & Co., Inc. 1958



PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS (cont)

ITEM No.	RATING OHMS	RATING WATT	DELCO PART No.	NOTES
R12	47K		1219	
R13	3.3meg		1241	
R14	470K		1231	
R15	1meg		1235	
R16	2200Ω		1129	
R17	1000Ω		1125	
R18	56K		1220	
R19	47K	1	1259	
R20	360Ω 5%	1(WW)	7234563	
R21	1800Ω	5		①
R22	15K	1	1253	

① Mfg. recommends replacing with 2700Ω 2W (Part #1204) & 5600Ω 1W (Part #1171) in parallel.

TRANSFORMER (VIBRATOR)

ITEM No.	RATING PRI.	RATING SEC. 1	RATING SEC. 2	REPLACEMENT DATA DELCO PART No.	Holldorson PART No.	Merit PART No.	Rom PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
T1	12.6VCT @ 2.33A	500VCT @ .070A		7269118				P-6497		

TRANSFORMER (DRIVER)

ITEM No.	DC Resistance	REPLACEMENT DATA DELCO PART No.	Holldorson PART No.	Merit PART No.	Rom PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
T2	1800Ω CT	1220902				A-4421			

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE PRI.	IMPEDANCE SEC.	REPLACEMENT DATA DELCO PART No.	Holldorson PART No.	Merit PART No.	Rom PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
T3	8700Ω CT	3-4Ω	7266997	21011 ①	A-2901 ①	AU-606 ①	A-4430	22S56 ①	S-55X ①	① Use original channel frame

SPEAKER

ITEM No.	TYPE SIZE	TYPE FIELD	TYPE V. C. IMP.	REPLACEMENT DATA DELCO PART No.	QUAM PART No.	NOTES
SP1	6" X 9"	PM	3-4Ω	7269084	69A2	① Used in rear seat speaker kit 981905.
	6" X 9"	PM		7267685 ①		

PARTS LIST AND DESCRIPTIONS (Continued)

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA DELCO PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Rom PART No.	NOTES
L1	Antenna Coil	7255738					6.5 Microhenries
L2	Antenna Coil	1221138					
L3	RF Coil	1221138					
L4	Osc. Coil	1221139					
L5	Input IF	1220990	16-6756	BC-317	13-PH1		
L6	Output IF	1220992		BC-320	13-PH6		
L7	"A" Lead Choke	1217846					1.4 Microhenries
L8	Hash Choke	1221077					

VIBRATOR

ITEM No.	TYPE	INPUT VOLTS	FREQUENCY	REPLACEMENT DATA DELCO PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	RADIART PART No.	NOTES
M1	Interrupter	12.6 VDC	115~	7265528 ①	6330	G1602/G883	6330	① Alternate Part #8555

FUSES

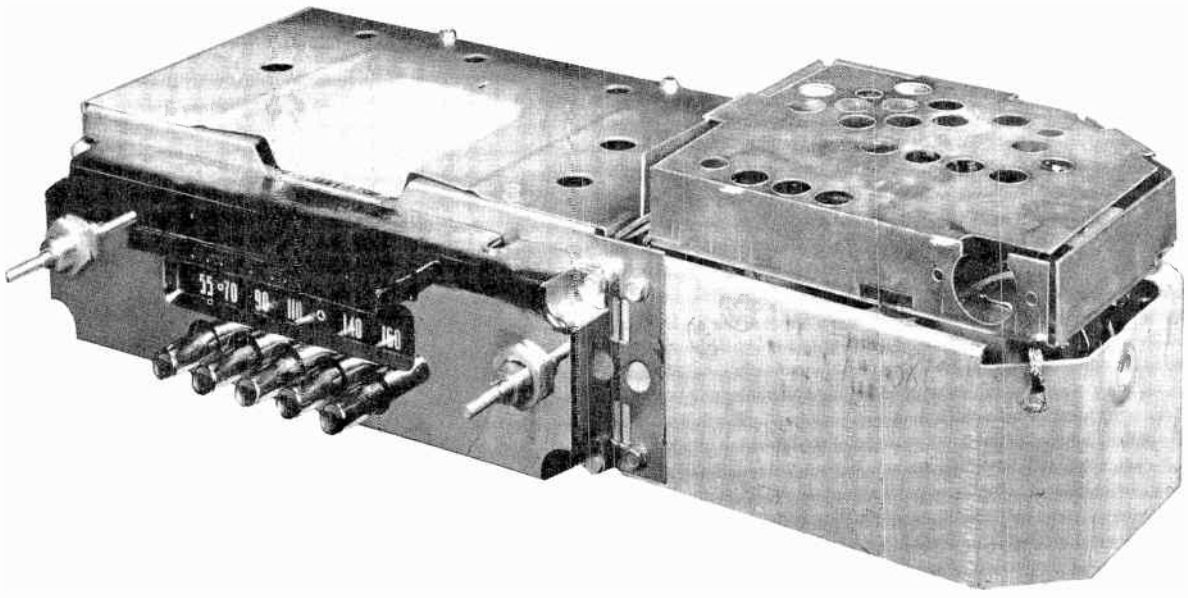
ITEM No.	TYPE	RATING	REPLACEMENT DATA DELCO PART No. FUSE	DELCO PART No. HOLDER	LITTELFUSE PART No. FUSE	LITTELFUSE PART No. HOLDER	BUSS PART No. FUSE	BUSS PART No. HOLDER
M2		7½A 32V	455640					

MISCELLANEOUS

ITEM No.	PART NAME	DELCO PART No.	NOTES
M3	Dial Lamp	456985	#1891
M4	Dial Lamp	456985	#1891
M5	Speaker Ass'y	Model 981905	(includes Fader control Part #7270865, Knob Part #1174606, Speaker Part #7267685, Speaker Grille Part #7271698)
	Printed Board	7268814-F	

WIRING DATA

General-use Unshielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors
Shielded Hook-up Wire ..... Use BELDEN No. 8885
Bonding Strap ..... Use BELDEN No. 8661



TRADE NAME	Buick Model 981903 (For 1958 Buick Automobiles)
MANUFACTURER	Delco Radio Div., G.M. Corp., Kokomo, Indiana
TYPE SET	Battery Operated Custom Built AM Automobile Receiver
TUBES (Eight)	Types 12BA6 RF Amplifier, 12BE6 Converter, 12BA6 IF Amplifier, 12BF6 Det.-AVC-AF Amp., 12AU7 Trigger, (2) 12V6GT Output, 0Z4 Rectifier
POWER SUPPLY	12 Volt Storage Battery — RATING 3 Amp. @ 12.6 Volts DC
TUNING RANGE—BROADCAST	550-1600KC

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING 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.
Sensitivity control to maximum (Position 1).
Tone control to treble.
To tune to high frequency stop, place a .070" feeler gauge in slot against high frequency stop. Depress station selector bar and allow the treadle arm to run against feeler gauge. Turn radio off, and then on. Remove feeler gauge.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.1mfd	High side to pin 7 (grid) of 12BE6 (V2). Low side to chassis.	262KC (400~ Mod)	High Freq. End Stop.	DC probe to point (A). Common to chassis.	A1, A2, A3	Adjust for maximum deflection.
2.	"	"	"	"	"	A4	Adjust for MINIMUM deflection.
3.	82mmf	High side to antenna receptacle. Low side to chassis.	1615KC	"	"	A6, A7, A8	Check setting of osc. coil core (A5). Rear of core should be 1 5/8" from mounting end of coil form. Adjust for maximum deflection.
4.	"	"	600KC	Tune to 600KC signal	"	A9, A10	Adjust for maximum deflection.
5.	"	"	1615KC	Tune to 1615KC signal	"	A7, A8	"
6.	With radio installed in car and antenna fully extended, tune in a weak station near 1000KC and adjust A8 for maximum output.						

POINTER ADJUSTMENT

With radio tuned to a 1100KC signal adjust pointer adjustment so that pointer coincides with 1100KC mark on dial.

PUSHBUTTON ADJUSTMENT

1. Pull pushbutton to the left and out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining pushbuttons.

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PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier	12BA6	
V2	Converter	12BE6	
V3	IF Amplifier	12BA6	
V4	Det.-AVC-AF Amp.	12BF6	

ITEM No.	USE	TYPE	NOTES
V5	Trigger	12AU7	
V6	Output	12V6GT	
V7	Output	12V6GT	
V8	Rectifier	0Z4	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	DELCO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	■20	400	6322	AFH3-120	C0990	FP345.8	TMT-106	T-550	TVL-3678
B	▲20	400							
C	20	25							

FIXED CAPACITORS

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

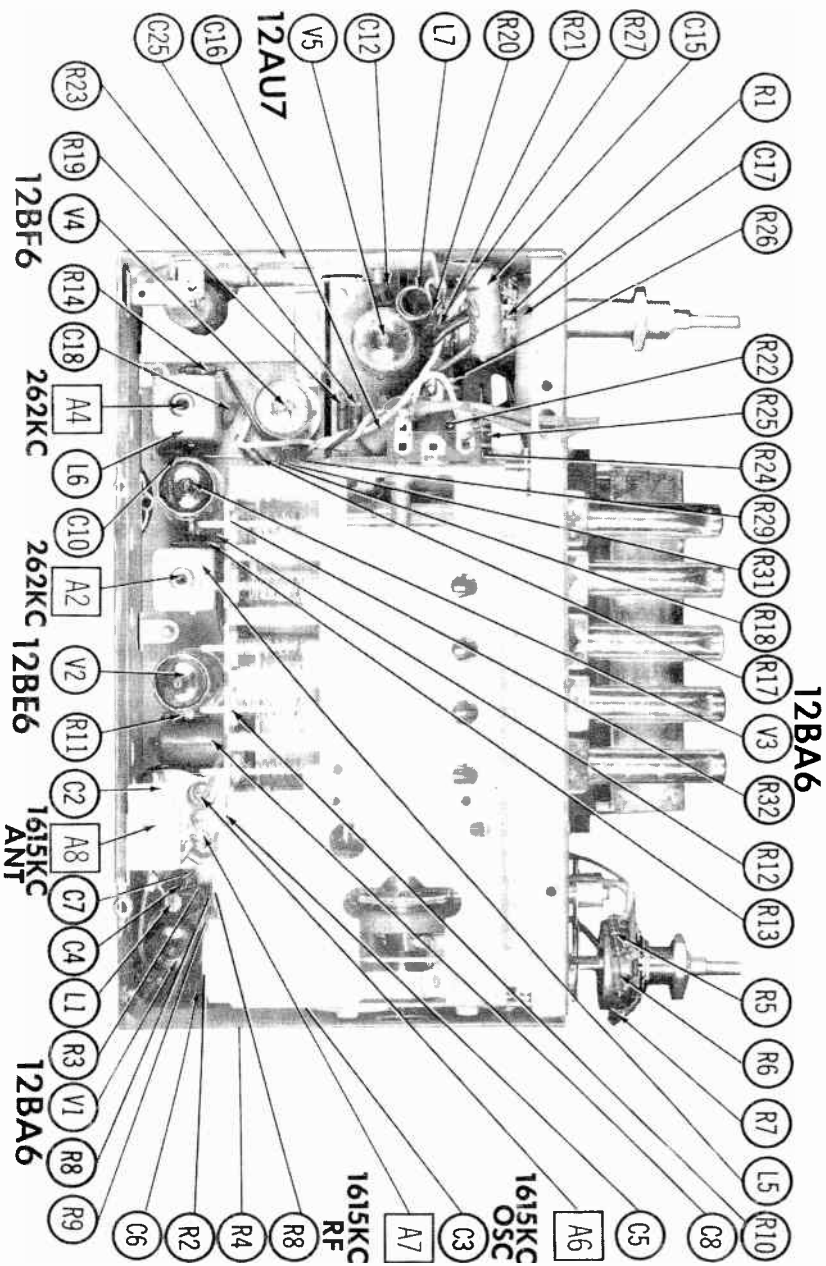
ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT	DELCO PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
C2A			7269079						
B									
C3	.047	200	6612	P288N-047	DF-503	CUB2S47	GEM-4147	2TM-S47	
C4	68		6369	SI 68	DD-680	L10Q68	UC-5468	5GA-Q68	
C5A			7268828						
B									
C									
D									
C6	.047	100	6612	P288N-047	DF-503	CUB2S47	GEM-4147	2TM-S47	
C7	39		6366	BPD-000039	DD-390	L10Q39	UC-5439	5GA-Q39	
C8	.1	400	6613	P488N-1	DF-104	CUB4P1	GEM 401	4TM-P1	
C9	200		7270129	1469-0002	DTZ-201	22R5T2	MCE237	MS-32	5%
C10	100		1219498	1469-0001	DTZ-100	22R5T1	MCE235	MS-31	5%
C11	100		1219498	1469-0001	DTZ-100	22R5T1	MCE235	MS-31	5%
C12	2000		6352	BPD-002	DD-202	BYA10D2	DC522	5HK-D2	
C13	120		6372	1468-00012	DD-121	5W5T12		1FM-312	
C14	100		7265995	BPD-0001	DD-101	L10T1	UC-531	5GA-T1	
C15	.004	600	6630	P688N-004	D6-402	CUB6D4	GEM-624	6TM-D4	
C16	.002	600	6628	P688N-002	D6-202	CUB6D2	GEM-622	6TM-D2	
C17	.015	600	7237719	P688N-015		CUB6S15	GEM-6115	6TM-S15	
C18	220		6375	BPD-00022	DD-221	L10T22	UC-5322	5GA-T22	
C19	.2	400	6614	P488N-2		CUB6P2	GEM-402	4TM-P2	
C20	.003	1000	6583	P1088N-003	DD-302	CUB10D3	GEM-1023	10TM-D3	
C21	.007	1600	6587	VBC-24		CUB16D7	GEM-1627	MB-D7	
C22	.1	200	6690	P288N-1	DF-104	CUB2P1	GEM-201	2TM-P1	
C23	.47	100	6692	P288N-47		CUB2P47	GEM-2047	2TM-P47	
C24	.47	100	6692	P288N-47		CUB2P47	GEM-2047	2TM-P47	
C25			1221054						

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	DELCO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1A	500K	½	7271329	F1-41 ‡	RTV-657-C †		■ UE3818S	Tone
B	1meg	½		R2-58				Volume, Tap @ 250K
C	Switch			KB-4 or KR-4*				On-Off

* Use KR on CRL "Red Label" controls and KB on "Blue Label" controls.
† Use XB-1 adaptor bushing.
‡ Use AK-28 adaptor bushing.
■ "STA-LOC" Equivalent: FL55A, OS1625, RU16T254, IS2250, US-41

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING OHMS	RATING WATT	DELCO PART No.	NOTES
R2	2.2meg		1239	
R3	10K	1	1174	
R4	100Ω		1113	
R5	1200Ω		1126	
R6	22K		1215	
R7	150K		1225	
R8	330K		1229	
R9	12K	2	1276	
R10	100Ω		1113	
R11	22K		1215	
R12	10Ω		1101	
R13	150Ω		1115	
R14	100K		1223	
R15	820K 5%		1219491	
R16	180K 5%		7271550	
R17	1.5meg 5%		1219492	
R18	1.5meg		1237	
R19	1meg		1235	
R20	120K		1224	
R21	5.6meg		1244	
R22	6800Ω 5%	1	7266367	
R23	910Ω 5%		7266033	Note 1
R24	6800Ω	1	1172	
R25	47K	1	1259	
R26	47K 5%	1	1220188	
R27	68K		1221	
R28	820K		1234	
R29	1meg		1235	
R30	47K	1	1259	
R31	1000Ω 5%		1220176	
R32	3300Ω 5%		1220173	
R33	360Ω 10%	4(WW)	7234563	
R34	1800Ω	7(WW)		Note 2
R35	15K		1253	

Note 1. Alternate values: 750Ω 5% (Part #7266320), 820Ω 5% (Part #7266231). Replace with original value.
Note 2. Replace with 2700Ω 2W (Part #1204) and 5600Ω 1W (Part #1171) in parallel.

TRANSFORMER (VIBRATOR)

ITEM No.	RATING PRI.	RATING SEC. 1	RATING SEC. 2	REPLACEMENT DATA DELCO PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
T1	12.6V ③2.33A	500VCT ③.070A		7269118				P-6497		

TRANSFORMER (DRIVER)

ITEM No.	DC RESISTANCE PRI.	DC RESISTANCE SEC.	REPLACEMENT DATA DELCO PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
T2	1800Ω CT		1220902			A-4421			

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE PRI.	IMPEDANCE SEC.	REPLACEMENT DATA DELCO PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
T3	8300Ω CT	3-4Ω	7269116	Z1011 ①	A-2901 ②	AU-606 ①	A-4430	22S56 ①	S-55X ①	① Use original channel frame. ② Drill new mounting holes.

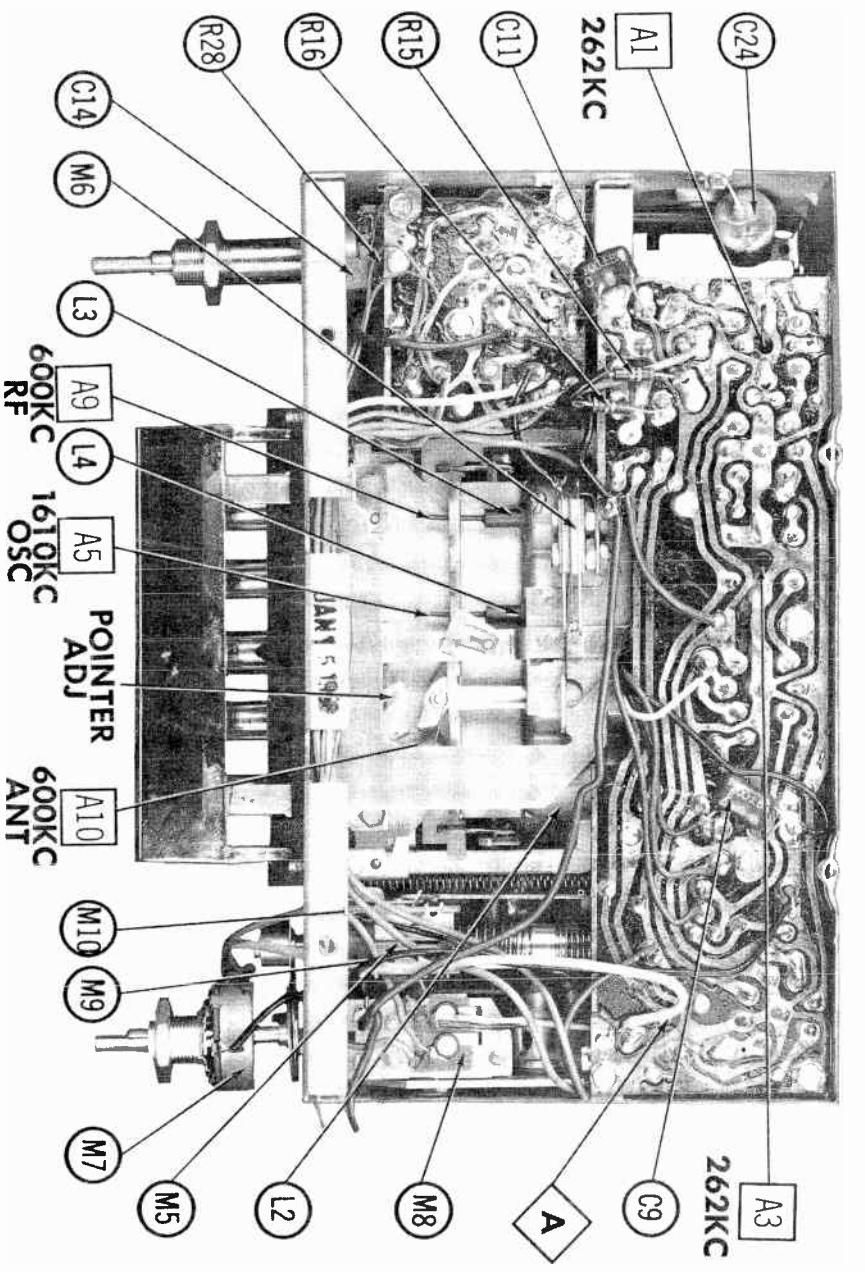
SPEAKER

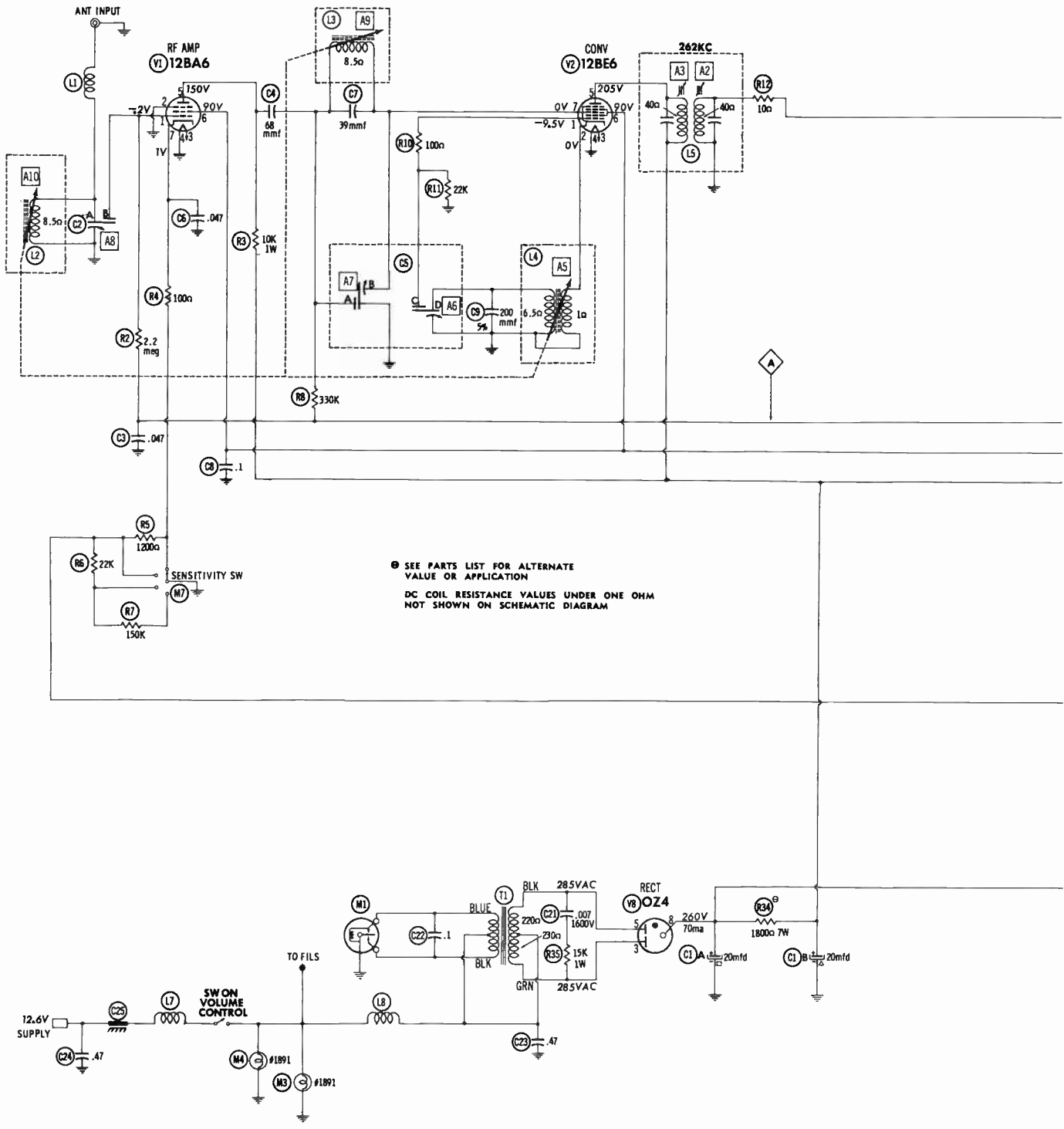
ITEM No.	TYPE SIZE	TYPE FIELD	TYPE V. C. IMP.	REPLACEMENT DATA DELCO PART No.	QUAM PART No.	NOTES
SP1	6" x 9"	PM	3-4Ω	7269084	69A2	

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA DELCO PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Ram PART No.	NOTES
L1	Ant. Coil	7255738	19-1004	BC-565	4610		6.5 Microhenries
L2	Ant. Coil	1221138					
L3	RF Coil	1221138					
L4	Osc. Coil	1221139					
L5	Input IF	1220990	16-6756	BC-317	13-PH1		
L6	Output IF	1220992					
L7	"A" Lead Choke	7241708					1.4 Microhenries
L8	Hash Choke	1221077					

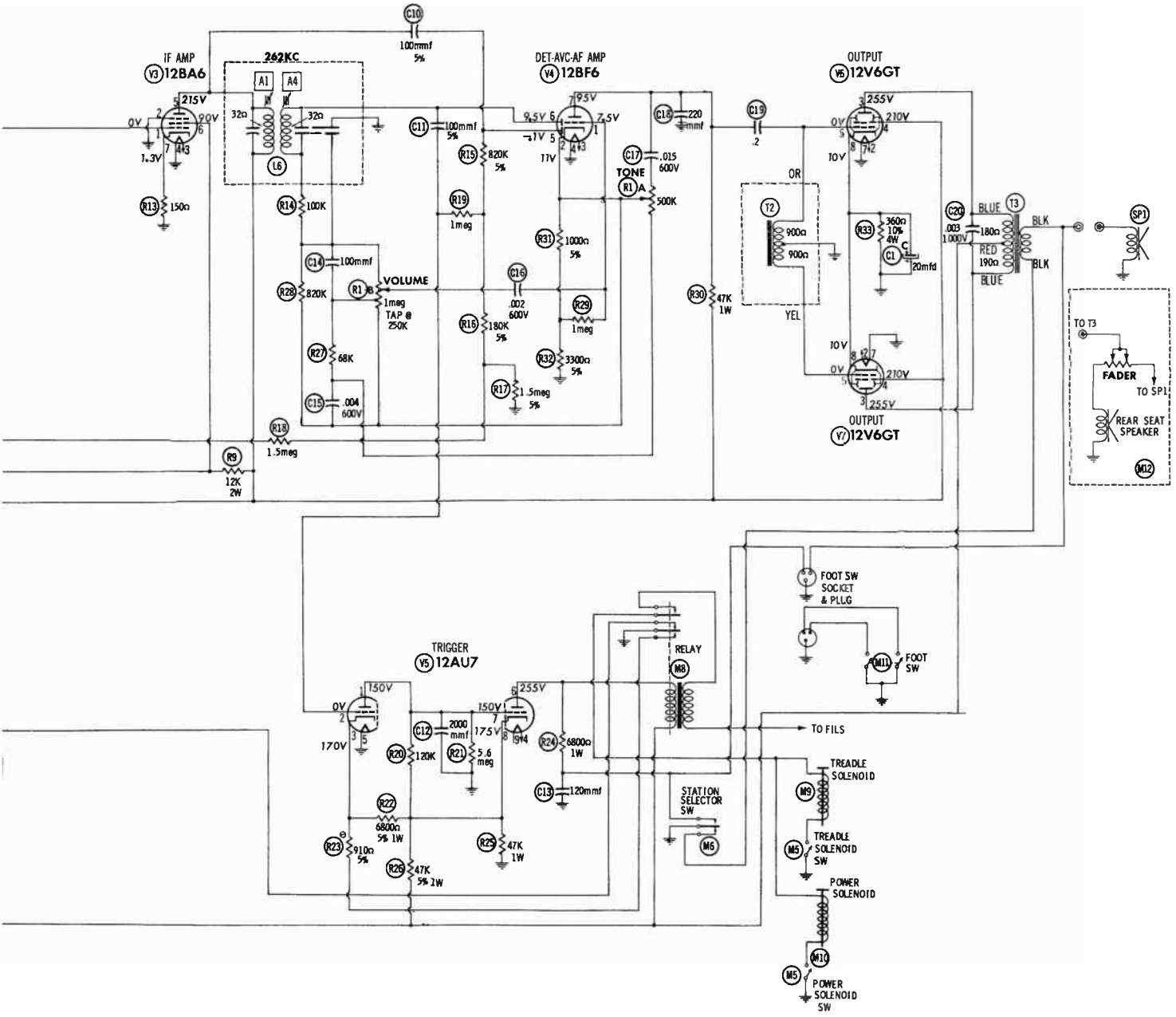
CHASSIS—BOTTOM VIEW





1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured at 1000 ohms per volt.
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

A PHOTOFACT STANDARD NOTATION SCHEMATIC
Howard W. Sams & Co., Inc. 1958



RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12BA6	5.2meg	0Ω	1.3Ω	0Ω	†12K	†14K	100Ω		
V2	12BE6	22K	1Ω	1.3Ω	0Ω	†1800Ω	†14K	3.3meg		
V3	12BA6	50Ω	0Ω	1.3Ω	0Ω	†1800Ω	†14K	150Ω		
V4	12BF6	1meg	4300Ω	1.3Ω	0Ω	2.5meg	480K	†49K		
V5	12AU7	†140K	1.6meg	†50K	1.3Ω	0Ω	†2000Ω	†150K	†45K	.7Ω
V6	12V6GT	TP	1.3Ω	†180Ω	†1800Ω	900Ω	TP	0Ω	360Ω	
V7	12V6GT	NC	1.3Ω	†190Ω	†1800Ω	900Ω	TP	0Ω	360Ω	
V8	0Z4	0Ω	NC	230Ω	NC	220Ω	NC	TP	20K(MIN)	

† MEASURED FROM PIN 8 OF V8.
TP TIE POINT.
NC NO CONNECTION.

PARTS LIST AND DESCRIPTIONS (Continued)

VIBRATOR

ITEM No.	TYPE	INPUT VOLTS	FREQUENCY	REPLACEMENT DATA				NOTES
				DELCO PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	RADIART PART No.	
M1	Interrupter	12.6 VDC	115∿	8555	6330	G1602/G883	6330	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			DELCO PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M2		7½A 32V	455840					

MISCELLANEOUS

ITEM No.	PART NAME	DELCO PART No.	NOTES
M3	Lamp	456985	#1891
M4	Lamp	456985	#1891
M5	Switch	7268030	Power Solenoid, Treadle Solenoid
M6	Switch	7269292	Station Selector
M7	Switch	7268938	Sensitivity
M8	Relay	7270546	
M9	Solenoid	1221161	Treadle
M10	Solenoid	1221160	Power
M11	Switch	7269471	Foot
M12	Speaker Assy.	Model 981905	Rear Seat. Includes 6" x 9" speaker (Part #7267685), fader control (Part #7270865), knob (Part #1174606), speaker grille (Part #7271698).

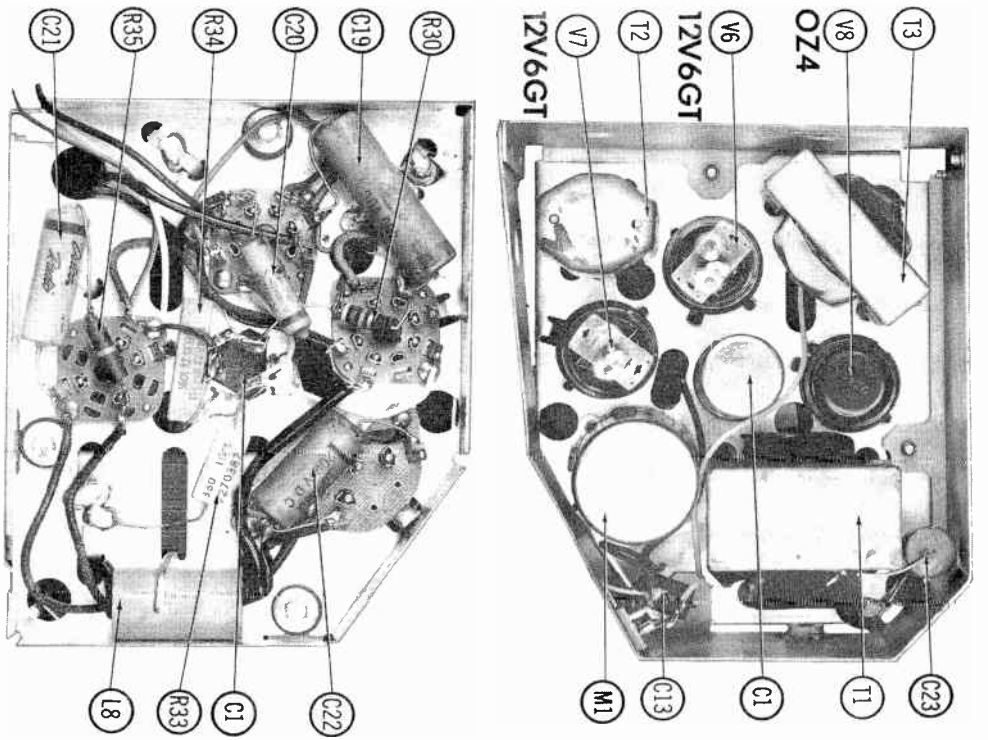
CABINETS & CABINET PARTS

NAME	PART NO.	DESCRIPTION
Knob	1174806	Control
Knob	1175236	Tone
Knob	1175237	Sensitivity
Pushbutton	1221055	5 Used. (Includes Front Bearing, Plate and Slides)
Pointer Assy.	1221057	
Dial	7288943	

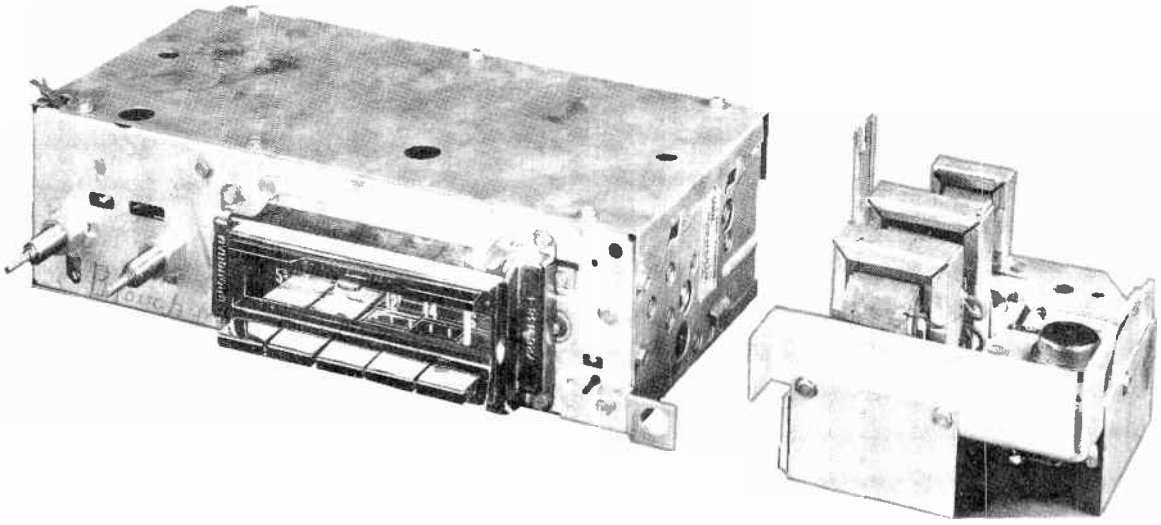
WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in Ten Colors 8524 (Stranded) Available in Ten Colors
Shielded Hook-up Wire	Use BELDEN No. 8885
Bonding Strap	Use BELDEN No. 8661

POWER SUPPLY



CADILLAC
MODEL 7268085



TRADE NAME	Cadillac Brougham Model 7268085 (For 1957 Cadillac Brougham Automobiles)
MANUFACTURER	Delco Radio Div., G.M. Corp., Kokomo, Indiana
TYPE SET	Battery Operated Custom Built Transistorized AM Automobile Receiver
POWER SUPPLY	12 Volts DC
RATING	350MA @ 12.6 Volts DC (Before Serial #HD80)
TUNING RANGE—BROADCAST	540-1600KC
	2000MA @ 12.6 Volts DC (After Serial #HD80)

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Set sensitivity and volume controls to maximum, tone control to treble. Attenuate signal generator so that VTVM readings do not exceed 3 Volts. Use an insulated alignment screwdriver for adjusting. Signal generator return lead should be very short.

To set receiver to high frequency end, put a .018" feeler gauge (or bare #25 wire) in slot against high frequency stop. Press station bar and allow planetary arm to run against feeler gauge. Turn off receiver, then on.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
1.		High side to point (B) Low side to chassis.	262KC	High freq. end. (See alignment instructions)	DC probe to point (A). Common to chassis.	A1	Adjust for maximum deflection.
2.		"	"	"	"	A2	Adjust for MINIMUM deflection.
3.		High side to point (C) Low side to chassis.	"	"	"	A3, A4 A5, A6	Adjust for maximum deflection.
	Check setting of oscillator coil core (A10). Rear of core should be 1 5/8" from mounting end of coil form. Antenna and RF coil cores (A11 & A12) should be as far from the mounting end of their coils as the oscillator coil core.						
4.	82mmf	High side to antenna terminal. Low side to chassis.	1615KC	High freq. end. (See alignment instructions)	DC probe to point (A). Common to chassis.	A7, A8 A9	Adjust for maximum deflection.
5.	82mmf	"	600KC	Tune to 600KC signal	"	A10, A11 A12	"
6.	82mmf	"	1615KC	Tune to 1615KC signal	"	A8, A9	"
	With radio installed in car and antenna fully extended, tune in a weak station between 600KC and 1000KC and adjust A9 for maximum output.						

POINTER ADJUSTMENT

If necessary, turn pointer adjustment so that pointer coincides with 900KC on the dial when receiving a 900KC signal.

PUSHBUTTON ADJUSTMENT

1. Turn on receiver and allow a 10 minute warm-up period.
2. Extend antenna fully.
3. Pull pushbutton to the left and out.
4. Tune manually to desired station. Press pushbutton in firmly.
5. Repeat for remaining pushbuttons.

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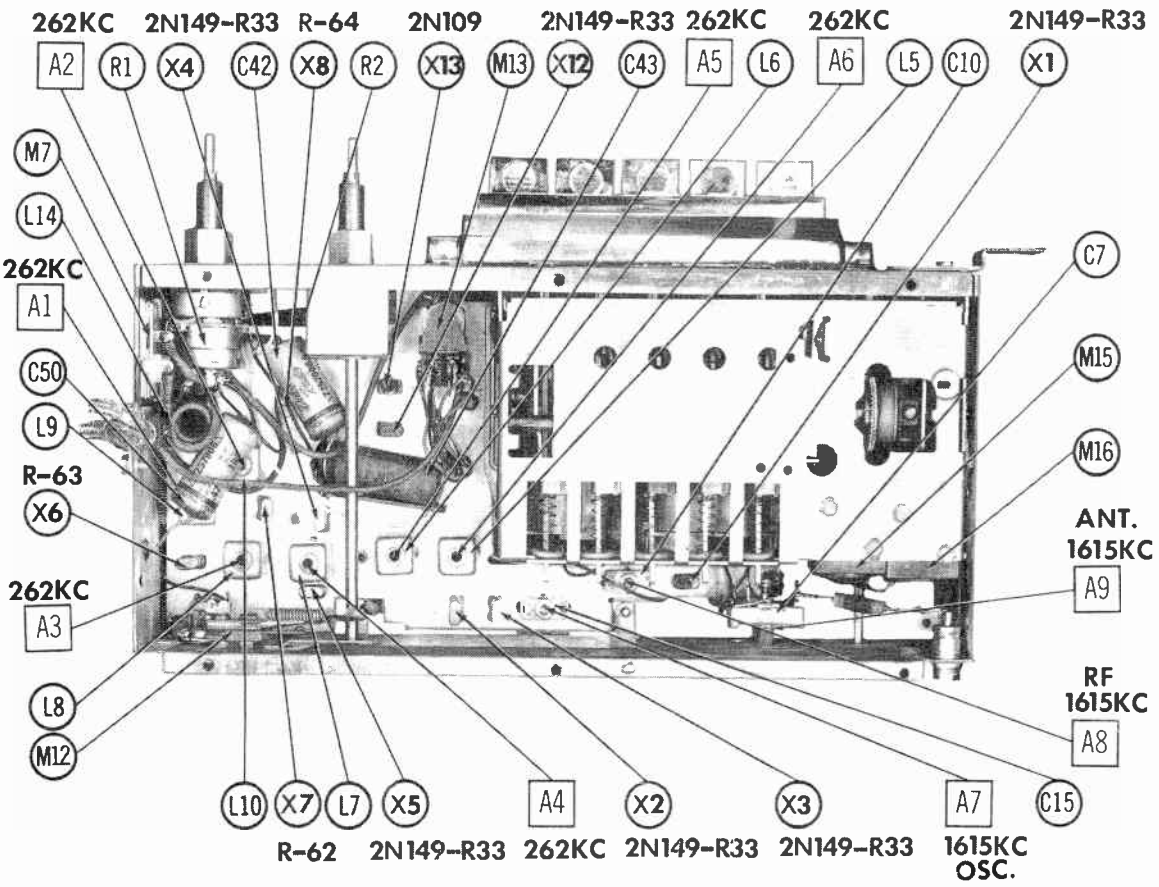
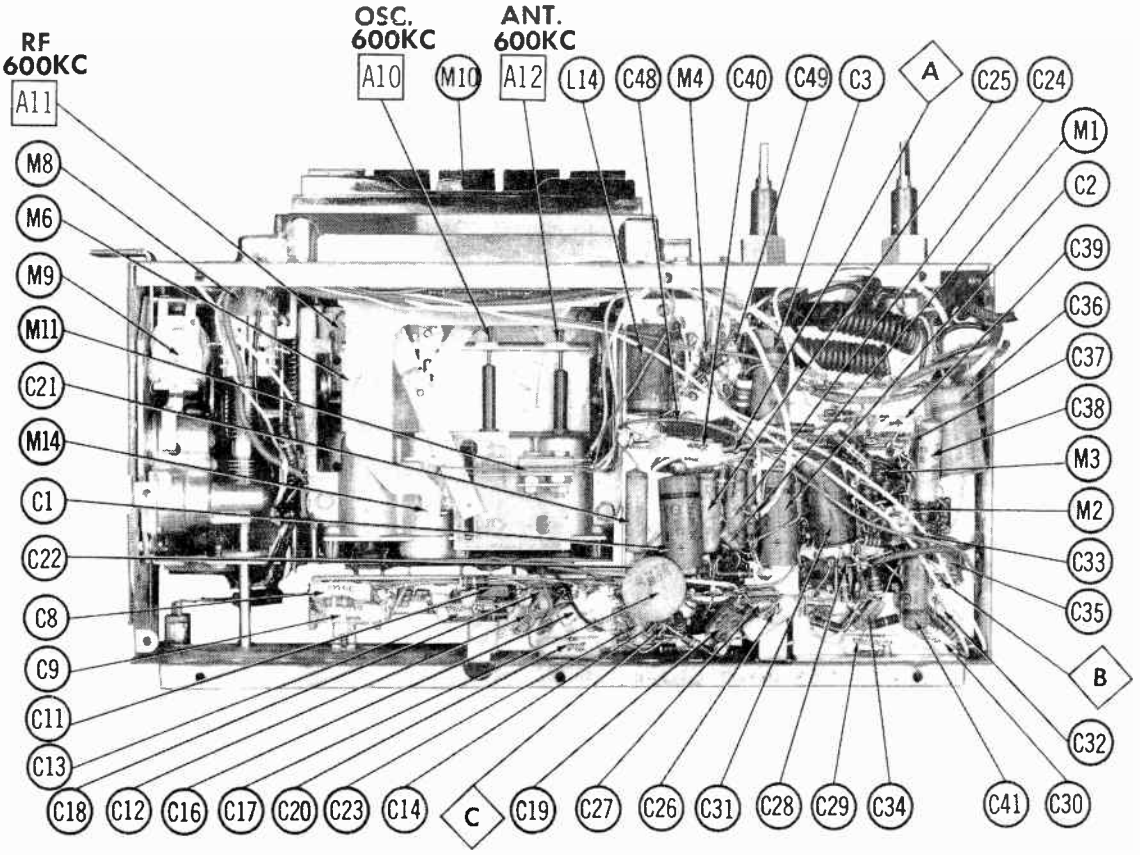
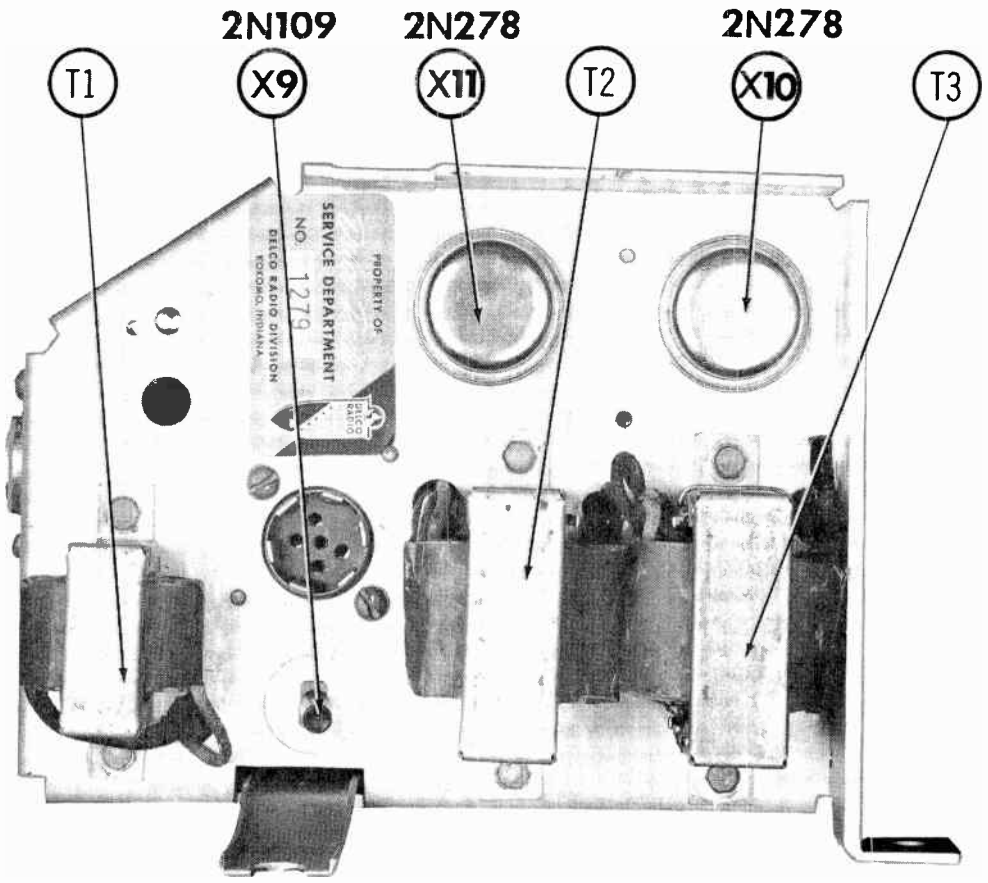
H245



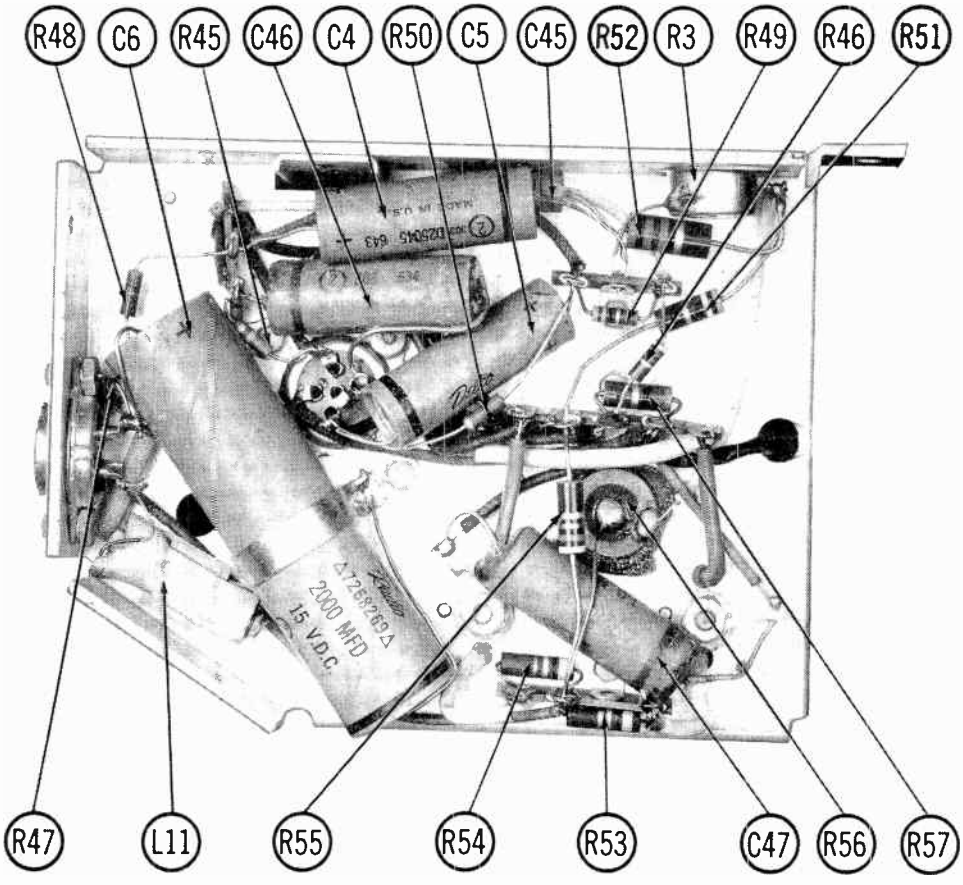
CHASSIS TOP VIEW



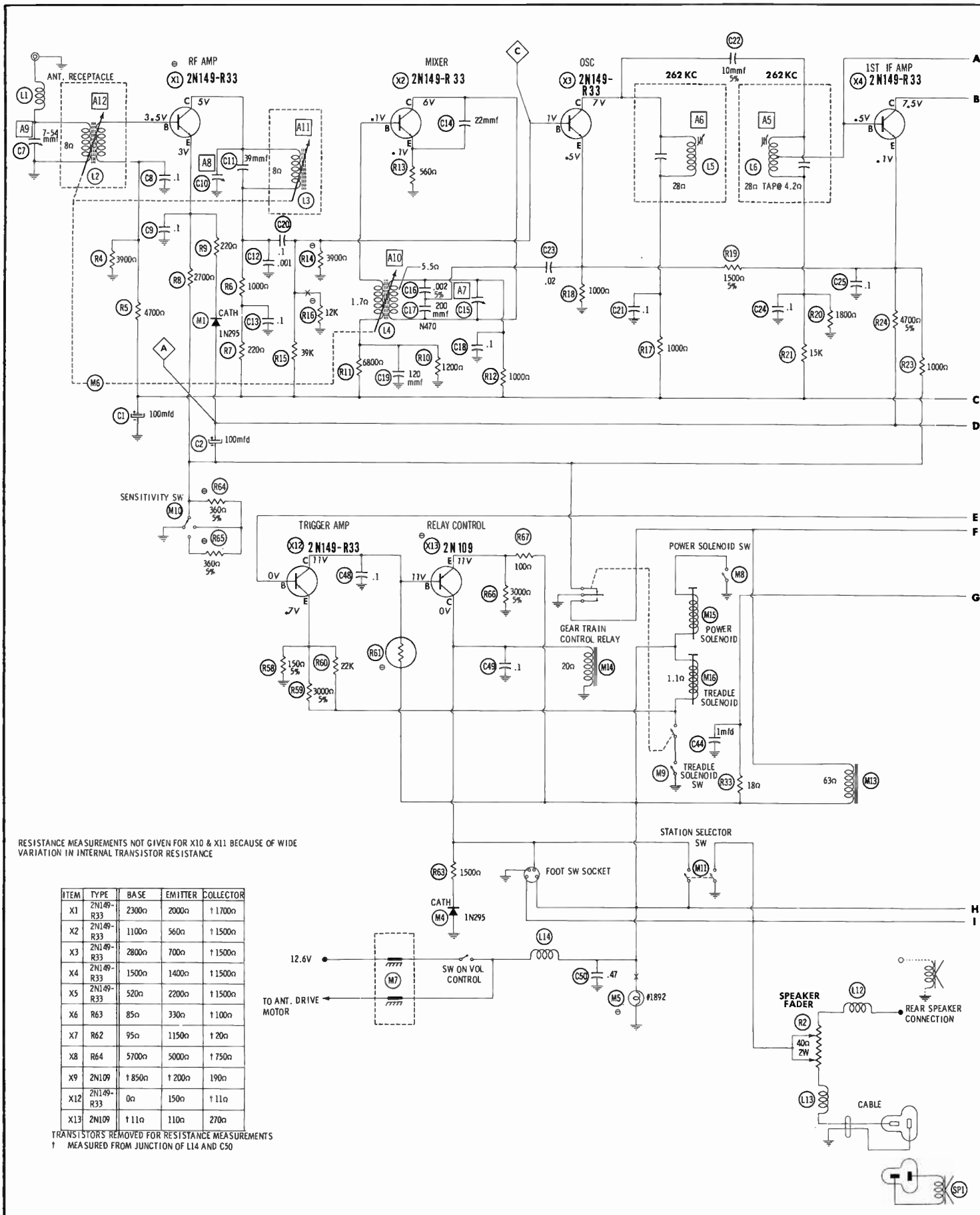
CHASSIS BOTTOM VIEW - CAPACITOR & MISCELLANEOUS IDENTIFICATION



OUTPUT CHASSIS - TOP VIEW



OUTPUT CHASSIS - BOTTOM VIEW

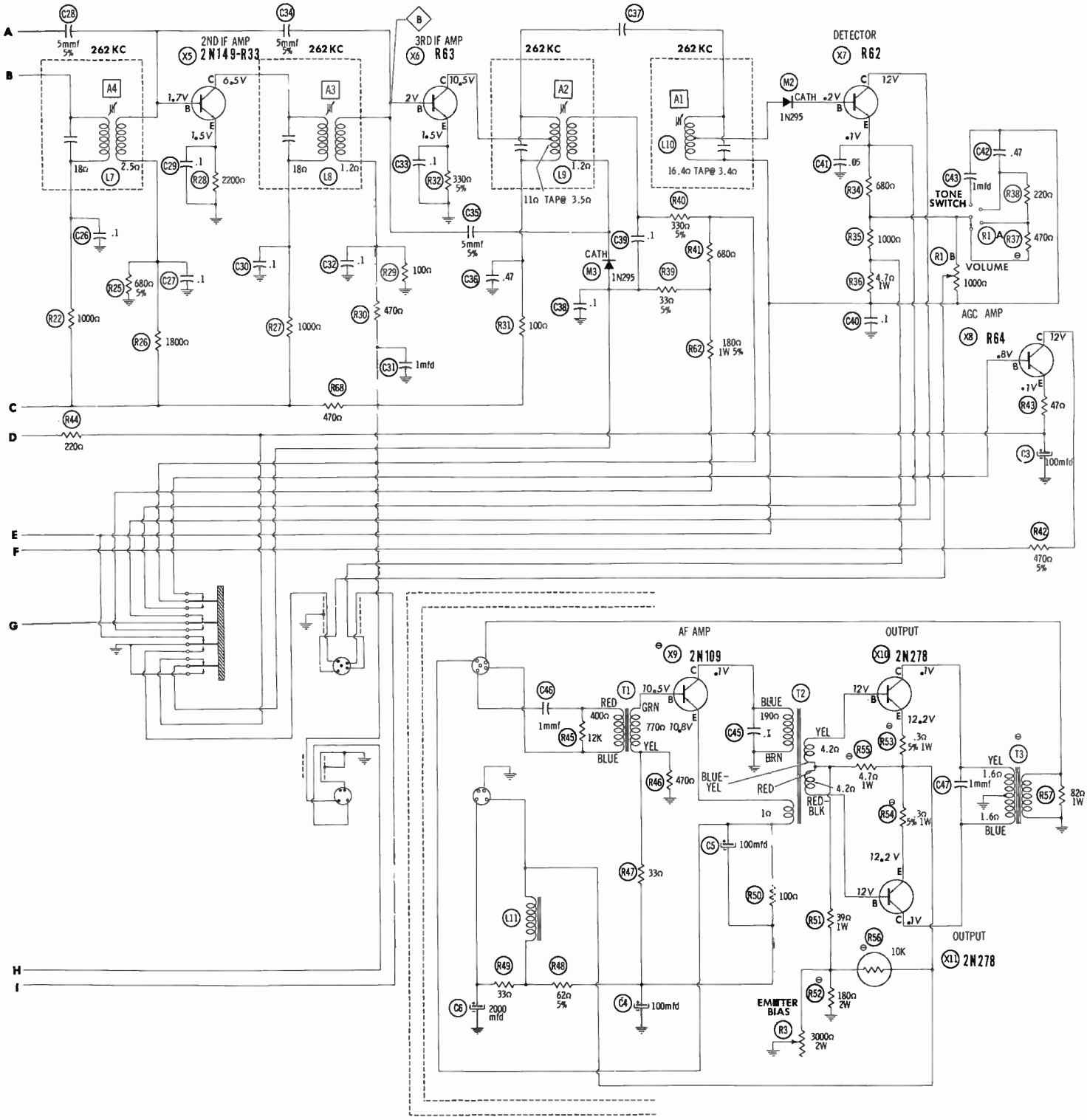


RESISTANCE MEASUREMENTS NOT GIVEN FOR X10 & X11 BECAUSE OF WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE

ITEM	TYPE	BASE	EMITTER	COLLECTOR
X1	2N149-R33	2300Ω	2000Ω	†1700Ω
X2	2N149-R33	1100Ω	560Ω	†1500Ω
X3	2N149-R33	2800Ω	700Ω	†1500Ω
X4	2N149-R33	1500Ω	1400Ω	†1500Ω
X5	2N149-R33	520Ω	2200Ω	†1500Ω
X6	R63	85Ω	330Ω	†100Ω
X7	R62	95Ω	1150Ω	†20Ω
X8	R64	5700Ω	5000Ω	†750Ω
X9	2N109	†850Ω	†200Ω	190Ω
X12	2N149-R33	0Ω	150Ω	†11Ω
X13	2N109	†11Ω	110Ω	270Ω

TRANSISTORS REMOVED FOR RESISTANCE MEASUREMENTS
† MEASURED FROM JUNCTION OF L14 AND C50

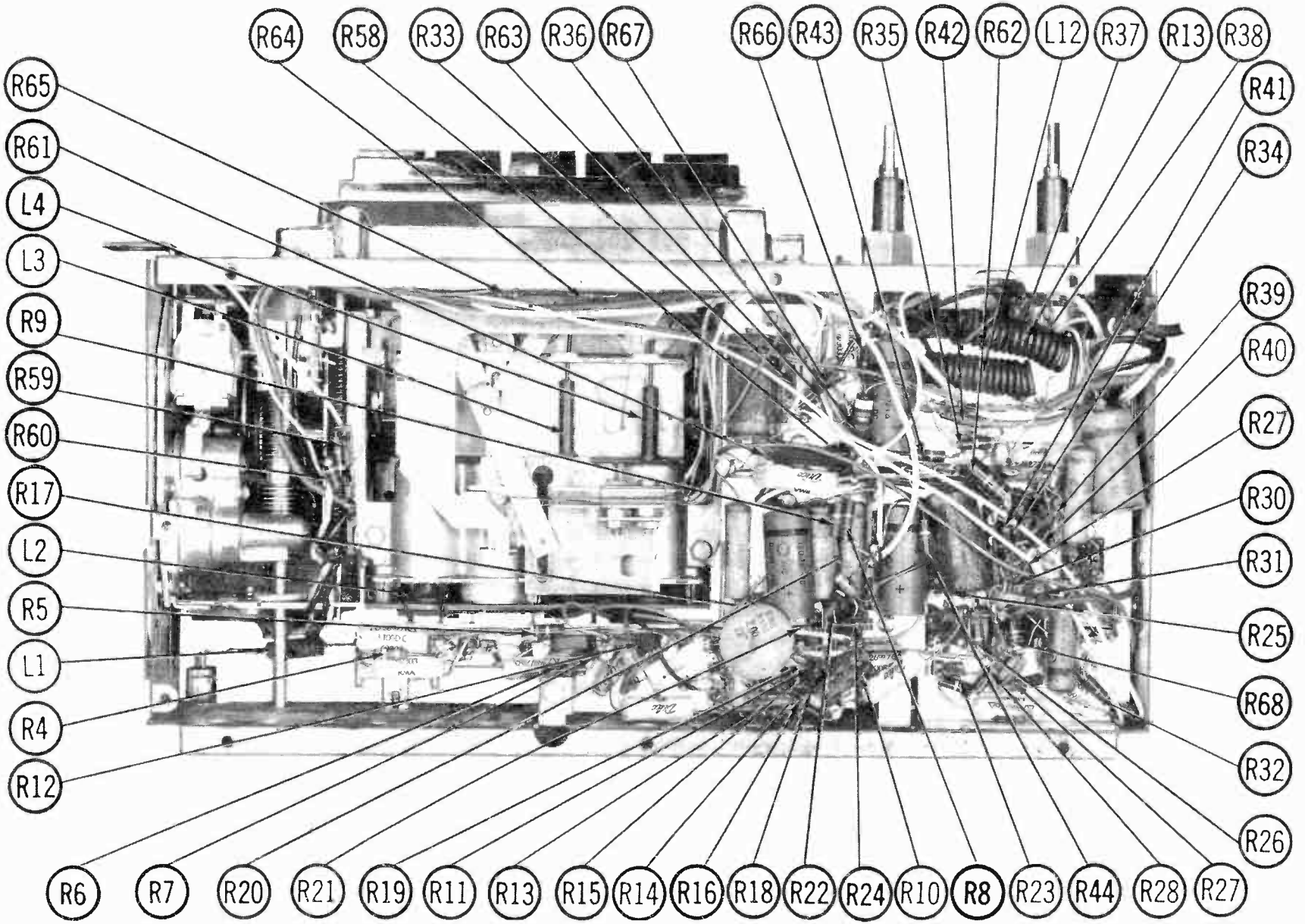
A PHOTOFACT STANDARD NOTATION SCHEMATIC
Howard W. Sams & Co., Inc. 1958



1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured at 1000 ohms per volt.
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

⊖ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC



CHASSIS BOTTOM VIEW-RESISTOR AND INDUCTOR IDENTIFICATION

PARTS LIST AND DESCRIPTIONS

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			CBS PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	2N149-R33	RF Amplifier	2N440			A 2N150-R34 may be used in some versions.
X2	2N149-R33	Mixer	2N439			
X3	2N149-R33	Oscillator	2N439			
X4	2N149-R33	1st IF Amplifier	2N439			
X5	2N149-R33	2nd IF Amplifier	2N439			
X6	R-63	3rd IF Amplifier				
X7	R-62	Detector				
X8	R-64	AGC Amplifier				
X9	2N109	AF Amplifier	2N160	2N360		
X10	2N278	Output				
X11	2N278	Output				
X12	2N149-R33	Trigger Amplifier	2N439			
X13	2N109	Relay Control	2N180	2N360		

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	DELCO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1	100	10	7269784	PRS12V100	BBR100-15	TC2501	TP-100-15	MTH-1210	TVA-1130
C2	100	10	7269784	PRS12V100	BBR100-15	TC2501	TD-100-15	MTH-1210	TVA-1130
C3	100	10	7269784	PRS12V100	BBR100-15	TC2501	TD-100-15	MTH-1210	TVA-1130
C4	100	25	7268285	PRS25V100	BBR100-25	TC2501	TD-100-25	MTH-2510	TVA-1207
C5	100	25	7268285	PRS25V100	BBR100-25	TC2501	TD-100-25	MTH-2510	TVA-1207
C6	2000	15	7268289		BR20001	TC1501	TD-1000-15		R2525 *
						TC1501	TD-1000-15		

* Non Catalog Item

FIXED CAPACITORS

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

ITEM No.	RATING		REPLACEMENT DATA							NOTES
	CAP.	VOLT	DELCO PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	
C7	7-54		7269656							
C8	.1	100	7269776						TG-P10	
C9	.1	100	7269776						TG-P10	
C10			7269740							
C11	39		G-390	1468-000039	D6-390	5W5Q39	GP-39	UC-5439	1FM-439	
C12	.001	100	7269778	P288N-001	D6-102	CUB2D1	GP-1000	UC-521	5GA-D1	
C13	.1	100	7269776						TG-P10	
C14	22		G-220	1468-000022	D6-220	5W5Q22	GP-22	UC-5422	1FM-422	
C15			7269864							
C16	.002	100	7269782							5%
C17	200		7269783							N470
C18	.1	100	7269776						TG-P10	
C19	120		G-121	1468-00012	D6-121	5W5T12	GP-120		1FM-312	
C20	.1	100	7269776						TG-P10	
C21	.1	100	7269776						TG-P10	
C22	10		7269625	1469-00001	TCZ-10	22R5Q1	TCO-10	ZT-541	MS-41	5%
C23	.02	100	7269777							
C24	.1	100	7269776						TG-P10	
C25	.1	100	7269776						TG-P10	
C26	.1	100	7269776						TG-P10	
C27	.1	100	7269776						TG-P10	
C28	5		7269624	1469-000005	TCZ-4R7	22R5V5	TCO-5	ZT-555	MS-55	5%
C29	.1	100	7269776						TG-P10	
C30	.1	100	7269776						TG-P10	
C31	1.0	50	7269779							
C32	.1	100	7269776						TG-P10	
C33	.1	100	7269776						TG-P10	
C34	5		7269624	1469-000005	TCZ-4R7	22R5V5	TCO-5	ZT-555	MS-55	5%
C35	5		7269624	1469-000005	TCZ-4R7	22R5V5	TCO-5	ZT-555	MS-55	5%
C36	.47	50	7269780						2TM-P47	
C37	10		7269625	1469-00001	TCZ-10	22R5Q1	TCO-10	ZT-541	MS-41	5%
C38	.1	100	7269776						TG-P10	
C39	.1	100	7269776						TG-P10	

PARTS LIST AND DESCRIPTIONS (Continued)

CAPACITORS (cont)

ITEM No.	RATING		REPLACEMENT DATA							NOTES
	CAP.	VOLT	DELCO PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	
C40	.1	100	7269776						TG-P10	
C41	.05	100	7269781						TG-S50	
C42	.47	100	6692	P288N-47		CUB2P47			2TM-P47	
C43	1.0	100	7268522	P288N-1.0		CUB2W1			2TM-M1	
C44	1.0	50	7269779						2TM-M1	
C45	.1	100	7271042	P288N-1	DF-104	CUB2P1		GEM-201	TG-P10	
C46	1.0	100	7268522						2TM-M1	
C47	1.0	100	7268522	P286N-1.0		CUB2W1		GEM-21	2TM-M1	
C48	.1	100	7269776	P288N-1	DF-104	CUB2P1		GEM-201	TG-P10	
C49	.1	100	7269776						TG-P10	
C50	.47	100	6692	P288N-47		CUB2P47		GEM-2047	2TM-P47	

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	DELCO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1A	Switch		7269483					Tone
B	1000Ω	½						Volume
C	Switch							Power ON-OFF
R2	40Ω	2	7269482					Speaker Fader (Wirewound)
R3	3000Ω	2	7269743		39-3000			Emitter Bias (Wirewound)

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING		DELCO PART No.	NOTES
	OHMS	WATT		
R4	3900Ω		1132	
R5	4700Ω		1133	
R6	1000Ω		1125	
R7	220Ω		1117	
R8	2700Ω		1130	
R9	220Ω		1117	
R10	1200Ω		1126	
R11	6800Ω		1135	
R12	1000Ω		1125	
R13	580Ω		1122	
R14	3900Ω		1132	Note 1
R15	39K		1218	
R16	12K		1212	Note 2
R17	1000Ω		1125	
R18	1000Ω		1125	
R19	1500Ω 5%		1219488	
R20	1800Ω		1128	
R21	15K		1213	
R22	1000Ω		1125	
R23	1000Ω		1125	
R24	4700Ω 5%		7269772	
R25	660Ω 5%		1219493	
R26	1800Ω		1128	
R27	1000Ω		1125	
R28	2200Ω		1129	
R29	100Ω		7299767	
R30	470Ω		1121	
R31	100Ω		7269767	
R32	330Ω 5%		7269768	
R33	18Ω		1104	
R34	680Ω		1123	
R35	1000Ω		1125	

ITEM No.	RATING		DELCO PART No.	NOTES
	OHMS	WATT		
R36	4.7Ω	1	1097	
R37	470Ω		1121	Note 3
R38	220Ω		1117	
R39	33Ω 5%		7271112	
R40	330Ω 5%		7269768	
R41	680Ω		1123	
R42	470Ω 5%		1219487	
R43	47Ω		1109	
R44	220Ω		1117	
R45	12K		1212	
R46	470Ω		1121	
R47	33Ω		1107	
R48	62Ω 5%		1213215	
R49	33Ω		1107	
R50	100Ω		1113	
R51	39Ω	1	1108	
R52	180Ω	2	7269770	Note 4
R53	0.3Ω 5%	1	7268273	Note 5
R54	0.3Ω 5%	1	7268273	Note 5
R55	4.7Ω	1	1097	Note 6
R56	10K		1513424	Note 7
R57	82Ω	1	1149	
R58	150Ω 5%		1189	
R59	3000Ω 5%		7269773	
R60	22K		1215	
R61			1221013	Note 7
R62	160Ω 5%	1	7269770	
R63	*1500Ω		1127	
R64	360Ω 5%			Note 8
R65	360Ω 5%			Note 8
R66	3000Ω 5%		7269773	
R67	100Ω		1113	
R68	470Ω		1121	

Note 1. Some versions may use 3000Ω 5% in this application (Part #7269773).
Note 2. Not used in some versions.
Note 3. Some versions may use 220Ω in this application (Part #1117).
Note 4. Some versions may use 100Ω in this application (Part #1113).
Note 5. Versions after serial #HD80 use two .56Ω resistors in parallel in this application (Part #7270331).
Note 6. Versions after serial #HD80 use 39Ω in this application (Part #1108).
Note 7. Temperature compensating unit.
Note 8. Part of sensitivity switch (M10).

PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (INTERSTAGE)

ITEM No.	TURNS RATIO		REPLACEMENT DATA						NOTES
	PRI.	SEC.	DELCO PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T1	7:	1	7269336						

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA						NOTES
	PRI.	SEC.1	DELCO PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	4.5:	1	7269339						
		SEC.2							
	35:	1							

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA						NOTES
	PRI.	SEC.	DELCO PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T3	138Ω	6-8Ω	7268193 ①						① Versions above serial #HD80 use Part #7270327

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	DELCO PART No.	QUAM PART No.	
SP1	6" X 9"	PM	6-8Ω	7269616	69A3Z8.6	

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA				NOTES
		DELCO PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	
L1	Antenna Coil	7255738	19-1004	BC-565	4610	6 Microhenries
L2	Ant. Trans.	1221105				
L3	RF Coil	1221050				
L4	Osc. Coil	1221104				
L5	1st IF Pri.	1221001				
L6	1st IF Sec.	1221003				
L7	2nd IF Trans.	1221005				
L8	3rd IF Trans.	1221007				
L9	4th IF Pri.	1221009				
L10	4th IF Sec.	1221011				
L11	"A" Supply Choke	7265642				187 Microhenries
L12	Spkr. Lead Choke	1217846	19-1001	BC-562	4604	1.4 Microhenry
L13	Spkr. Lead Choke	1217846	19-1001	BC-562	4604	1.4 Microhenry
L14	"A" Lead Choke	7258554				1.7 Microhenry

PARTS LIST AND DESCRIPTIONS (Continued)

CRYSTAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA			NOTES
		DELCO PART No.	CBS PART No.	SYLVANIA PART No.	
M1	1N295	7269746	1N60	1N34A	AGC Delay
M2	1N295	7269746	1N60	1N34A	AM Detector
M3	1N295	7269746	1N60	1N34A	AGC Rectifier
M4	1N295	7269746	1N60	1N34A	Relay Control Clamper

MISCELLANEOUS

ITEM No.	PART NAME	DELCO PART No.	NOTES
M5	Pilot Light	274020	#1892 (Not used in some versions)
M6	Tuner		
M7	Spark Plate	1220308	
M8	Switch	7268030	Power Solenoid
M9	Switch	7268030	Treadle Solenoid
M10	Switch	7269755	Sensitivity
M11	Switch	1220983	Station Selector
M12	Switch	1220982	Antenna Override
M13	Relay	7263471	4 Section
M14	Relay	7269296	Gear Train Control
M15	Solenoid	7268040	Power
M16	Solenoid	7268050	Treadle

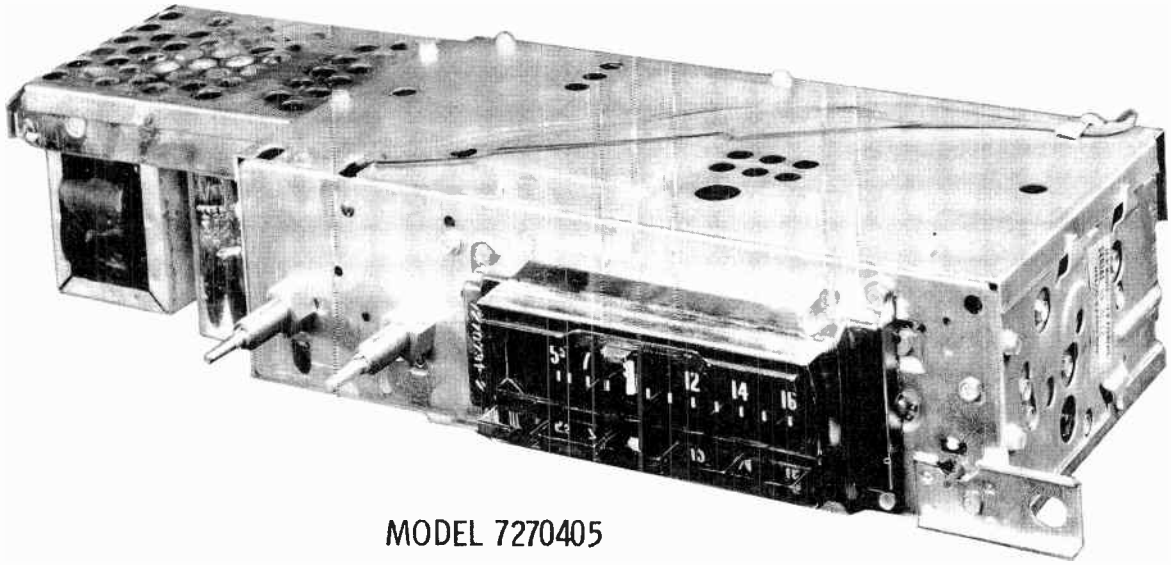
CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

NAME	PART NO.	DESCRIPTION
Dial Glass	7269448	
Escutcheon	7269758	
Knob	1466055	ON-OFF-Volume, Tuning
Knob	1466056	Tone, Speaker Fader
Dial Pointer	1220999	
Pushbutton	1220974	Set of Five (Includes front bearing plate)

WIRING DATA

General-use Unshielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors
Shielded Hook-up Wire ..... Use BELDEN No. 8885
Bonding Strap ..... Use BELDEN No. 8661



MODEL 7270405

TRADE NAME	Cadillac Models 7270405 (For 1958 Cadillac Automobiles), 7270555 (For 1958 Cadillac Ambulances)
MANUFACTURER	Delco Radio Div., G. M. Corp., Kokomo, Indiana
TYPE SET	Battery Operated Custom Built AM Automobile Receiver
TUBES (Eight)	Types 12BA6 RF Amplifier, 12BE6 Converter, 12BA6 IF Amplifier, 12BF6 Det.-AVC-AF Amp. 12AU7 Trigger, (2) 12V6GT Output, 0Z4 Rectifier
POWER SUPPLY	12 Volt Storage Battery — RATING 3 Amp. @12.6 Volts DC
TUNING RANGE—BROADCAST	540-1600KC

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING 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.
To tune to high frequency stop, put a .070" feeler gauge against the high frequency stop. Depress station selection bar and allow treadle arm to run against feeler gauge. Turn the radio off, then on.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.1mfd	High side to pin 7 (grid) of 12BE6 (V2) Low side to chassis.	262KC (400~Mod)	High frequency end stop.	Across Voice Coil	A1, A2, A3	Adjust for maximum output.
2.	"	"	"	"	"	A4	Adjsut for MINIMUM output.
3.	68mmf	High side to Antenna receptacle. Low side to chassis.	1615KC	"	"	A6, A7, A8	Check setting of osc. coil core (A5). Rear of core should be 1 5/8" from mounting end of coil form. Adjust for maximum output.
4.	"	"	600KC	Tune to 600KC signal.	"	A9, A10	"
5.	"	"	1615KC	Tune to 1615KC signal.	"	A7, A8	"
6.	With radio installed in car and antenna fully extended, tune in a weak staion near 1000KC and adjust A8 for maximum output.						

POINTER ADJUSTMENT

With radio tuned to a 900KC signal, adjust pointer adjustment so that pointer coincides with 900KC mark on dial.

PUSHBUTTON ADJUSTMENT

1. Pull pushbutton to left and out.
2. Tune manually to desired station.
3. Press pushbutton in firmly.
4. Repeat for remaining pushbuttons.

HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana

H582

PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier	12BA6	
V2	Converter	12BE6	
V3	IF Amplifier	12BA6	
V4	Det. -AVC-AF Amp.	12BF6	

ITEM No.	USE	TYPE	NOTES
V5	Trigger	12AU7	
V6	Output	12V6GT	
V7	Output	12V6GT	
V8	Rectifier	0Z4	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	Delco PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	■ 20	400	6322	AFH3-120	C0990	FP345. 8	TMT-106	T-550	TVL-3678
B	▲ 20	400							
C	20	25							

FIXED CAPACITORS

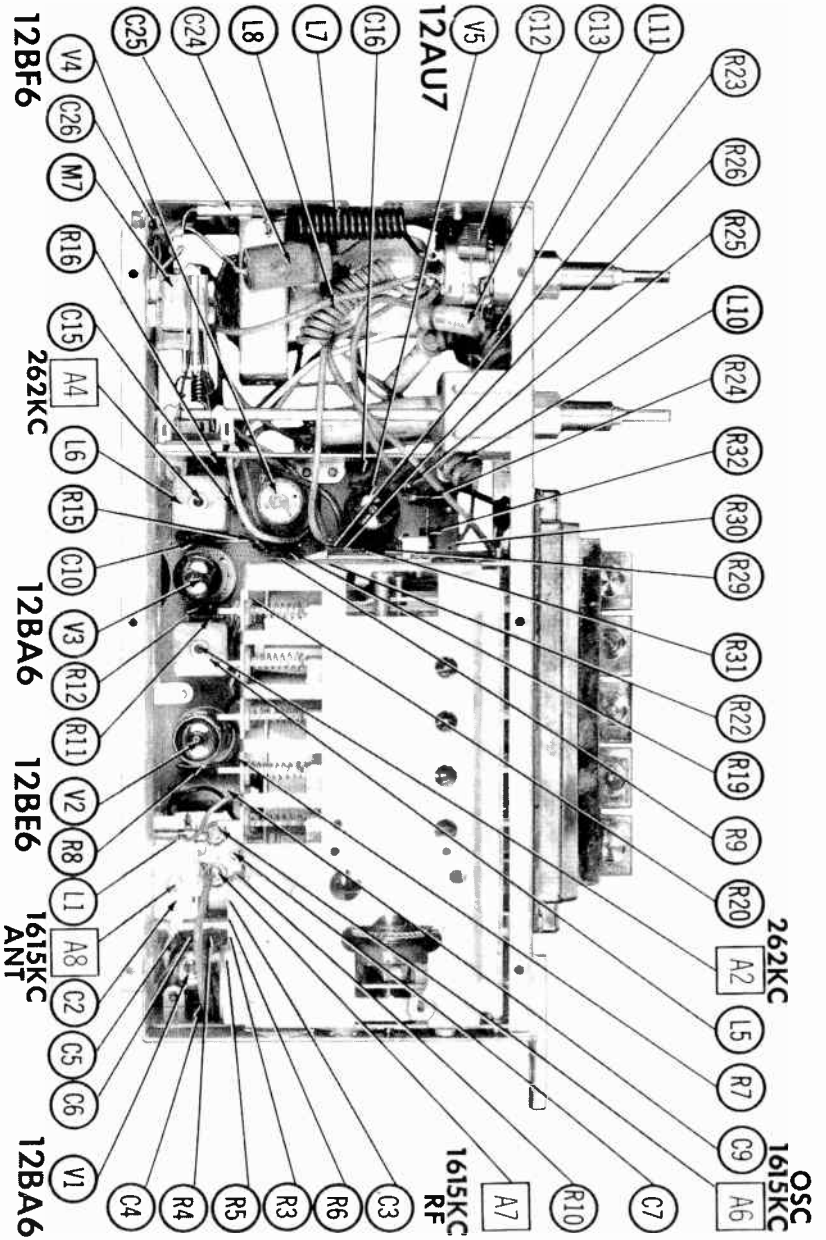
Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT	Delco PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
C2A	6-60		7270981						
B	22								
C3	.047	200	6612	P288N-047	DF-503	CUB2S47	GEM-4147	2TM-S47	
C4	.047	200	6612	P288N-047	DF-503	CUB2S47	GEM-4147	2TM-S47	
C5	68		6369	DI-000068	DD-680	L10Q68	UC-5468	5GA-Q68	
C6	39		6366	DI-000039	DD-390	L10Q39	UC-5439	5GA-Q39	
C7A			7268828						
B									
C									
D									
C8	200		7270129	1469-0002		22R5T2	MCE237	MS-32	5%
C9	.1	400	6613	P488N-1	DF-104	CUB4P1	GEM-401	4TM-P1	
C10	100		1219498	1469-0001		22R5T1	MCE235	MS-31	5%
C11	100		1219498	1469-0001		22R5T1	MCE235	MS-31	5%
C12	100		6371	1468-0001	D6-101	5W5T1	MC235	1FM-31	
C13	.002	600	6628	P688N-002	D6-202	CUB6D2	GEM-622	6TM-D2	
C14	.005	600	6631	P688N-005	D6-502	CUB6D5	GEM-625	6TM-D5	
C15	220		6375	BPD-00022	DD-221	L10T22	UC-5322	5GA-T22	
C16	2000		6352	BPD-002	DD-202	BYA10D2	DC522	5HK-D2	
C17	.2	400	6614	P488N-22		CUB4P22	GEM-4022	4TM-P22	
C18	.022	200	7271396	P288N-022	DD-203	CUB2S22	GEM-4122	2TM-S22	
C19	.004	800	6564	P1088N-004	DD16-402	CUB10D4	GEM-1024	10TM-D4	
C20A	220			BPD-00022	DD-221	L10T22	UC-5322	5GA-T22	
B	220		6375	BPD-00022	DD-221	L10T22	UC-5322	5GA-T22	
C21	.007	1600	6567	P1688N-007	DD16-702	CUB16D7	GEM-1627	MB-D7	
C22	.1	200	6690	P288N-1	DF-104	CUB2P1	GEM-201	2TM-P1	
C23	.47	100	6692	P288N-47		CUB2P47	GEM-2047	2TM-P47	
C24	.47	100	6692	P288N-47		CUB2P47	GEM-2047	2TM-P47	
C25			1212278						
C26	2000		6352	BPD-002	DD-202	BYA10D2	DC522	5HK-D2	

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	Delco PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1A	100K	½	7270853					Tone
B	1.5meg							Volume, Tap @ 300K
C	Switch							
R2	40Ω	2(WW)	7270982					Speaker Fader

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING OHMS	RATING WATT	Delco PART No.	NOTES
R3	2.2meg		1239	
R4	10K	1	1174	
R5	100Ω		1113	
R6	330K		1229	
R7	100Ω		1113	
R8	22K		1215	
R9	1.5meg		1237	
R10	12K	2	1276	
R11	10Ω		1101	
R12	150Ω		1115	
R13	820K 5%		1219491	
R14	180K 5%		7271550	
R15	1.5meg		1219492	
R16	100K		1223	
R17	680K		1233	
R18	100K		1223	
R19	1meg		1235	
R20	3300Ω 5%		1220173	
R21	47K	1	1259	
R22	1000Ω 5%		1220176	
R23	1meg		1235	
R24	5.6meg 5%		1244	
R25	120K		1224	
R26	910Ω 5%		7266033	①②
R27	1200Ω			②③
R28	47K			②
R29	6800Ω	1	1172	
R30	47K	1	1259	
R31	6800Ω 5%	1	7266367	
R32	47K 5%	1	1220188	
R33	360Ω	5(WW)	7270387	
R34	1800Ω		1204	③
R35	15K	1.	1253	

①Some versions may use 750Ω (Part #7266320) or 820Ω (Part #7266231). Replace with original value
②Part of M8
③Mfgr recommends replacing with 2700Ω 2W (Part #1204) and 5600Ω 1W (Part #1171) connected in parallel.

TRANSFORMER (VIBRATOR)

ITEM No.	RATING PRI.	RATING SEC. 1	RATING SEC. 2	REPLACEMENT DATA Delco PART No.	Halldorson PART No.	Merit PART No.	Rom PART No.	Stancor PART No.	Thordarson PART No.	Triod PART No.
T1	12.6VCT @1.99A	475VCT @.060A		7271233				P-6497		

TRANSFORMER (DRIVER)

ITEM No.	DC RESISTANCE PRI.		REPLACEMENT DATA Delco PART No.	Halldorson PART No.	Merit PART No.	Rom PART No.	Stancor PART No.	Thordarson PART No.	Triod PART No.	NOTES
T2	1800Ω CT		1220902				A-4421			

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE PRI.	IMPEDANCE SEC.	REPLACEMENT DATA Delco PART No.	Halldorson PART No.	Merit PART No.	Rom PART No.	Stancor PART No.	Thordarson PART No.	Triod PART No.	NOTES
T3	7900Ω CT	3-4Ω	6063 ①	Z1007	A-2936		A-4432	22S87	S-15X	①Alternate Part #7260855

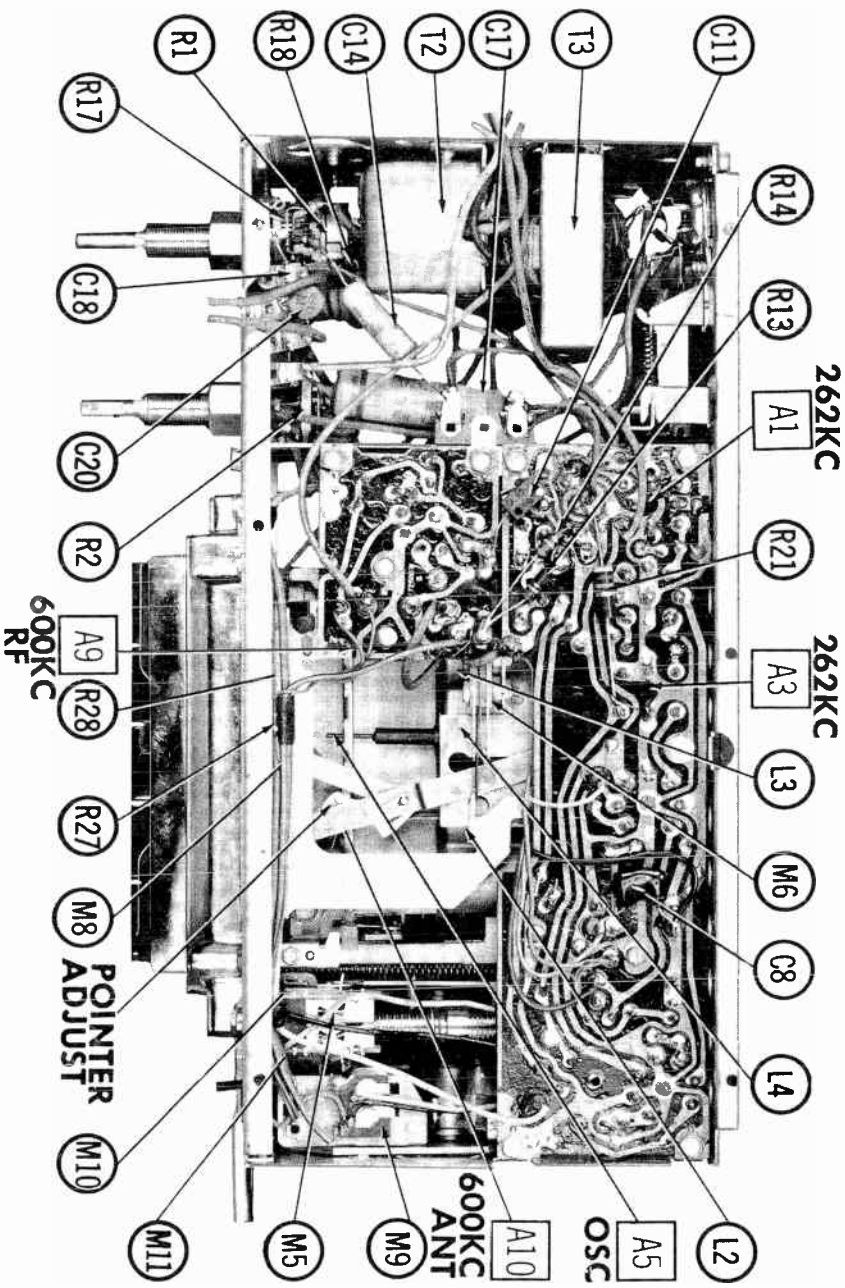
SPEAKER

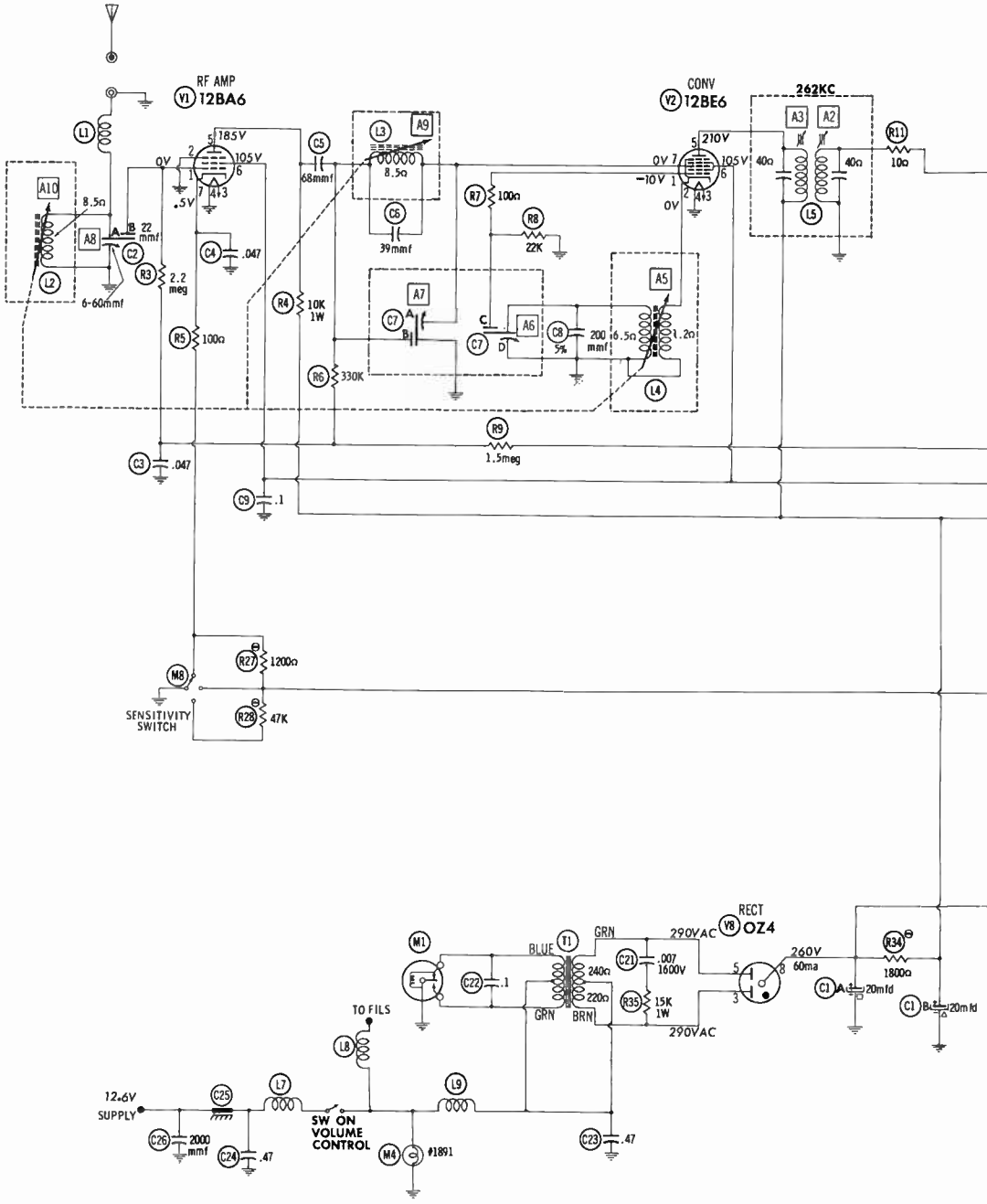
ITEM No.	TYPE SIZE	TYPE FIELD	TYPE V. C. IMP.	REPLACEMENT DATA Delco PART No.	QUAM PART No.	NOTES
SP1	4" x 8" 6" x 9"	PM PM	3-4Ω 3-4Ω	7270605 ① 7262245		①Alternate Part #7260605

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA Delco PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Rom PART No.	NOTES
L1	Ant. Coil	7255738	19-1004	BC-565	4610		6.5 Microhenries
L2	Ant. Coil	1221138					
L3	RF Coil	1221138					
L4	Osc. Coil	1221139					
L5	Input IF	1220990	16-6756	BC-317	13-PH1		
L6	Output IF	1220992		BC-320	13-PH6		
L7	"A" Lead Choke	1217846					1.4 Microhenry
L8	Fil. Choke	1217846					1.4 Microhenry
L9	Hash Choke	7269090					
L10	Speaker Choke	1217846	19-1001	BC-562	4604		1.4 Microhenry
L11	Speaker Choke	1217846	19-1001	BC-562	4604		1.4 Microhenry

CHASSIS—BOTTOM VIEW



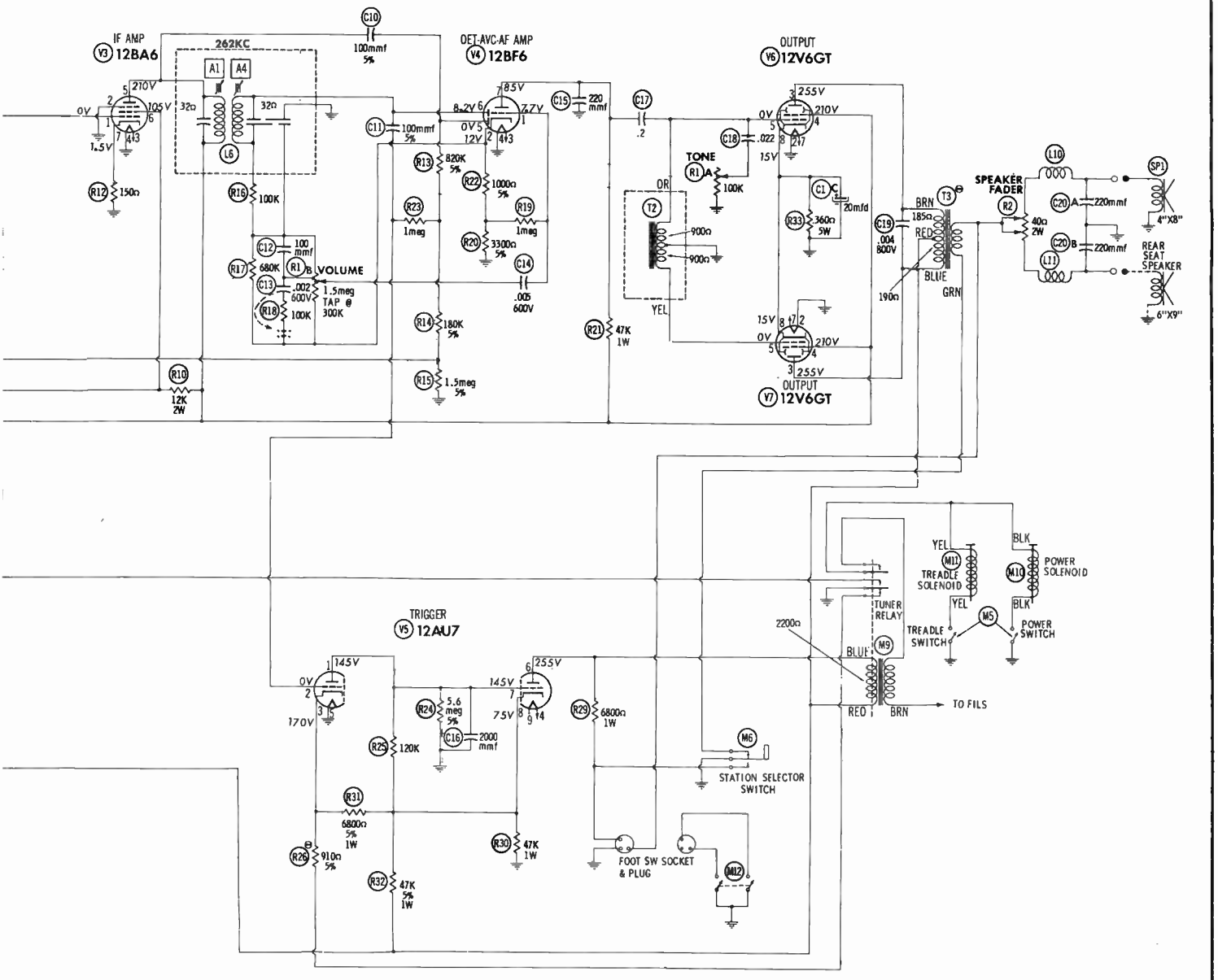


Θ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured at 1000 ohms per volt.
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes posssible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

A PHOTOFACT STANDARD NOTATION SCHEMATIC



RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12BA6	5.2meg	0Ω	1.1Ω	0Ω	†12K	†14K	1300Ω		
V2	12BE6	22K	1.2Ω	1.1Ω	0Ω	†1800Ω	†14K	3.3meg		
V3	12BA6	50Ω	0Ω	1.1Ω	0Ω	†1800Ω	†14K	150Ω		
V4	12BF6	1meg	4300Ω	1.1Ω	0Ω	2.5meg	500K	†49K		
V5	12AU7	†140K	2.7meg	†50K	1.1Ω	0Ω	†2200Ω	†150K	†45K	.6Ω
V6	12V6GT	NC	0Ω	†185Ω	†1800Ω	900Ω	NC	1.1Ω	360Ω	
V7	12V6GT	NC	0Ω	†190Ω	†1800Ω	900Ω	NC	1.1Ω	360Ω	
V8	OZ4	0Ω	NC	220Ω	NC	240Ω	NC	TP	20K(MIN)	

† MEASURED FROM PIN 8 OF V8
NC NO CONNECTION
TP TIE POINT

PARTS LIST AND DESCRIPTIONS (Continued)

VIBRATOR

ITEM No.	TYPE	INPUT VOLTS	FRE-QUENCY	REPLACEMENT DATA				NOTES
				Delco PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	RADIART PART No.	
M1	Interrupter	12.6 VDC	115~	8555	6330	G1602/G883	6330	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			Delco PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M2		7½A 32V	455640					

MISCELLANEOUS

ITEM No.	PART NAME	Delco PART No.	NOTES
M3	Lamp		#1891
M4	Lamp		#1891
M5	Switch	7268030	Power Solenoid, Treadle Solenoid
M6	Switch	7269292	Station Selector
M7	Switch	7271223	Antenna
M8	Switch	7271196	Sensitivity
M9	Tuner Relay	7270546	
M10	Solenoid	1221160	Power
M11	Solenoid	1221161	Treadle
M12	Switch	7264602	Foot
	Belt	7269454	Manual Drive

CABINETS & CABINET PARTS

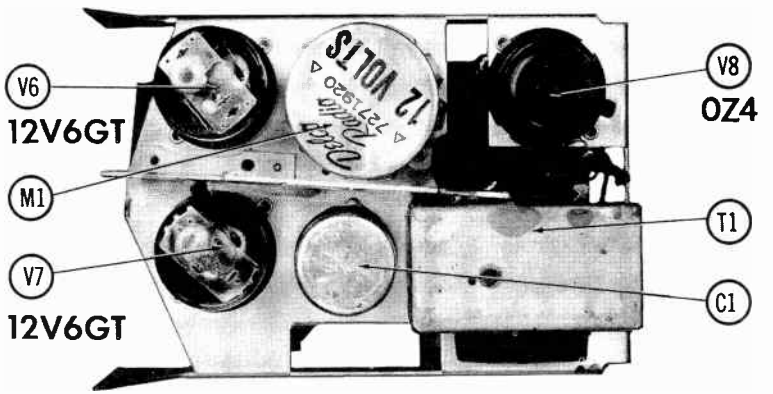
(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

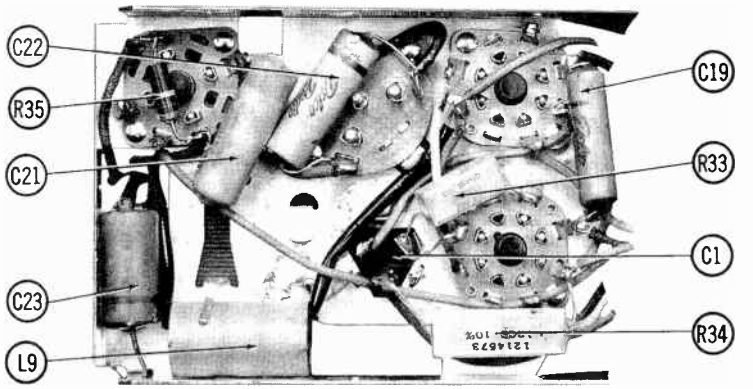
NAME	PART NO.	DESCRIPTION
Knob	1469145	Control
Knob	1469004	Dummy (Series 86 Only)
Knob	1466056	Tone and Speaker
Pushbutton	1220974	Five used (Includes Front Bearing Plate and Slides)
Pointer	7272066	
Dial	7271660	
Dial Window	7269448	

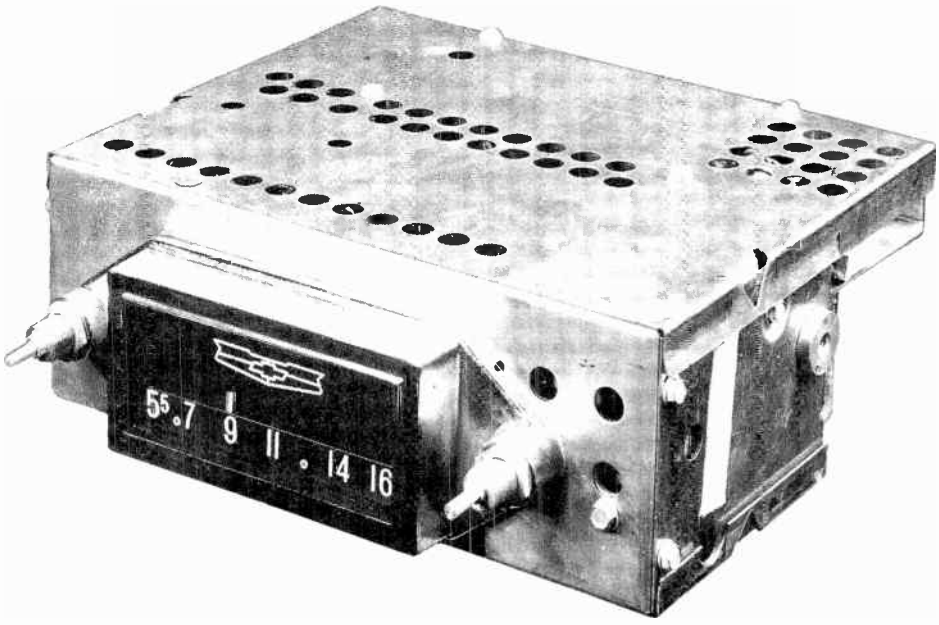
WIRING DATA

General-use Unshielded Hook-up Wire .....Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors
Shielded Hook-up Wire .....Use BELDEN No. 8885
Bonding Strap .....Use BELDEN No. 8661

POWER CHASSIS







TRADE NAME	Chevrolet Model 987724 (For 1958 Chevrolet Automobiles)
MANUFACTURER	Delco Radio Div., G. M. Corp., Kokomo, Indiana
TYPE SET	Battery Operated Custom Built AM Automobile Receiver
TUBES (Six)	Types 12BA6 RF Amplifier, 12BE6 Converter, 12BA6 IF Amplifier, 12AV6 Det.-AVC-AF Amplifier, 12V6GT Output, 0Z4 Rectifier
POWER SUPPLY	12 Volt Storage Battery
RATING	2.2 Amp. @ 12.6 Volts DC
TUNING RANGE—BROADCAST	540-1600KC

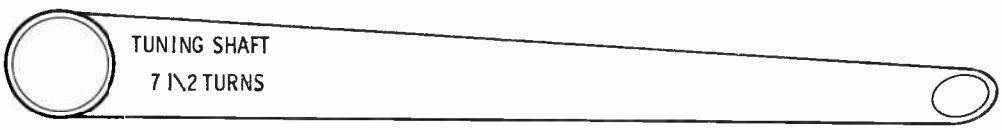
ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING 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.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.1mfd	High side to pin 7 (grid) of 12BE6 (V2). Low side to chassis.	262KC (400~ Mod)	High frequency end stop	Across voice coil	A1, A2, A3, A4	Adjust for maximum output.
2.	68mmf	High side to Antenna Receptacle. Low side to chassis.	1615KC	"	"	A6, A7, A8	Check setting of osc. coil core (A5). Rear of core should be 1 5/8" from mounting end of coil form. Adjust for maximum output.
3.	"	"	600KC	Tune to 600KC signal	"	A9, A10	Adjust for maximum output.
4.	"	"	1615KC	High frequency end stop	"	A7, A8	"
5.	With radio tuned to a 1100KC signal, adjust pointer on dial cord to coincide with 1100KC mark on dial.						
6.	With radio installed in car and antenna fully extended, tune in a weak station near 1000KC and adjust A8 for maximum output.						

CORES OUT OF COILS



DIAL CORD STRINGING

HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana

H584

PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier	12BA6	
V2	Converter	12BE6	
V3	IF Amplifier	12BA6	
V4	Det.-AVC-AF Amp.	12AV6	
V5	Output	12V6GT	
V6	Rectifier	0Z4	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP.	RATING VOLT.	DELCO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	■20	400	6309	AFH2-51	B0400	FP234	TMD-50	D-215	TVL-2755
B	▲20	400							

FIXED CAPACITORS

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

ITEM No.	RATING CAP.	RATING VOLT	DELCO PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	NOTES
C2A	7-67		7270434						
B	37								
C3	.047	200	6612	P288N-047	DF-503	CUB2S47	GEM-4147	2TM-S47	
C4	15		8361	NPO-DI 15	DD-150	L10Q15	UC-5415	5GA-Q15	10%
C5	39		6366	DI-000039	DD-390	L10Q39	UC-5439	5GA-Q39	
C6A			7268828						
B									
C									
D									
C7	200		7270129	1469-0002		22R5T2	MCE237	MS-32	5%
C8	.047	400	6612	P488N-047	DF-503	CUB4S47	GEM-4147	4TM-S47	
C9	2000		6352	BPD-002	DD-203	BYA10D2	DC522	5HK-D2	
C10	.01	400	6610	P488N-01	D6-103	CUB4S1	GEM-411	4TM-S1	
C11	.047	400	6612	P488N-047	DF-503	CUB4S47	GEM-4147	4TM-S47	
C12	1000		6350	BPD-001	DD-102	BYA6D1	DC521	5HK-D1	
C13	.002	600		P688N-002	D6-202	CUB6D2	GEM-622	6TM-D2	①
C14	.007	1600	6567	P1688N-007	DD16-702	CUB16D7	GEM-1627	MB-D7	
C15	.1	200	6690	P288N-1	DF-104	CUB2P1	GEM-201	2TM-P1	
C16	.47	100	6692	P288N-47		CUB2P47	GEM-2047	2TM-P47	
C17	.1	200	6690	P288N-1	DF-104	CUB2P1	GEM-201	2TM-P1	
C18A			1220885						
B									

① Some versions use .006mfd 800V in this application (Part #6566).

CONTROLS

ITEM No.	RATING RESISTANCE	RATING WATTS	DELCO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	INSTALLATION NOTES
R1A	2meg	½	122113					Tone
B	300K	½						Volume
C	Switch							On-Off

RESISTORS

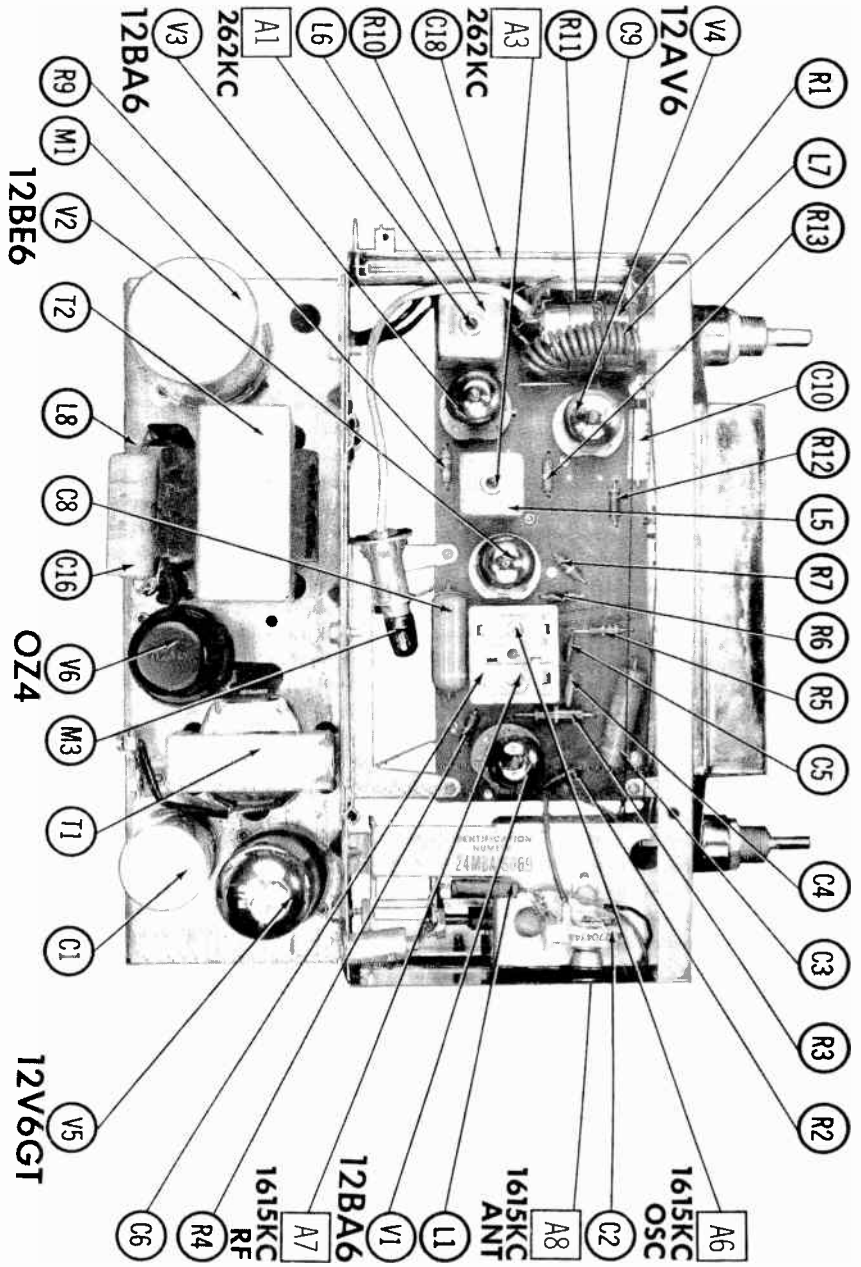
All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING OHMS	RATING WATT	DELCO PART No.	NOTES
R2	2.2meg		1239	
R3	10K	1	1174	
R4	150Ω		1115	
R5	330K		1229	
R6	100Ω		1113	
R7	22K		1215	
R8	15K	2	1277	
R9	330Ω		1119	

ITEM No.	RATING OHMS	RATING WATT	DELCO PART No.	NOTES
R10	47K		1219	
R11	1meg		1235	
R12	6.8meg		1245	
R13	220K		1117	
R14	220K		1227	
R15	330Ω	1	1156	
R16	1800Ω	(WW)	1204	①
R17	15K	1	1253	

① Replace with 5600Ω 1W (Part #1171) and 2700Ω 2W (Part #1204) connected in parallel.

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (VIBRATOR)

ITEM No.	RATING			REPLACEMENT DATA						
	PRI.	SEC. 1	SEC. 2	DELCO PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
T1	12.6VCT @ 1.8A	530VCT @ .052A		7265604		P-2860 ①		P-6497	22R79 ①	

① Use original channel frame.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA							NOTES
	PRI.	SEC.	DELCO PART No.	Halldorson PART No.	Merit PART No.	Rom PART No.	Stoncor PART No.	Thordorson PART No.	Triad PART No.	
T2	6000Ω	3-4Ω	6062	Z1002 ①	A-3019 ①		A-4431	26S49 ①	S-5Z ①	① Use original channel frame.

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	DELCO PART No.	QUAM PART No.	
SP1	6" X 9"	PM	3-4Ω	7269880 ①	69A2	① Alternate Part #7269884

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		DELCO PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Ram PART No.	
L1	Antenna Coil	7255738	19-1004	BC-565	4610		6.5 Microhenries
L2	Antenna Coil	1221138					
L3	RF Coil	1221138					
L4	Osc. Coil	1221151					
L5	Input IF	1220990	16-6756	BC-317	13-PH1		
L6	Output IF	1220992		BC-320	13-PH6		
L7	Fil. Choke	1217846					1.4 Microhenry
L8	Hash Choke	7269252					

VIBRATOR

ITEM No.	TYPE	INPUT VOLTS	FREQUENCY	REPLACEMENT DATA				NOTES
				DELCO PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	RADIART PART No.	
M1	Interrupter	12.6 VDC	115∿	8555	6330	G1602/G883	6330	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			DELCO PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M2		7½A 32V	455107					

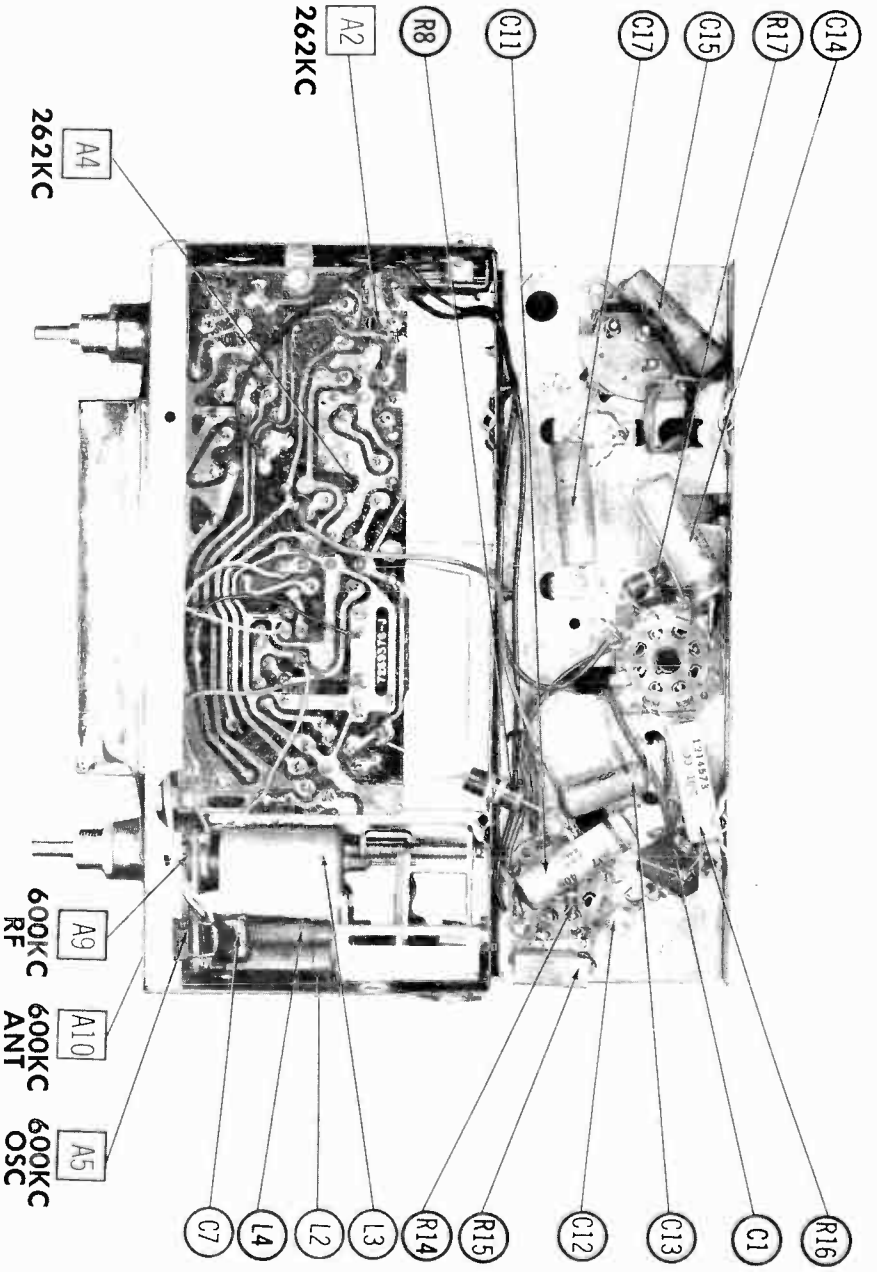
MISCELLANEOUS

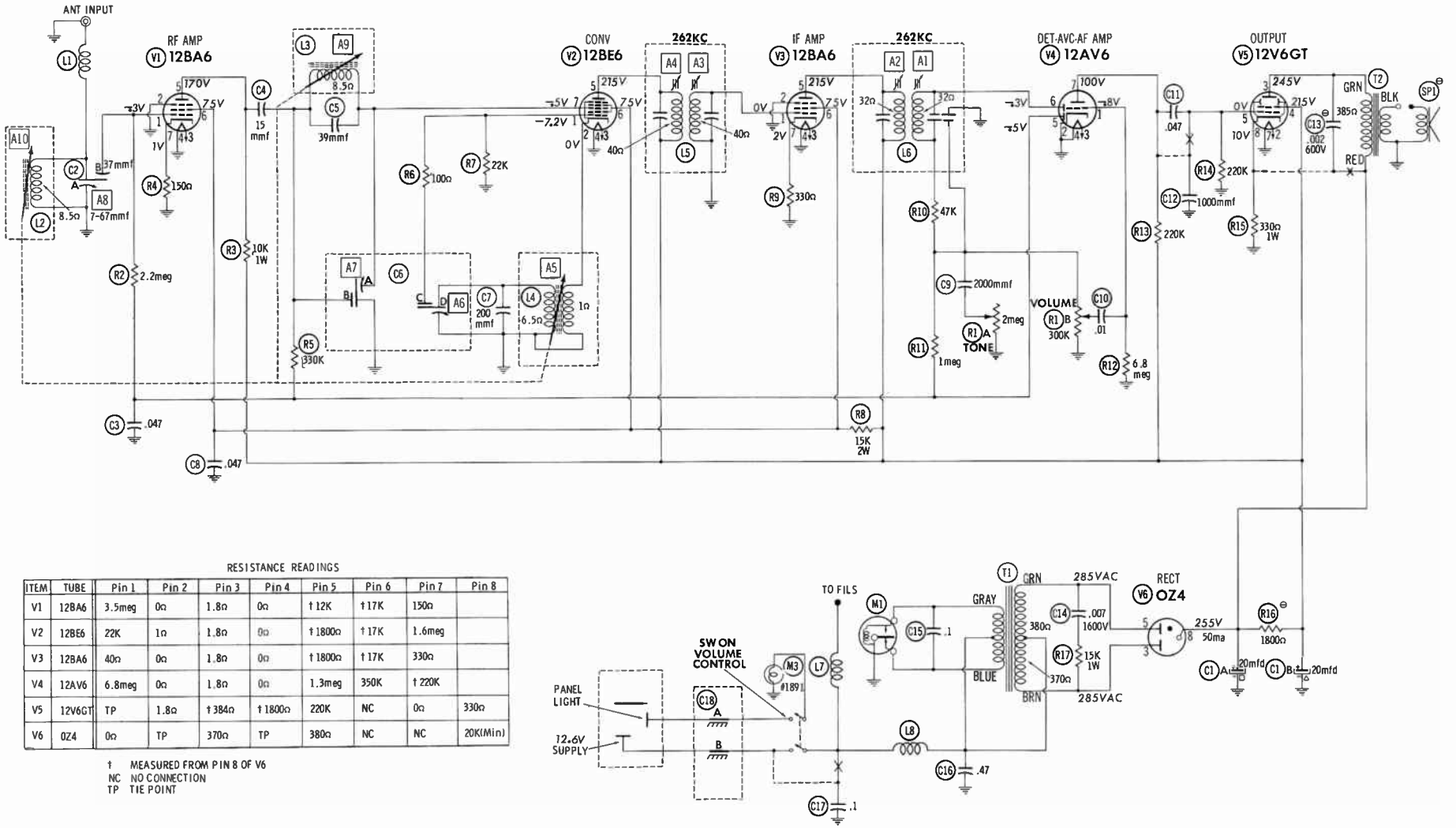
ITEM No.	PART NAME	DELCO PART No.	NOTES
M3	Lamp		#1891
	Pointer Ass'y	7270447	
	Printed Board	7269376-J	
	Speaker Ass'y	Model 987765	Complete 6" X 9" Rear Seat installation.
	Speaker Ass'y	Model 987766	Complete 6" Round Rear Seat installation.

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in Ten Colors 8524 (Stranded) Available in Ten Colors
Shielded Hook-up Wire	Use BELDEN No. 8885
Bonding Strap	Use BELDEN No. 8661

CHASSIS—BOTTOM VIEW





RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
V1	12BA6	3.5meg	0Ω	1.8Ω	0Ω	†12K	†17K	150Ω	
V2	12BE6	22K	1Ω	1.8Ω	0Ω	†1800Ω	†17K	1.6meg	
V3	12BA6	40Ω	0Ω	1.8Ω	0Ω	†1800Ω	†17K	330Ω	
V4	12AV6	6.8meg	0Ω	1.8Ω	0Ω	1.3meg	350K	†220K	
V5	12V6GT	TP	1.8Ω	†384Ω	†1800Ω	220K	NC	0Ω	330Ω
V6	0Z4	0Ω	TP	370Ω	TP	380Ω	NC	NC	20K(Min)

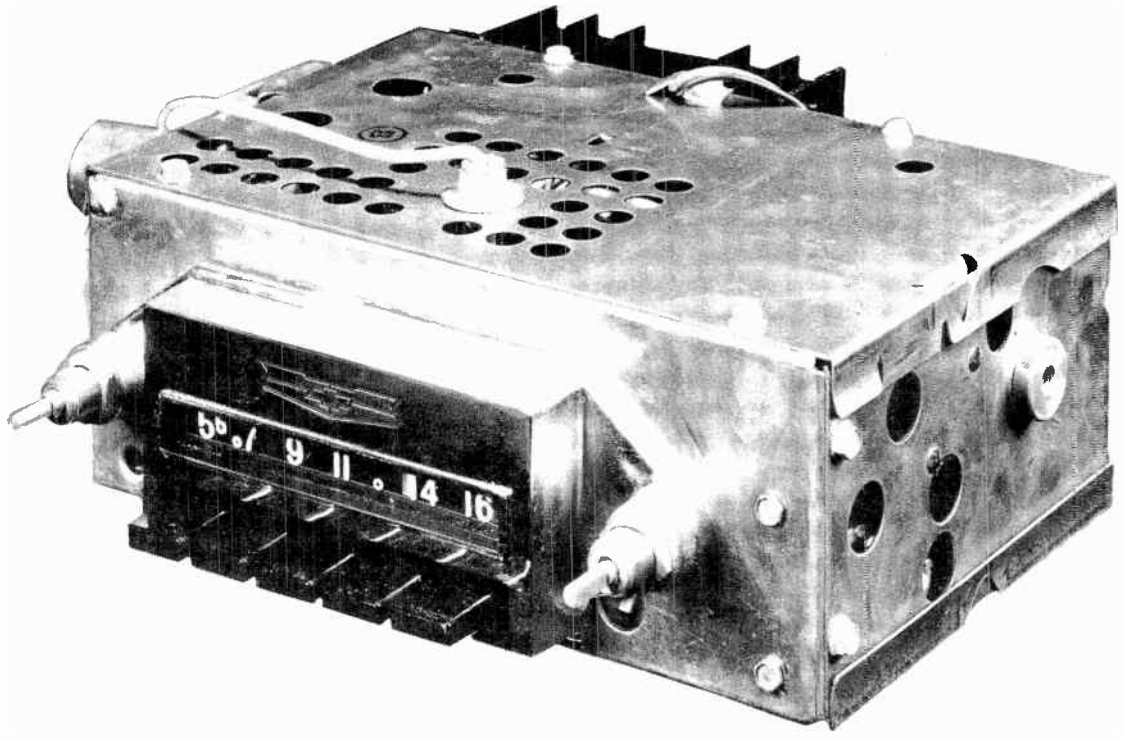
† MEASURED FROM PIN 8 OF V6
NC NO CONNECTION
TP TIE POINT

1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured at 1000 ohms per volt.
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

Θ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

A PHOTOFACT STANDARD NOTATION SCHEMATIC



TRADE NAME	Chevrolet Model 987727 (For 1958 Chevrolet Automobiles)
MANUFACTURER	Delco Radio Div., G. M. Corp., Kokomo, Indiana
TYPE SET	Battery Operated Custom Built AM Automobile Receiver With Transistorized Output
TUBES (Five)	Types 12BL6 RF Amplifier, 12AD6 Converter, 12AF6 IF Amplifier, 12F8 Det.-AVC-1st AF Amplifier, 12K5 2nd AF Amplifier
POWER SUPPLY	12 Volt Storage Battery — RATING 1.8 Amp. @ 12.6 Volts DC
TUNING RANGE—BROADCAST	540 - 1600KC

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING 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. Set Tone to Treble.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.1mfd	High side to pin 7 (grid) of 12AD6 (V2). Low side to chassis.	262KC (400~ Mod)	High frequency end stop	Across voice coil	A1, A2, A3, A4	Adjust for maximum output.
	Check setting of oscillator coil core (A5). Rear of core should be 1 5/8" from mounting end of coil form.						
2.	68mmf	High side to Antenna connector. Low side to chassis.	1615KC	High frequency end stop	Across voice coil	A6, A7, A8	Adjust for maximum output.
3.	"	"	600KC	Tune to 600KC signal	"	A9, A10	"
4.	"	"	1615KC	High frequency end stop	"	A7, A8	"
5.	With radio installed in car and antenna fully extended, tune in a weak station near 1000KC and adjust A8 for maximum output.						

POINTER ADJUSTMENT

With radio tuned to an 1100KC signal, adjust pointer adjustment so that pointer coincides with 1100KC mark on dial.

PUSHBUTTON ADJUSTMENT

1. Pull pushbutton to the left and out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.

HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana

H586

PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier	12BL6	
V2	Converter	12AD6	
V3	IF Amplifier	12AF6	
V4	Det.-AVC-1st AF Amp.	12F8	
V5	2nd AF Amplifier	12K5	

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA				NOTES
			CBS PART No.	RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	2N278	Output					

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	DELCO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	■1000	16	7270691 ①	AFH2-02-70		WP200.27			R2668 *
B	▲500	16							

① Alternate Part #7270417 * Non Catalog Item

FIXED CAPACITORS

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

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT	DELCO PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
C2A	7-73		7268558						
B	42								
C3	.022	200	6611	P288N-022	DD-203	CUB2S22	GEM-2122	2TM-S22	
C4	68		6369	BPD-000068	DD-680	L10Q68	UC-5468	5GA-Q68	
C5	39		6366	DI-000039	DD-390	L10Q39	UC-5439	5GA-Q39	
C6A			7268828						
B									
C									
D									
C7	200		7270129	1469-0002		5R5T2	MCE237	MS-32	5%
C8	.047	200	6612	P288N-047	DF-503	CUB2S47	GEM-4147	2SE-S47	
C9	47		6367	1468-000047	DD-470	1W5Q47	UC-5447	1FM-447	
C10	47		6367	BPD-000047	DD-470	L10Q47	UC-5447	5GA-Q47	
C11	.005	600	6631	P688N-005	D6-502	CUB6D5	GEM-625	6TM-D5	
C12	.1	50	7269714	P288N-1		BC2P1J	ACE401	2SE-P10	
C13	1000		6350	BPD-001	DD-102	BYA6D1	DC521	5HK-D1	
C14	39		6366	DI-000039	DD-390	L10Q39	UC-5439	5GA-Q39	
C15	220		6375	BPD-00022	DD-221	L10T22	UC-5322	5GA-T22	
C16	2000		6352	BPD-002	DD-202	BYA10D2	DC522	5HK-D2	
C17	.022	200	6611	P288N-022	DD-203	CUB2S22	GEM-4122	2TM-S22	
C18	.05	200	6612	P288N-05	DF-503	CUB2S5	GEM-415	2TM-S5	
C19A	220		6375	BPD-00022	DD-221	L10T22	UC-5322	5GA-T22	
B	220			BPD-00022	DD-221	L10T22	UC-5322	5GA-T22	
C20	.47	50	7269780	P288N-47		CUB2P47	GEM-2047	2TM-P47	
C21A			1220885						
B									

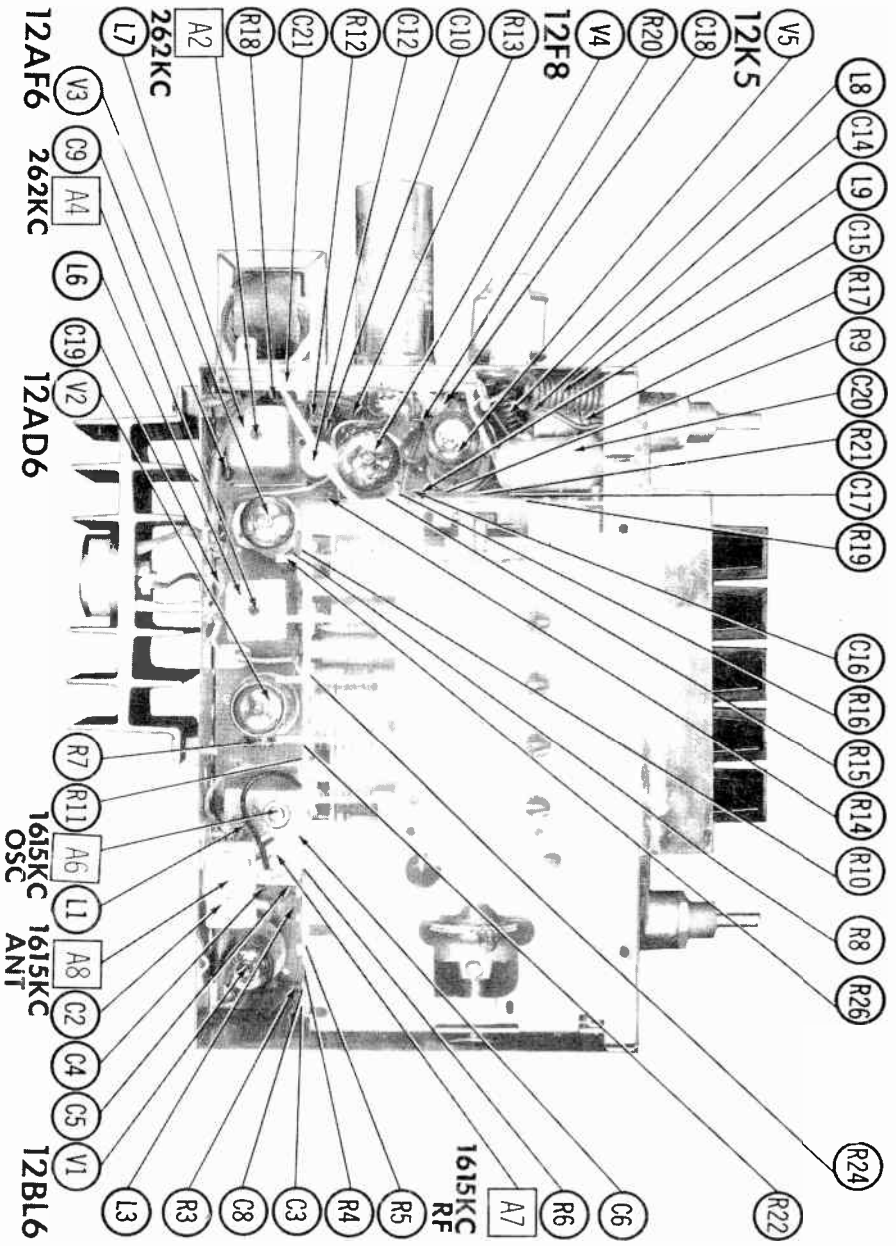
CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESIST-ANCE	WATTS	DELCO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1A	5meg	½	7270479 ①				■UE3815-S	Tone
B	5meg	½						Volume, Tap ② 1meg
C	Switch							
R2	100Ω	2(WW)	7269637		39-100		FL-150	Transistor Bias

① Alternate Part #1221118

■ "STA-LOC" Equivalent: FF56A, OS1250, RU56T16, IS1687, US-42

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING OHMS	RATING WATT	DELCO PART No.	NOTES
R3	1.5meg		1237	
R4	10K		1137	
R5	1.5meg		1237	
R6	680K		1233	
R7	33K		1217	
R8	2.2meg		1239	
R9	3.3meg		1241	
R10	12meg			①
R11	4.7meg		1243	②
R12	560K		1232	
R13	1000Ω		1125	
R14	12K		1212	
R15	270K		1228	
R16	120K		1224	
R17	270K		1228	
R18	47K		1219	
R19	470K		1231	
R20	33Ω		1107	
R21	22Ω		1105	
R22	.47Ω	2	7270608	③
R23	10Ω		1101	
R24	100Ω	2	1187	
R25	150Ω	1	1152	
R26	100Ω		1113	

① Some versions may use 4.7meg in this application (Part #1243).
② Some versions may use 1.8meg in this application (Part #1238).
③ Fuse & temperature compensating unit, .36Ω @ room temperature.

TRANSFORMER (INTERSTAGE)

ITEM No.	Turns Ratio PRI.	Turns Ratio SEC.	REPLACEMENT DATA DELCO PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
T1	50	: 1	7269877				TA-48			

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE PRI.	IMPEDANCE SEC.	REPLACEMENT DATA DELCO PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
T2	10.9Ω	3-4Ω	7270627							

SPEAKER

ITEM No.	TYPE SIZE	TYPE FIELD	TYPE V. C. IMP.	REPLACEMENT DATA DELCO PART No.	REPLACEMENT DATA QUAM PART No.	NOTES
SP1	6" X 9"	PM	3-4Ω	7270531	69A3	

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA DELCO PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Ram PART No.	NOTES
L1	Antenna Coil	7255738	19-1004	BC-565	4610		6.5 Microhenries
L2	Antenna Coil	1221138					
L3	RF Choke	7269684					1772 Microhenries
L4	RF Coil	1221138					
L5	Osc. Coil	1221151					
L6	Input IF	1221015	16-6756	BC-317	13-PH1		
L7	Output IF	1221021		BC-318			
L8	Hash Choke	1217846					
L9	Fil. Choke	1217846					

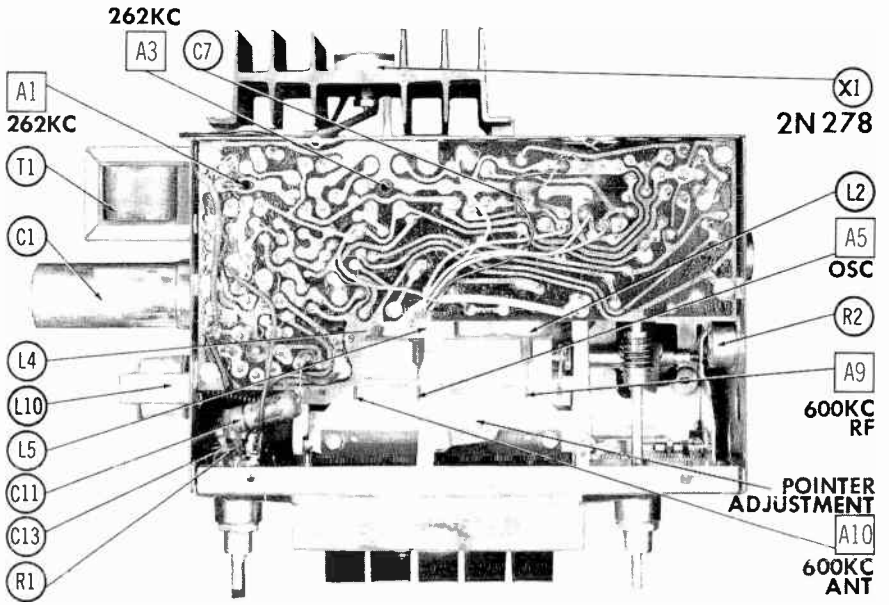
FILTER CHOKE

ITEM No.	RATINGS CURRENT (Measured)	RATINGS DC RES.	RATINGS INDUCTANCE (0 CURRENT 1000 ∿)	REPLACEMENT DATA DELCO PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
L10	.92A	.75Ω	.011 Hy.	7271321						

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA DELCO PART No. FUSE	DELCO PART No. HOLDER	LITTELFUSE PART No. FUSE	LITTELFUSE PART No. HOLDER	BUSS PART No. FUSE	BUSS PART No. HOLDER
M1	AGC	4A 32V	7270059					

CHASSIS—BOTTOM VIEW



MISCELLANEOUS

ITEM No.	PART NAME	DELCO PART No.	NOTES
M2	Dial Lamp		#1891
	Printed Board	7271333-E	
	Speaker Ass'y	Model 987765	Complete, For 6" X 9" Rear Seat Speaker Installation
	Speaker Ass'y	Model 987766	Complete, For Round 6" Rear Seat Speaker Installation

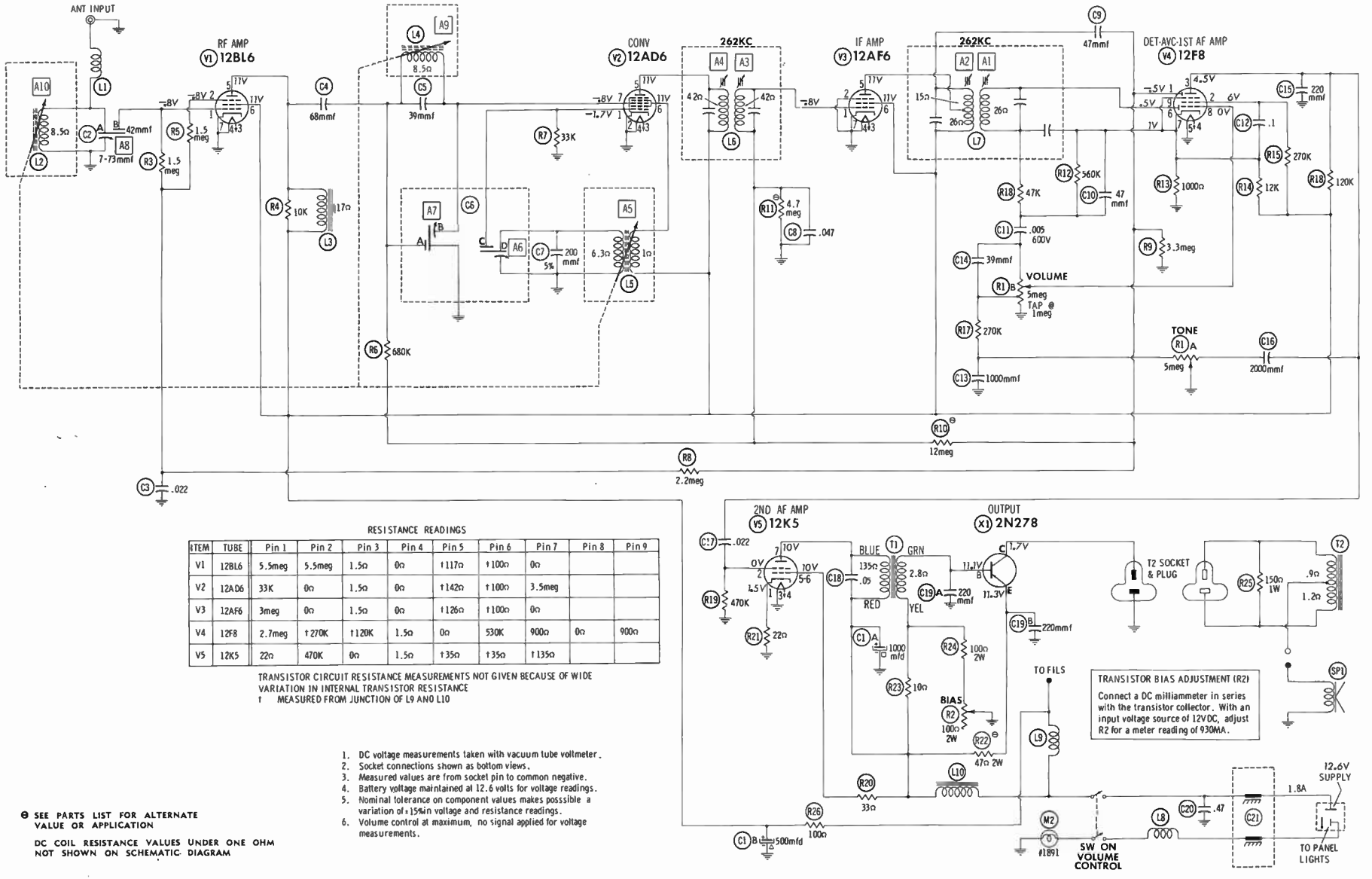
CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

NAME	PART NO.	DESCRIPTION
Knob	7270288	Tone
Knob	7270289	Dummy
Knob	1990894	Control
Pushbutton	1221120	Five used, incl. front bearing plate and slides
Dial Pointer	7270456	
Dial	7270397	

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in Ten Colors 8524 (Stranded) Available in Ten Colors
Shielded Hook-up Wire	Use BELDEN No. 8885
Bonding Strap	Use BELDEN No. 8661



RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12BL6	5.5meg	5.5meg	1.5Ω	0Ω	†117Ω	†100Ω	0Ω		
V2	12AD6	33K	0Ω	1.5Ω	0Ω	†142Ω	†100Ω	3.5meg		
V3	12AF6	3meg	0Ω	1.5Ω	0Ω	†126Ω	†100Ω	0Ω		
V4	12F8	2.7meg	†270K	†120K	1.5Ω	0Ω	530K	900Ω	0Ω	900Ω
V5	12K5	22Ω	470K	0Ω	1.5Ω	†35Ω	†35Ω	†135Ω		

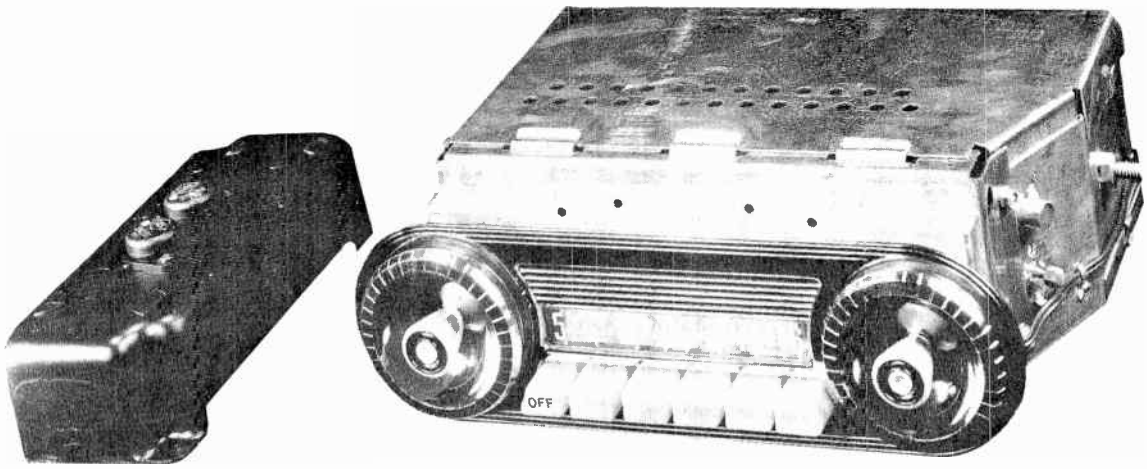
TRANSISTOR CIRCUIT RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE
† MEASURED FROM JUNCTION OF L9 AND L10

1. DC voltage measurements taken with vacuum tube voltmeter.
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

Θ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

A PHOTOFACT STANDARD NOTATION SCHEMATIC



TRADE NAME	Edsel Model 85SE (For 1958 Edsel Automobiles)
MANUFACTURER	Stromberg-Carlson, National Service Dept., 1400N. Goodman St., Rochester 3, N.Y.
TYPE SET	Battery Operated Custom Built AM Automobile Receiver with Transistorized Output
TUBES (Five)	Types 12AF6 RF Amplifier, 12AD6 Converter, 12AF6 IF Amplifier 12EL6 Det.-AVC-AF Amp., 12K5 Driver
POWER SUPPLY	12 Volt Storage Battery RATING 1.6 Amp. @ 12.6 Volts DC
TUNING RANGE—BROADCAST	540-1600KC

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING 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.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.1mfd	High side to pin 7 (grid) of 12AD6 (V2) Low side to chassis.	262.5KC (400~ Mod.)	High Freq. end.	Across Voice Coil	A1, A2, A3, A4	Adjust for maximum output.
2.	Fig. 1	Thru dummy to antenna receptacle.	1605KC	"	"	A5, A6	" " " "
	Step 3 is not necessary unless tuner has been tampered with or associated components have been replaced. If necessary, remove escutheon, dial background and dial lamp to expose tuning cores (A7, A8, A9).						
3.	"	Thru dummy to antenna receptacle.	1200KC	Tuner carriage 9/32" from high freq. end stop.	Across Voice Coil	A7, A8, A9	Adjust for maximum output. Repeat steps 2 and 3 until no further improvement is obtained.
4.	"	"	1400KC	1400KC	"	A10	"

SENSITIVITY ADJUSTMENT (R3)

Connect a signal generator thru dummy (Fig. 1) to antenna receptacle. Tune the gnerator to 1400KC, 400~ modulation, 5 microvolts output. Replace speaker with a 4Ω 2W carbon resistor. Connect an output meter across the resistor and adjust R3 for a reading of 2 volts. This is equivalent to an output of 1 watt. R3 should be adjusted on the counterclock wise side of the peak to prevent overbiasing V1.

PUSHBUTTON ADJUSTMENT

1. Pull pushbutton out.
2. Tune manually to desired station.
3. Press pushbutton in firmly.
4. Repeat for remaining pushbuttons.

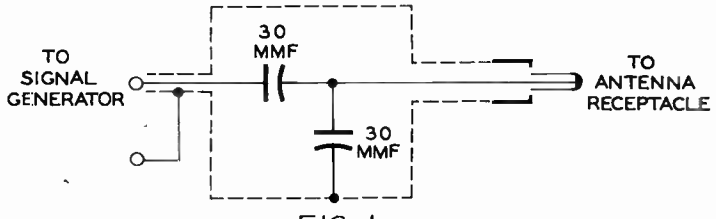


FIG. 1

EDSEL
MODEL 85SE

H453

PARTS LIST AND DESCRIPTIONS

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA				NOTES
			CBS PART No.	RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	2N155	Output	CBS-2N155				Alternate type 2N157
X2	2N155	Output	CBS-2N155				Alternate type 2N157

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier	12AF6	
V2	Converter	12AD6	
V3	IF Amplifier	12AF6	

ITEM No.	USE	TYPE	NOTES
V4	Det. -AVC-AF Amp.	12EL6	
V5	Driver	12K5	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	Stromberg-Carlson PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	▪250	16	111001-003	AFH2-02-05		WP200.7			R2564*
B	▲250	16							
C2	500	3	111001-004	PRS6V500	BR500-6	TC605	TD-500-6	MTH-0650	TVA-1103
C3	500	3	111001-004	PRS6V500	BR500-6	TC605	TD-500-6	MTH-0650	TVA-1103

*Non-Catalog Item

FIXED CAPACITORS

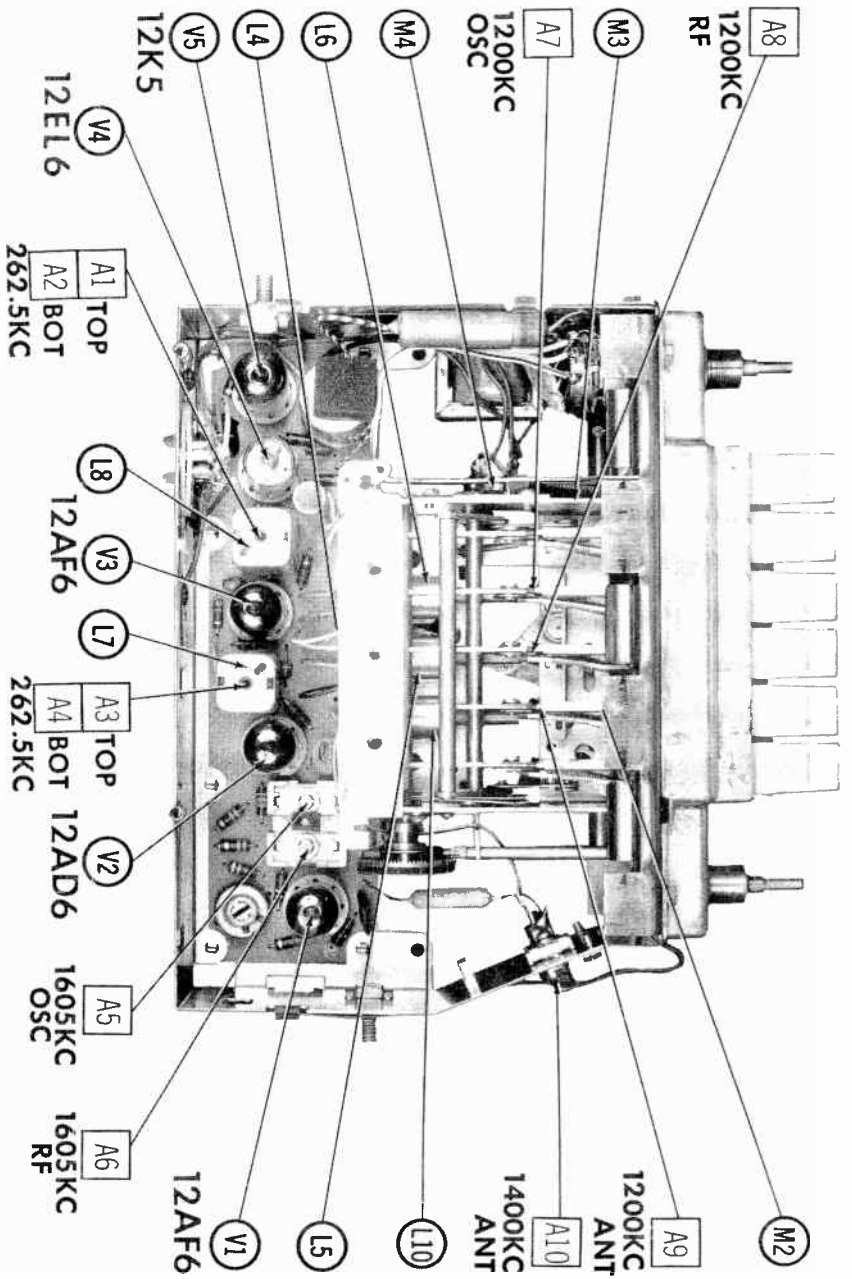
Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT	Stromberg-Carlson PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
C4	5-80		110000-001						
C5	10000		110002-026	BPD-01	DD-103	BY10S1	DC511	5HK-S1	
C6	10000		110919-000	BPD-01	DD-103	BY10S1	DC511	5HK-S1	
C7A	50-230		110000-011						
B	375-445		110000-011						
C	47		110000-011						
C8	6.8		110002-057	NP0-DI6.8	DTZ-6R8	C10V68C	ZT-5568	5TCCB-V68	NP0
C9	680		110915-000	1469-00068	D6-681	1R5T68		MS-368	10%
C10	4700		110002-054	BPD-0047	DD-472	BYA10D47M	UC-5247	5HK-D47	
C11	6.8		110907-000	NP0-S16.8	TCZ-6R8	CTA6V68C	ZT-5568	5TCCB-V68	10%
C12	68		110002-043	BPD-000068	DD-680	L10V68	UC-5468	5GA-Q68	
C13	220		110921-000	BPD-00022	DD-221	L10T22	UC-5322	5GA-T22	
C14	4700		110920-000	BPD-0047	DD-472	BYA10D47M	UC-5247	5HK-D47	
C15	.033	200	110003-002	P288N-033		BC-2S33J	GEM-4133	2SE-533	
C16	680		110002-050	BPD-00068	DD-681	BYA10T68	UC-5368	5GA-T68	
C17	10000		110919-000	BPD-01	DD-103	BYA10S1	DC511	5HK-S1	
C18			110000-022						
C19			110000-021						
C20			110000-020						
C21	5	50	110628-000	P288N-5		CUB2P5	GEM-205	2TM-P5	

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESIST-ANCE	WATTS	Stromberg-Carlson PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1A	Switch		145000-001					Tone Switch
B	1meg	½						Volume, Tap @ 300K
R2	20Ω	1(WW)	145000-010					Speaker Fader Sensitivity
R3	3000Ω	2(WW)	145000-030					
R4	250Ω	2(WW)	145000-020		39-300		FL250	Transistor Bias
R5	250Ω	2(WW)	145000-020		39-300		FL250	Transistor Bias

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING OHMS	RATING WATT	Stromberg-Carlson PART No.	NOTES
R6	10meg		554002-106	
R7	12K		554001-123	
R8	1200Ω		554001-122	
R9	4700Ω		554002-472	
R10	22meg		554002-226	
R11	3.3meg		554001-335	
R12	3.3meg		554001-335	
R13	6800Ω		554002-682	
R14	33K		554002-333	
R15	10meg		554002-106	
R16	47K		554002-473	
R17	2.2meg		554001-225	
R18	39K		554001-393	
R19	10K		554002-103	

ITEM No.	RATING OHMS	RATING WATT	Stromberg-Carlson PART No.	NOTES
R20	100K		554002-104	
R21	1meg		554002-105	
R22	1meg		554002-105	
R23	68Ω		554002-680	
R24	1000Ω		554002-102	
R25	3.3meg		554002-335	
R26	15Ω		554001-150	
R27	270Ω		554002-271	
R28	22Ω		554002-220	
R29	18ΩCold		149559-000	
R30	270Ω		554002-271	
R31	3300Ω		554002-332	
R32	15Ω		554001-150	

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO PRI.	TURNS RATIO SEC.	REPLACEMENT DATA Stromberg-Carlson PART No.	Holldorson PART No.	Merit PART No.	Rom PART No.	Stoncor PART No.	Thordorson PART No.	Triod PART No.	NOTES
T1	9 :	1	161000-010							
		SEC.2								
		1								

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	TURNS RATIO PRI.1	TURNS RATIO SEC.	REPLACEMENT DATA Stromberg-Carlson PART No.	Holldorson PART No.	Merit PART No.	Rom PART No.	Stoncor PART No.	Thordorson PART No.	Triod PART No.	NOTES
T2	3-4Ω CT		161000-020							
	PRI: 2									
	3-4Ω CT	:1								

SPEAKER

ITEM No.	TYPE SIZE	TYPE FIELD	TYPE V. C. IMP.	REPLACEMENT DATA Stromberg-Carlson PART No.	REPLACEMENT DATA QUAM PART No.	NOTES
SP1	6" x 9"	PM	3-4Ω	155000-001	69A2	

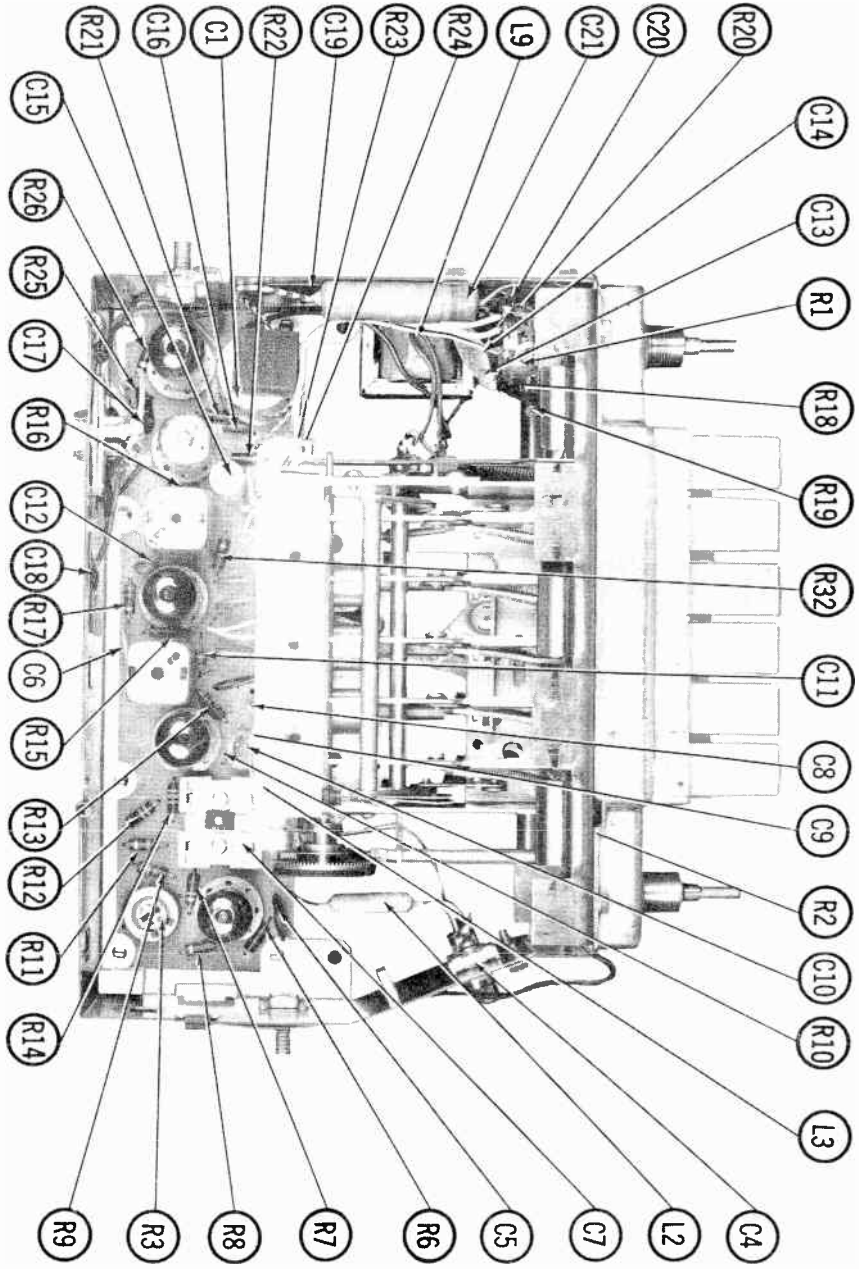
COILS (RF-IF)

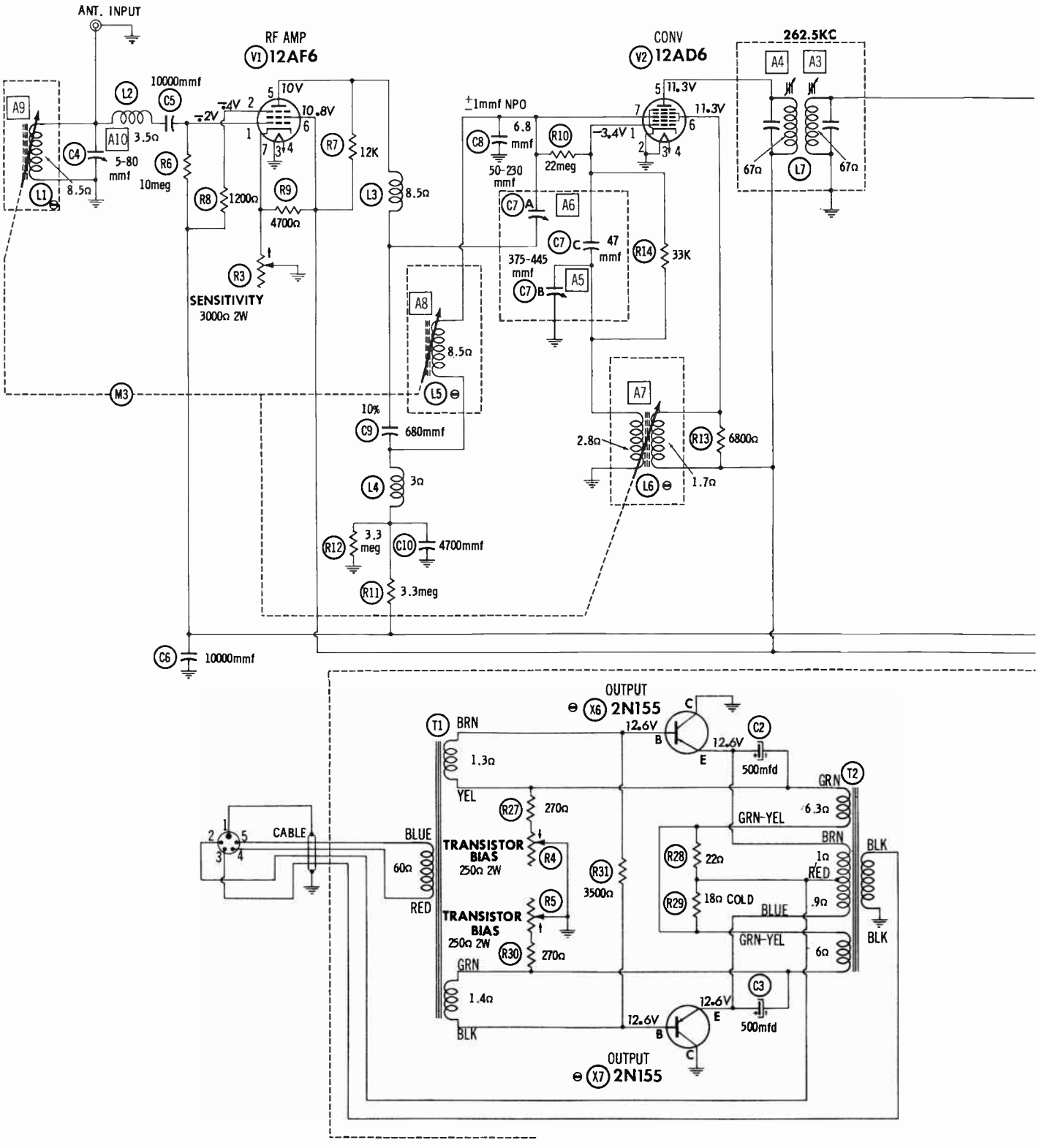
ITEM No.	USE	REPLACEMENT DATA Stromberg-Carlson PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Rom PART No.	NOTES
L1	Ant. Coil						Note 1
L2	Ant. Coil	114000-002	19-3036	TV-180	6176	VP-1	36 Microhenries
L3	RF Choke	114000-004	19-3160	TV-196	6120	VP-5	166 Microhenries
L4	RF Choke	114000-003					29 Microhenries
L5	RF Coil						Note 1
L6	Osc. Coil						Note 1
L7	Input IF	114000-020		BC-344*			
L8	Output IF	114000-030		BC-346*	13-PH6*		

Note 1 Part of tuner M3

* Drill hole in printed circuit for bottom slug adjustment.

CHASSIS— TOP VIEW



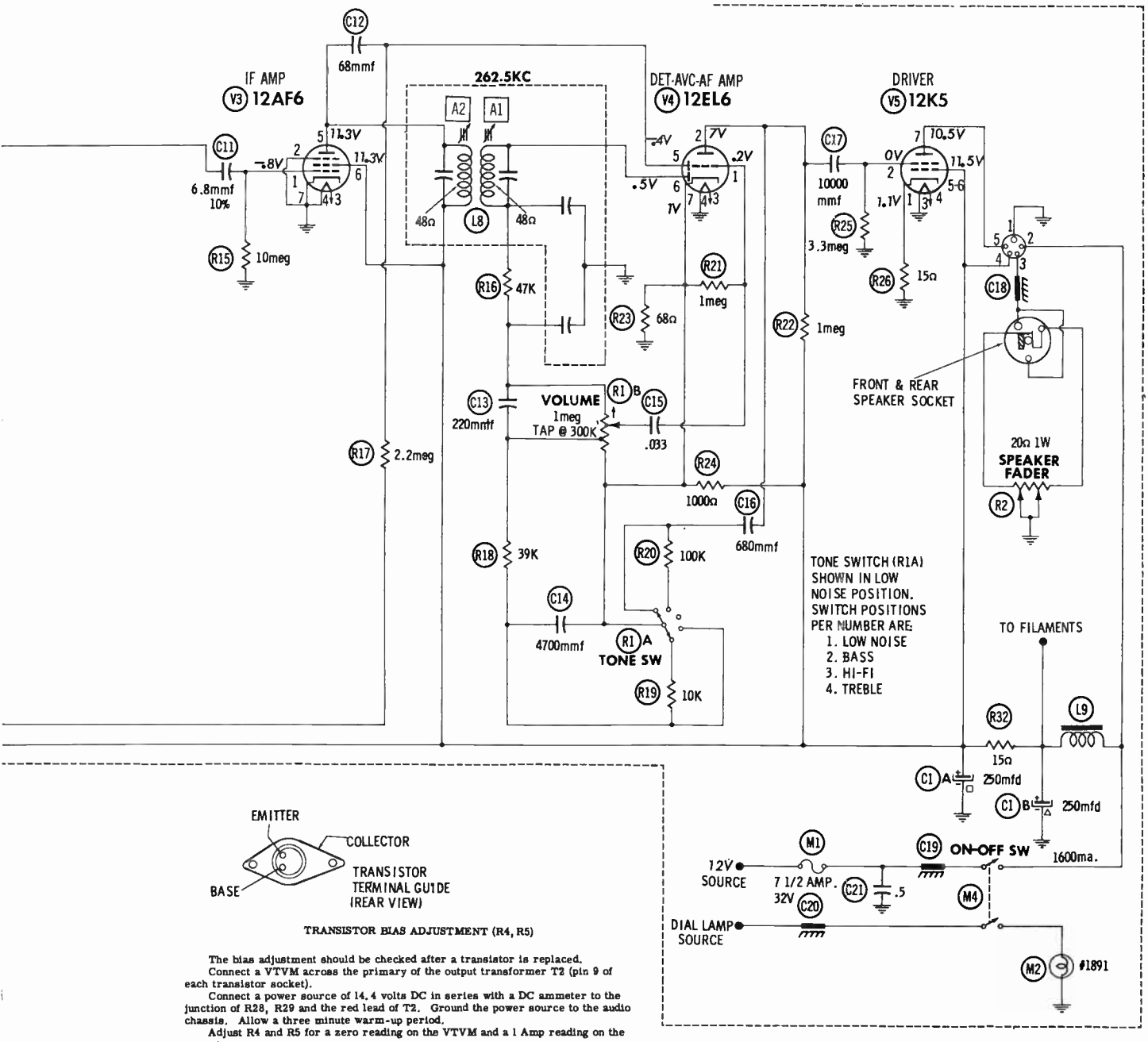


Θ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)

A PHOTOFACT STANDARD NOTATION SCHEMATIC
Howard W. Sams & Co., Inc. 1958



TRANSISTOR BIAS ADJUSTMENT (R4, R5)

The bias adjustment should be checked after a transistor is replaced.

Connect a VTVM across the primary of the output transformer T2 (pin 9 of each transistor socket).

Connect a power source of 14.4 volts DC in series with a DC ammeter to the junction of R28, R29 and the red lead of T2. Ground the power source to the audio chassis. Allow a three minute warm-up period.

Adjust R4 and R5 for a zero reading on the VTVM and a 1 Amp reading on the ammeter.

If the VTVM will not indicate zero volts with 1 Amp of current, the transistor associated with the fully clockwise control is weak. If the ammeter will not indicate 1 Amp, both transistors are weak.

1. DC voltage measurements taken with vacuum tube voltmeter
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes posssible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12AF6	16meg	6meg	0Ω	1.5Ω	†12K	†15Ω	270Ω		
V2	12AD6	33K	0Ω	0Ω	1.5Ω	†82Ω	†17Ω	22meg		
V3	12AF6	10meg	0Ω	1.5Ω	0Ω	†63Ω	†15Ω	0Ω		
V4	12EL6	1meg	†1meg	1.5Ω	0Ω	9meg	550K	68Ω		
V5	12K5	15Ω	3.3meg	0Ω	1.5Ω	†15Ω	†15Ω	†75Ω		

TRANSISTOR CIRCUIT RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE

† MEASURED FROM JUNCTION OF L9 AND ON-OFF SWITCH

PARTS LIST AND DESCRIPTIONS (Continued)

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA						
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000 ∿)	Stromberg-Carlson PART No.	Holldorson PART No.	Merit PART No.	Rom PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
L9	1.5A	.7Ω	.008HY	161000-001						

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			Stromberg-Carlson PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	7AG	7½A 32V		128000-001	30707.5 (7AG 7½A 32V)	155009	SFE7½ (7½A 32V)	HDH

MISCELLANEOUS

ITEM No.	PART NAME	Stromberg-Carlson PART No.	NOTES
M2	Dial Lamp	137000-002	#1891
M3	Tuner	164000-003	Tuner Ass'y.
M4	Switch	171000-168	DPST, On-Off

CABINETS & CABINET PARTS

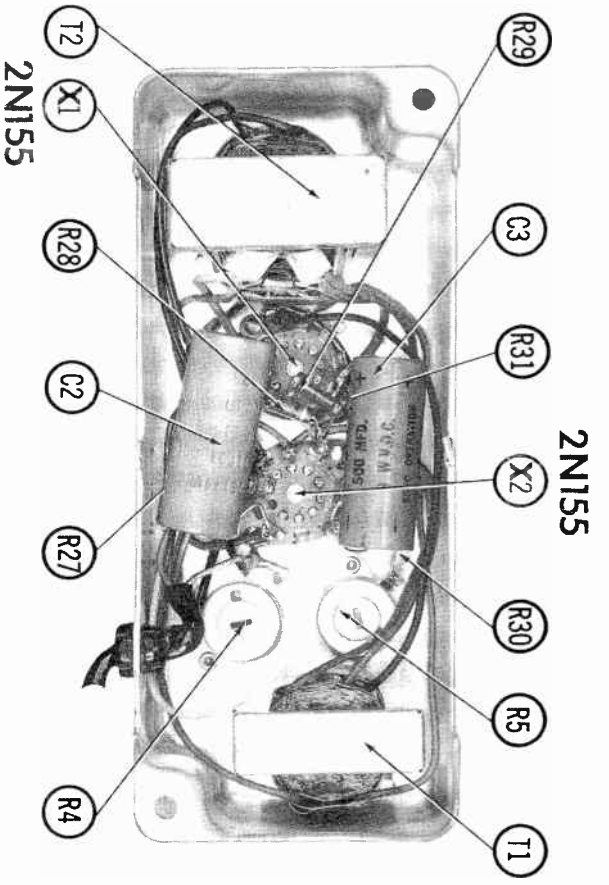
(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

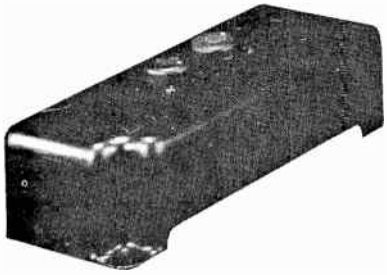
NAME	PART NO.	DESCRIPTION
Pushbutton	107000-001	Left side (Off), Gray
Pushbutton	107000-005	Right side, Gray
Pushbutton	107000-009	4 Used
Pushbutton	107000-002	Left side (Off), White
Pushbutton	107000-006	Right side, White
Pushbutton	107000-010	4 Used
Dial	122000-001	

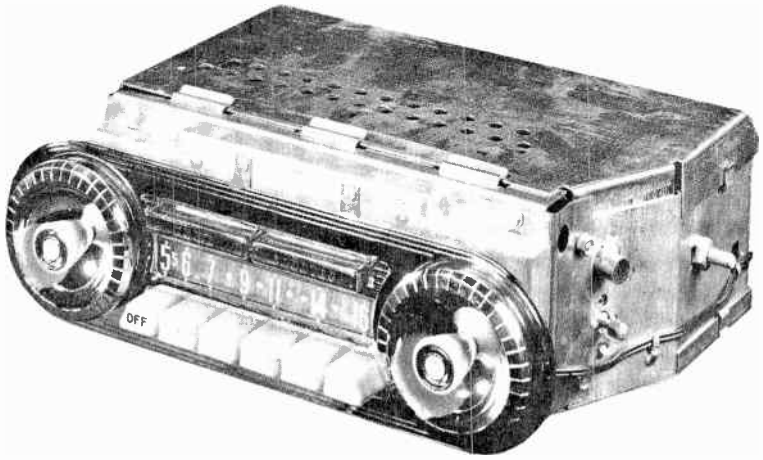
WIRING DATA

General-use Unshielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors
Shielded Hook-up Wire ..... Use BELDEN No. 8885
Bonding Strap ..... Use BELDEN No. 8661

POWER SUPPLY - BOT. VIEW







TRADE NAME	Edsel Model 87SE (For 1958 Edsel Automobiles)
MANUFACTURER	Stromberg-Carlson National Service Dept., 1400N. Goodman St., Rochester 3, N.Y.
TYPE SET	Battery Operated Custom Built AM Automobile Receiver with Transistorized Output
TUBES (Seven)	Types 12AD6 RF Amplifier, 12AD6 Converter, 12AF6 1st IF Amplifier, 12AF6 2nd IF Amplifier, 12EL6 Det.-AVC-AF Amp., 12K5 Driver, 12AL8 Relay Control.
POWER SUPPLY	12Volt Storage Battery RATING 2Amp. @12.6 volts DC
TUNING RANGE—BROADCAST	540KC-1600KC

EDSEL
MODEL 87SE

TRANSISTOR BIAS ADJUSTMENT (R5 & R6)

The bias adjustment should be checked after a transistor is replaced.
Connect a VTVM across the primary of the output transformer T2 (pin 9 of each transistor socket).
Connect a power source of 14.4 volts DC in series with a DC ammeter to the junction of R35, R37 and allow a three minute warm-up period.
Adjust R5 and R6 for a zero reading on the VTVM and a 1 Amp. reading on the ammeter.
If the VTVM will not indicate zero volts with 1 Amp. of current, the transistor associated with the fully clockwise control is weak. If the ammeter will not indicate 1 Amp., both transistors are weak.

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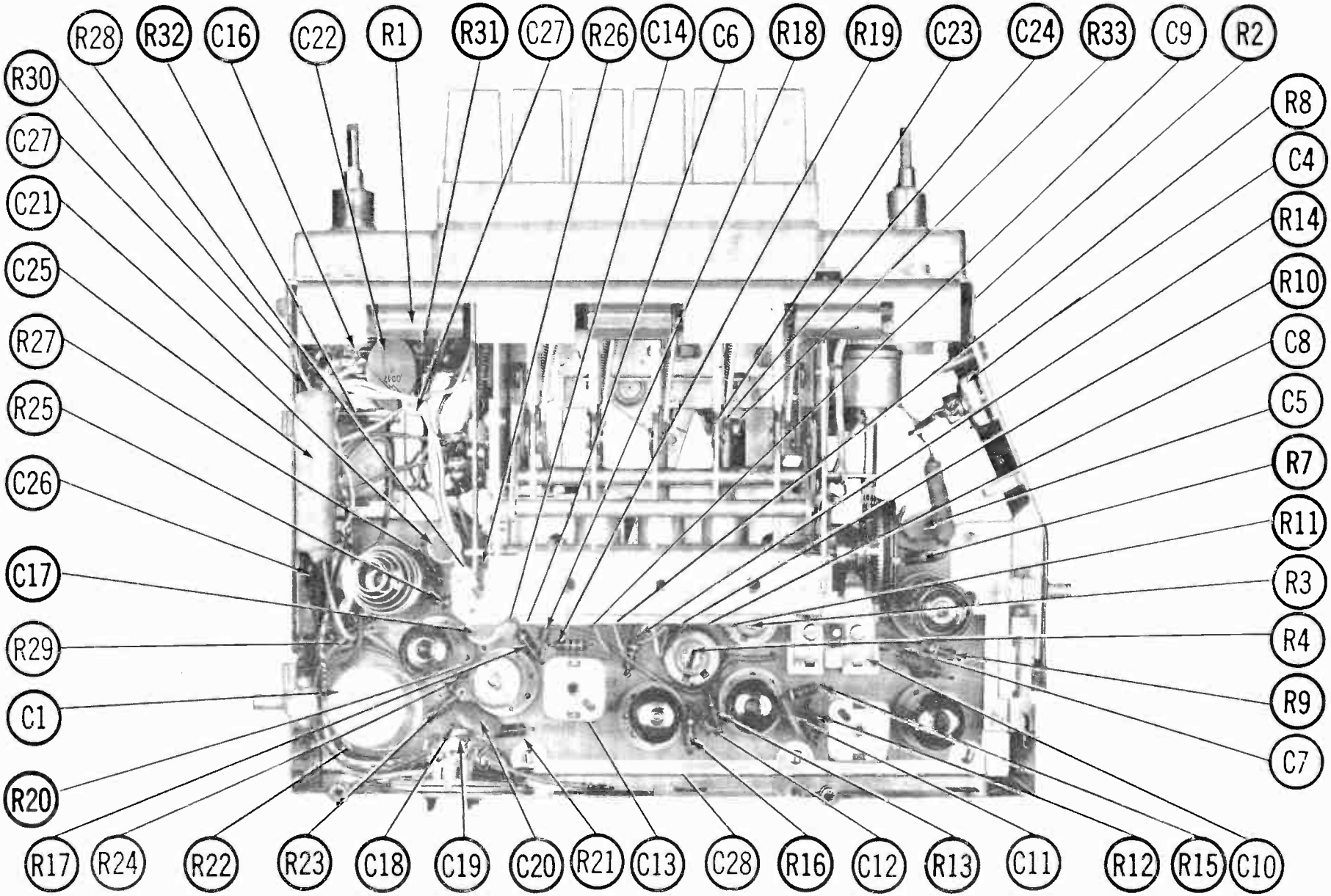
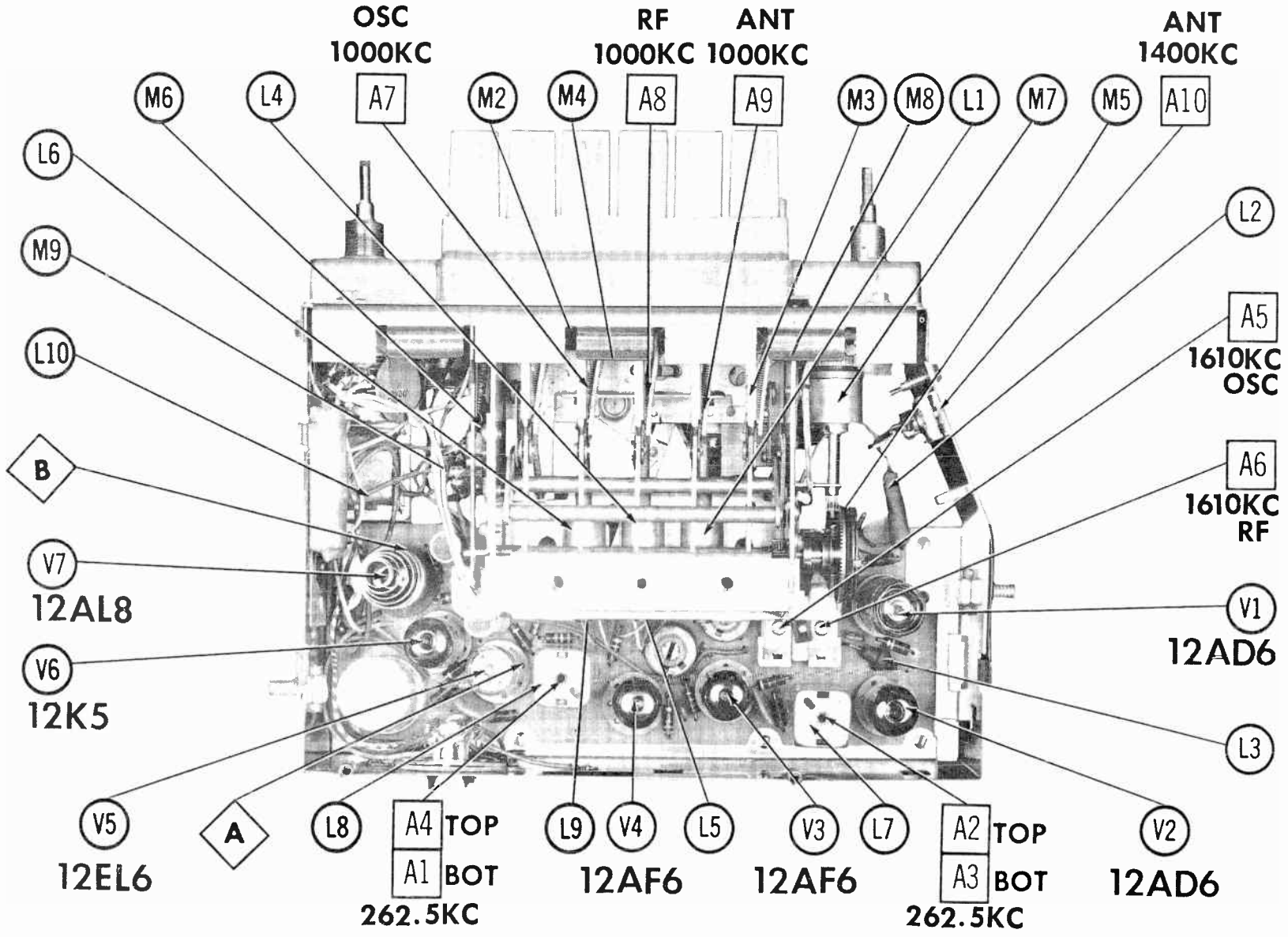
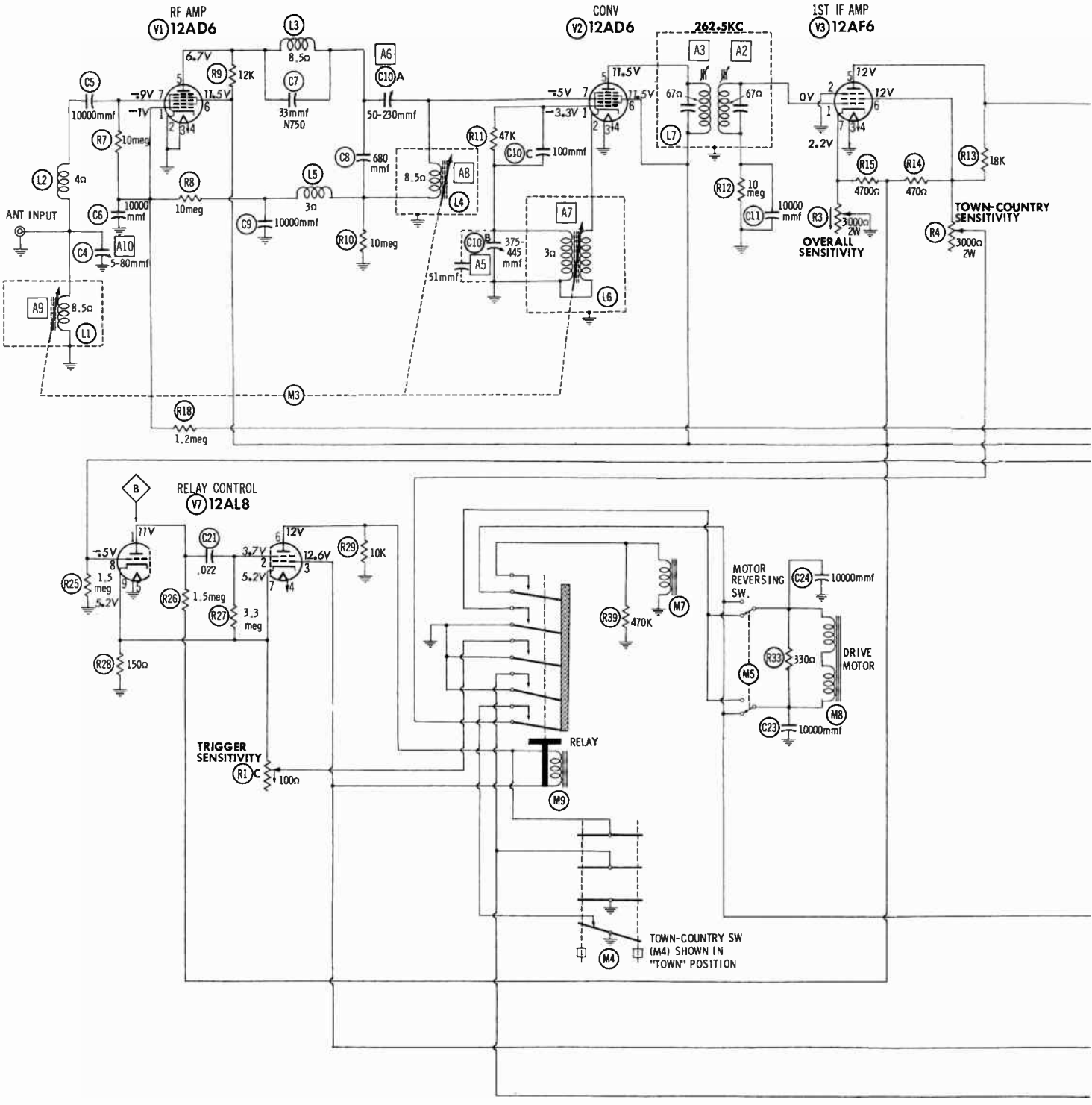


CHASSIS TOP VIEW—RESISTOR & CAPACITOR IDENTIFICATION



CHASSIS TOP VIEW--ALIGN, INDUCTOR, TUBE & MISC IDENT



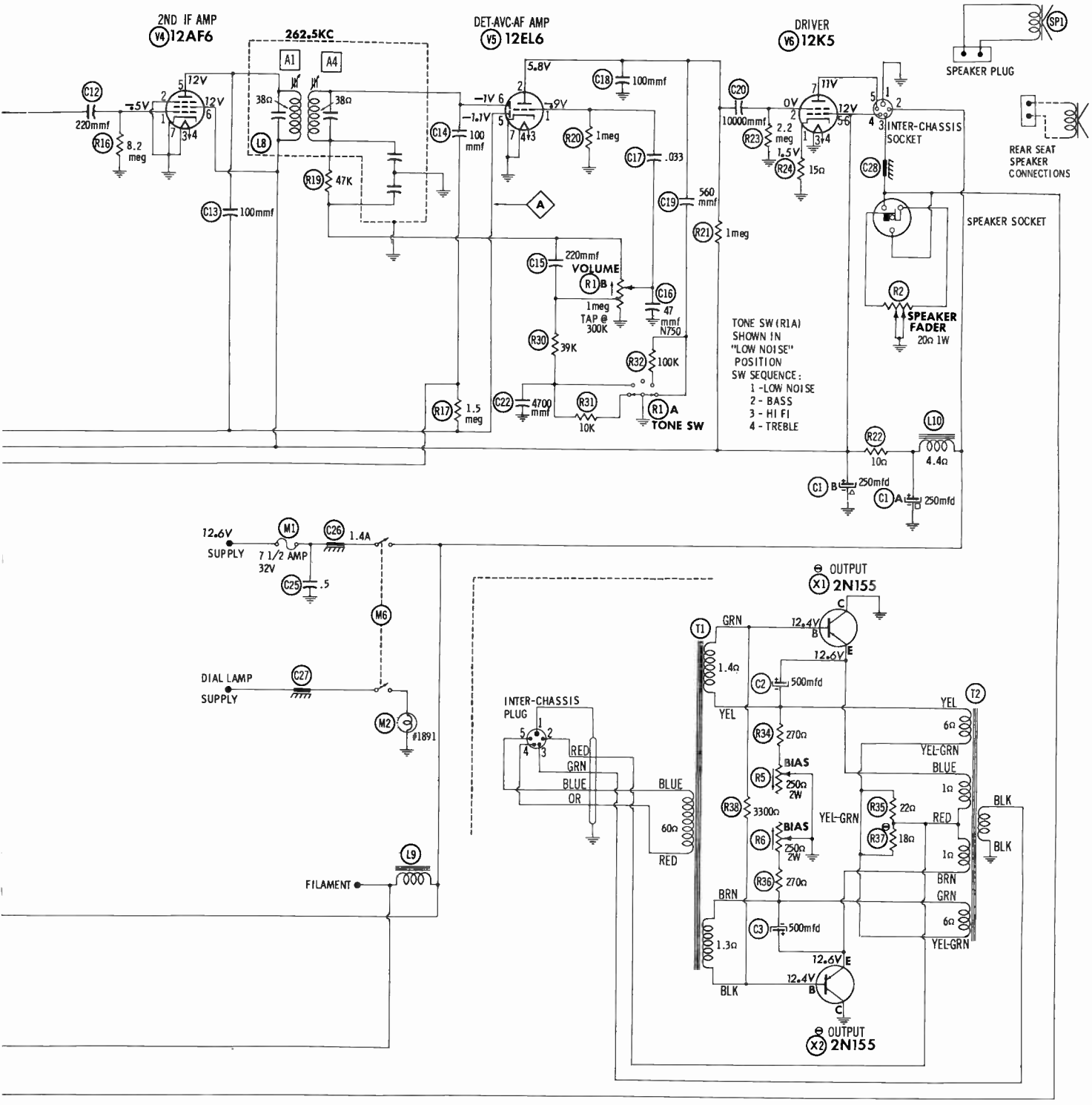
RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12AD6	4meg	0Ω	0Ω	1Ω	†12K	†10Ω	14meg		
V2	12AD6	47K	1Ω	0Ω	1Ω	†76Ω	†10Ω	7meg		
V3	12AF6	10meg	0Ω	0Ω	1Ω	†18K	†480Ω	870Ω		
V4	12AF6	8.2meg	0Ω	0Ω	1Ω	†48Ω	†10Ω	0Ω		
V5	12EL6	1meg	†1meg	1Ω	0Ω	3meg	1meg	0Ω		
V6	12K5	15Ω	2.2meg	0Ω	.1Ω	†10Ω	†10Ω	†70Ω		
V7	12AL8	†1.5meg	3.3meg	†1Ω	1Ω	0Ω	†70Ω	120Ω	1.5meg	120Ω

TRANSISTOR CIRCUIT RESISTANCE NOT GIVEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE

† MEASURED FROM POSITIVE TERMINAL OF C1A

A PHOTOFACT STANDARD NOTATION SCHEMATIC



1. DC voltage measurements taken with vacuum tube voltmeter.
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes posssible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

⊖ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING 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.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
1.	.1mfd	High side to pin 7 (grid) of 12AD6 (V2) Low side to chassis.	262.5KC (400% Mod)	High freq. end of band.	DC probe thru 22meg to point Ⓐ Common to chassis.	A1, A2, A3	Adjust for maximum deflection
2.	"	"	"	"	"	A4	Adjust for MINIMUM deflection.
3.	Fig. 1	Thru dummy to Ant. receptacle.	1610KC	"	Output meter Across Voice Coil	A5, A6	Adjust for maximum output.
	Step 4 is not necessary unless tuner has been tampered with or associated components have been replaced. If necessary, remove escutcheon, dial background, and lamp socket to expose tuning cores. Repeat Step 3.						
4.	Fig. 1	Thru dummy to Ant. receptacle.	1000KC	Tuner carriage ½" from High Freq. end stop.	Output meter Across Voice Coil.	A7, A8, A9	Adjust for maximum output Repeat Steps 3 & 4.
5.	"	"	1400KC	1400KC	"	A10	Adjust for maximum output.
	The following steps should not be attempted unless accurate sensitive equipment is available and then only after exhausting the possibility of component failure.						
6.	Fig. 1	Thru dummy to Ant. receptacle .	1400KC			R3	Adjust generator output for 4.5 microvolts. Adjust R3 for 1 watt output.
7.	Fig. 1	Thru dummy to Ant. receptacle.	1400KC	1400KC	AC probe to point Ⓑ Common to chassis.	R1C	Adjust generator output for 30 microvolts. Turn volume (R1B) to MINIMUM. Short arm of Trigger Sensitivity (R1C) to chassis. Adjust R1C for maximum deflection. Remove short.
8.	"	"	1400KC	"	Output meter Across Voice Coil.	R4	Adjust generator output for 70 microvolts. Turn volume (R1B) to maximum. Short arm of R4 to chassis. Adjust R4 for 1 watt output. Remove short.
9.	"	"	1400KC				Adjust generator output for 20 microvolts. Depress "Country" bar. If seeker does not stop on signal, repeat Steps 7 & 9.
10.	"	"	1400KC				Adjust generator output for 250-300 microvolts. Depress "Town" bar If seeker does not stop on signal, repeat Steps 8& 10

PUSHBUTTON ADJUSTMENT

1. Pull pushbutton out.
2. Tune manually to desired station.
3. Press pushbutton in firmly.
4. Repeat for remaining pushbuttons.

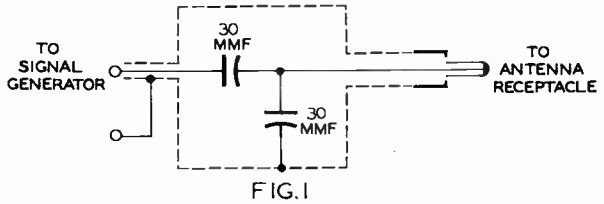


FIG. 1

PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier	12AD6	
V2	Converter	12AD6	
V3	1st IF Amplifier	12AF6	

ITEM No.	USE	TYPE	NOTES
V4	2nd IF Amplifier	12AF6	
V5	Det-AVC-AF Amp	12EL6	
V6	Driver	12K5	
V7	Relay Control	12AL8	

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA				NOTES
			CBS PART No.	RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	2N155	Output	2N155	2N301		2N242	Note 1
X2	2N155	Output	2N155	2N301		2N242	Note 1

Note. 1. Alternate type 2N257

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	Stromberg-Carlson PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	■250	16	111001-003	AFH2-02-05		WP200.7			R2564*
B	▲250	16							
C2	500	3	111001-004	PRS6V500	BR500-6	TC605	TD-500-6	MTH-0650	TVA-1103
C3	500	3	111001-004	PRS6V500	BR500-6	TC605	TD-500-6	MTH-0650	TVA-1103

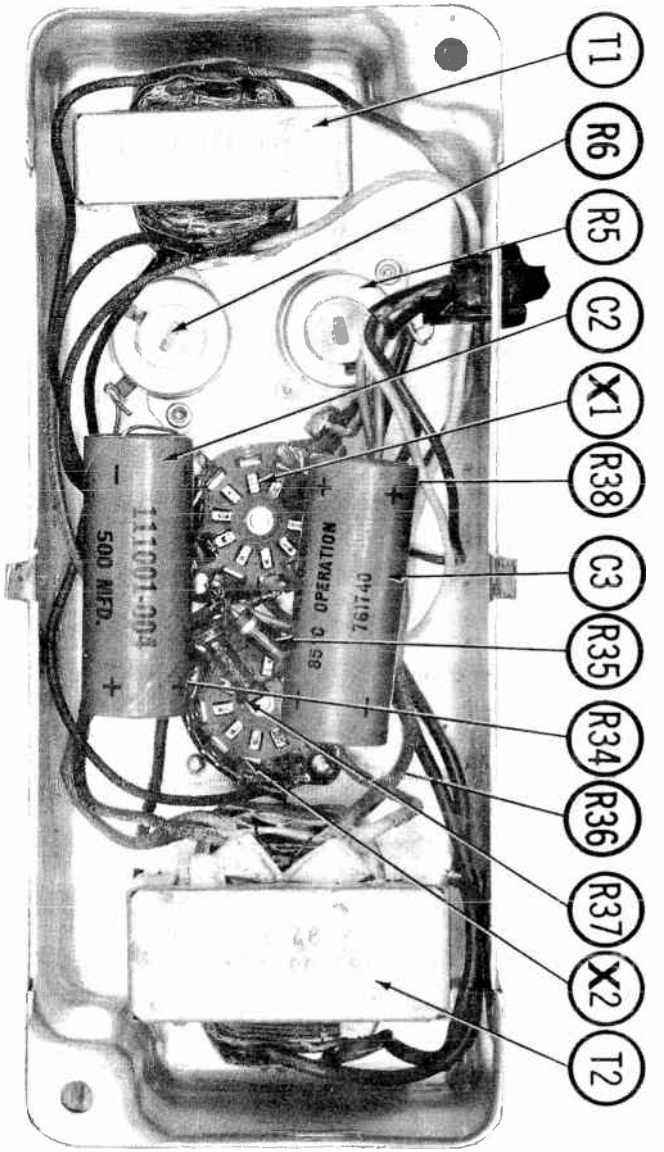
* Non Catalog Item

FIXED CAPACITORS

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

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT	Stromberg-Carlson PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
C4	5-80		110000-001						
C5	10000		110002-026	BPD-01	DD-103	BYA6S1	DC511	5HK-S1	
C6	10000		110919-000	BPD-01	DD-103	BYA6S1	DC511	5HK-S1	
C7	33		110002-051	N750-DI33	DTN-33	C10Q33U		5TCU-Q33	N750
C8	680		110915-000	1467-00068	D6-681	5W5T68	UC5368	1FM-368	
C9	10000		110002-026	BPD-01	DD-103	BYA6S1	DC511	5HK-S1	
C10A	50-230								
B	375-445		110000-010						
C	100								
C11	10000		110002-026	BPD-01	DD-103	BYA6S1	DC511	5HK-S1	
C12	220		110002-042	BPD-00022	DD-221	L10T22	UC-5322	5GA-T22	
C13	100		110002-040	BPD-0001	DD-101	L10T1	UC-531	5GA-T1	
C14	100		110002-040	BPD-0001	DD-101	L10T1	UC-531	5GA-T1	
C15	220		110921-000	BPD-00022	DD-221	L10T22	UC-5322	5GA-T22	
C16	47		110917-000	N750-DI47	DTN-47	C10Q47U	NT-5447	5TCU-Q47	N750
C17	.033	200	110003-002	P288N-033		BC2S33J		2SE-S33	
C18	100		110002-040	BPD-0001	DD-101	L10T1	UC-531	5GA-T1	
C19	560		110002-056	BPD-00056	DD-561	L10T56	UC-5356	5GA-T56	
C20	10000		110919-000	BPD-01	DD-103	BYA6S1	DC511	5HK-S1	
C21	.022	200	110003-001	P288N-022	DD-203	BC2S22J		2SE-S22	
C22	4700		110920-000	BPD-0047	DD-472	BYA10D47	UC-5247	5HK-D47	
C23	10000		110672-000	BPD-01	DD-103	BYA6S1	DC511	5HK-S1	
C24	10000		110672-000	BPD-01	DD-103	BYA6S1	DC511	5HK-S1	
C25	.5	50	110628-000	P288N-5		CUB2P5	GEM-205	2TM-P5	
C26									
C27									
C28									

POWER CHASSIS BOTTOM VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	Stromberg-Carlson PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1A	Switch		145000-002					Tone Switch
B	1meg	½						Volume, Tap @ 300K
C	100Ω	½						Trigger Sensitivity
R2	20Ω	1(WW)	145000-010					Speaker Fader
R3	3000Ω	2(WW)	145000-030					Sensitivity (Overall)
R4	3000Ω	2(WW)	145000-030					Sensitivity (Town-Country)
R5	250Ω	2(WW)	145000-020					Transistor Bias
R6	250Ω	2(WW)	145000-020					Transistor Bias

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING		Stromberg-Carlson PART No.	NOTES
	OHMS	WATT		
R7	10meg		554002-106	
R8	10meg		554001-106	
R9	12K		554001-123	
R10	10meg		554001-106	
R11	47K		554002-473	
R12	10meg		554002-106	
R13	18K		554001-183	
R14	470Ω		554002-471	
R15	4700Ω		554002-472	
R16	8.2meg		554001-825	
R17	1.5meg		554001-155	
R18	1.2meg		554001-125	
R19	47K		554002-473	
R20	1meg		554002-105	
R21	1meg		554002-105	
R22	10Ω		554001-100	
R23	2.2meg		554002-225	

ITEM No.	RATING		Stromberg-Carlson PART No.	NOTES
	OHMS	WATT		
R24	15Ω		554001-150	
R25	1.5meg		554001-155	
R26	1.5meg		554001-155	
R27	3.3meg		554002-335	
R28	150Ω		554002-151	
R29	10K		554002-103	
R30	39K		554001-393	
R31	10K		554001-103	
R32	100K		554002-104	
R33	330Ω		554002-331	
R34	370Ω		554002-271	
R35	22Ω		554002-220	
R36	270Ω		554002-271	
R37	18Ω		149559-000	Note 1.
R38	3300Ω		554002-332	
R39	470K		554002-471	

Note. 1. Temperature compensating unit.

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA							NOTES
	PRI.	SEC.	Stromberg-Carlson PART No.	Holldorson PART No.	Merit PART No.	Rom PART No.	Stancor PART No.	Thordorson PART No.	Triod PART No.	
T1	9:	1	161000-010							
		SEC. 2								
		1								

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE			REPLACEMENT DATA							NOTES
	PRI.	SEC.		Stromberg-Carlson PART No.	Holldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordorson PART No.	Triod PART No.	
	1	1	2								
T2	35.8Ω	35.8Ω	3.4Ω	161000-020							
	TURNS RATIO										
	3.4	3.4	:1								

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	Stromberg-Carlson PART No.	QUAM PART No.	
SP1	6" x 9"	PM	3-4Ω	155000-001	69A2	

PARTS LIST AND DESCRIPTIONS (Continued)

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		Stromberg-Carlson PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Rom PART No.	
L1	Ant. Coil						Note. 1
L2	Ant.Coil	114000-002	19-3036	TV-180	6176	VP-1	36 Microhenries
L3	RF Choke	114000-004	193160	TV-196	6120	VP-5	166 Microhenries
L4	Mixer Cnil						Note 1.
L5	RF Choke	114000-003					29 Microhenries.
L6	Osc. Cnil						Note. 1
L7	Input IF	114000-020		BC-344 *	13-PH1 *		
L8	Output IF	114000-040		BC-346 *	13-PH6 *		
L9	Fil. Chnke	114000-001					

Nnte. Part of M3

*Drill hole in printed board for bottom slug adjustment

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA						
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000 ~)	Stromberg-Carlson PART No.	Holldorson PART No.	Merit PART No.	Rom PART No.	Stancor PART No.	Thordorson PART No.	Triod PART No.
L10	.068A	4.4Ω	.09HY	161000-002						

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			Stromberg-Carlson PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	SFE	7½A 32V		128000-001	30707.5 (7½A 32V)	155009	SFE 7½ (7½A 32V)	HDH

MISCELLANEOUS

ITEM No.	PART NAME	Stromberg-Carlson PART No.	NOTES
M2	Lamp	137000-002	#1891
M3	Tuner Coil Ass'y	171000-162	
M4	Switch Ass'y	158000-020	Town & Country
M5	Switch	171000-169	Motor Reversing
M6	Switch	171000-168	On-Off (DPDT)
M7	Clutch Ass'y	171000-150	
M8	Drive Mntor	171000-172	
M9	Relay	172000-010	

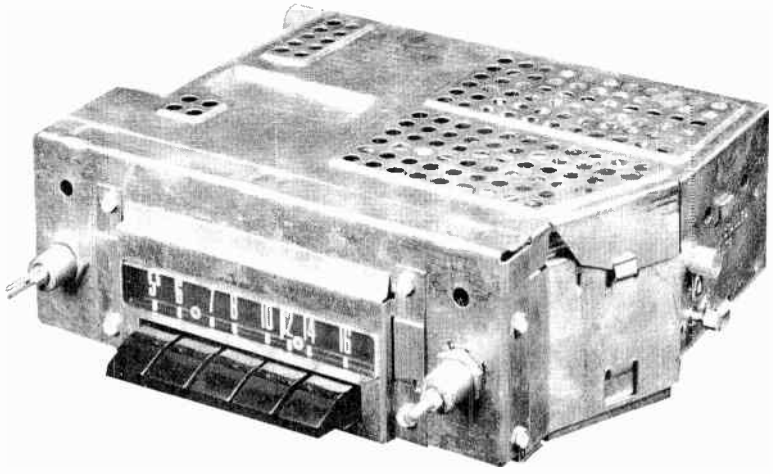
CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

NAME	PART NO.	DESCRIPTION
Push Button	171000-013	Town
Push Button	171000-014	Country
Push Button	107000-001	Left Hand (Off) Gray
Push Button	107000-005	Right Hand, Gray
Push Button	107000-009	Gray (4 used)
Push Button	107000-002	Left Hand (Off) White
Push Button	107000-006	Right Hand, White
Push Button	107000-010	White (4 used)
Dial	122000-002	

WIRING DATA

General-use Unshielded Hook-up Wire .....Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors
Shielded Hook-up Wire .....Use BELDEN No. 8885
Bonding Strap .....Use BELDEN No. 8661



TRADE NAME	Ford Models 74BF (FEG-18805) For 1957 Ford Automobiles; 84BF (B8A-18805-B) For 1958 Ford Automobiles
MANUFACTURER	Bendix Radio, Div. of Bendix Aviation Corp. , Baltimore 4, Maryland
TYPE SET	Battery Operated Custom Built AM Automobile Receiver with Transistorized Output
TUBES (Four)	Types 12CX6 RF Amplifier, 12AD6 Converter, 12CN5 If Amplifier, 12J8 Det. -AVC-AF Amp.
POWER SUPPLY	12 Volt Storage Battery — RATING 1.4 Amp. @ 12.6 Volts DC
TUNING RANGE—BROADCAST	540-1600 KC

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING 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.
Set tone control to high.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.1 mfd	High side to pin 7 (grid) of 12AD6 (V2) Low side to B—	262.5KC (400~ Mod)	Hi Freq. End Stop	Across Voice Coil	A1, A2, A3, A4	Adjust for maximum output.
2.	Fig. 1.	Thru dummy to Ant. Receptacle	1605KC	"	"	A5, A6 A7	"
	Steps 3 and 4 are not necessary unless tuning cores or coils have been replaced or tuner tampered with. If necessary, back tuning cores out of coils but not out of coil forms.						
3	Fig. 1	Thru dummy to Ant. Receptacle	1605KC	High End Stop	Across Voice Coil	A5, A6 A7	Adjust for maximum output
4.	"	"	1000KC	Tuning carriage ½" from high freq. end stop	"	A8. A9 A10	Adjust for maximum output Repeat steps 3 and 4 until no further improvement can be obtained.
	With radio installed in car and antenna fully extended, tune in a weak station near 1600KC and adjust A7 for maximum output.						

PUSHBUTTON ADJUSTMENT

1. Tune manually to desired station
2. Pull out pushbutton. Press pushbutton in firmly.
3. Repeat for remaining pushbuttons.

TRANSISTOR BIAS ADJUSTMENT (R2)

Connect an accurate low range DC voltmeter across R15. Adjust R2 for a meter reading of .42 volts. This is equivalent to an emitter current of 420MA, the maximum safe value.

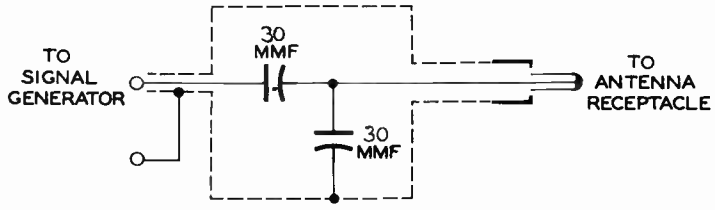


FIG. 1

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H356

PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier	12CX6	
V2	Converter	12AD6	
V3	IF Amplifier	12CN5	
V4	Det. -AVC-AF Amp.	12J8	Note 1

Note 1. Type 12EM6 used in Model 84BF

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA				NOTES
			CBS PART No.	RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	2N155	Output	2N155	2N301		2N242	Note 1.

Note 1. Type 2N235B used in model 84BF

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	BENDIX PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	■250	16	220353-4			PWP200.6			R2564*
B	▲250	16							
C2	500	3	2090031-2 ①	PRS6V500	BR500-6	TC605	TD-500-6	MTH-0650	TVA-1103

①Not uses in model 84BF
* Non-Catalog Item

FIXED CAPACITORS

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

ITEM No.	RATING		REPLACEMENT DATA							NOTES
	CAP.	VOLT	BENDIX PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	
C3	4-75		219083-1							
C4	150		220350-501	NP0-DI150	DD-151	L10T15	ED-150	ZT-5315	5TCC-T15	10%
C5	82		220332-20		TCZ-82	L10Q82	ED-82			10% ①
C6	33		220332-19	N750-DI33	TCN-33	C10Q33U	TC7-33		5TCU-Q33	N750 10%
C7	.1	100	2090059A-104 M	P288N-1		CUB2P1		GEM-201	2TM-P1	
C8A	120-450									
B	370-445		219092-2							
C	100									
C9	51		220332-22							N1500 10%
C10	.1	100	2090059A-104M	P288N-1		CUB2P1		GEM-201	2TM-P1	
C11	1. 2		220212-13							②
C12	270		220348-508	NP0-SI270	D6-271	L10T27	ED-270		MS-327	10%
C13	100		220332-14	N750-DI100	TCN-100	C10T1U	TC7-100	NT-531	5TCU-T1	N750①
C14	.003	100	2090059A-302K					GEM-1623		10%
C15	.0082	100	2090059A-822K					GEM-16282		10%③
C16	185		220267-14							
C17	185		220267-14							
C18	300		220267-12							
C19	200		220267-9							

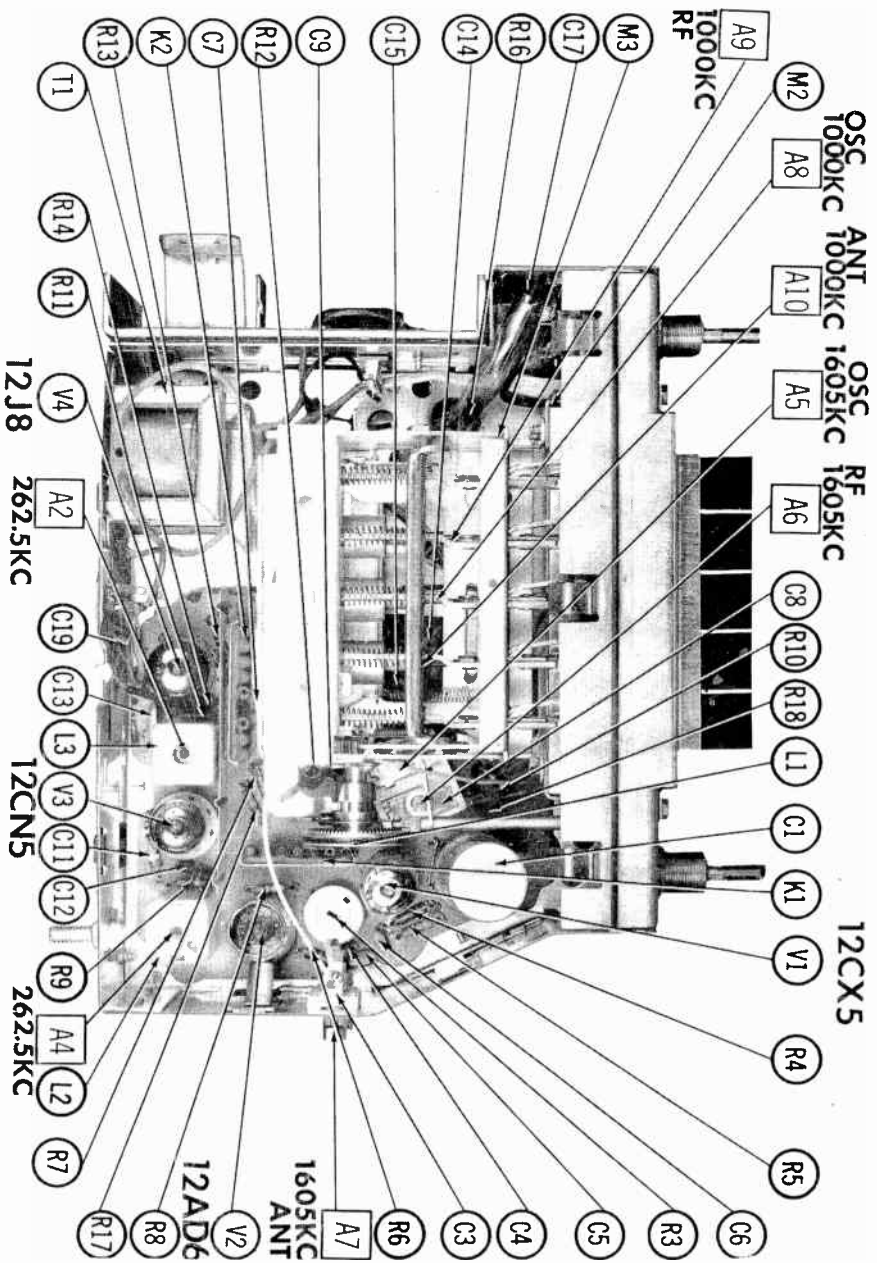
①Not used in Model 84BF
②In some versions this component consist of 1. 5 mmf track on printed circuit board.
③Model 84BF has .0033mfd, in this application (Part # 2090059A-332K)

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	BENDIX PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1A	2meg	½	2090035-2				UE3769S ■	Tone Volume, Tap②750K
B	1. 5meg	½						
C	Switch							
R2	600Ω	2	219555-14				FL-600S	Transistor Bias ①
R3	1000Ω	2	219682-2					Sensitivity (150Ω Stop)②

①Part #2090573-2 (0-15Ω) used in Model 84BF
②Part # 219682-5 (0-600Ω) used in Model 84BF
■ "STA-LOC" Equivalent: FR26L, RU55T754, 0S937A, IS1437, US-42

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING OHMS	RATING WATT	BENDIX PART No.	NOTES
R4	1meg		220604B-105	Note 1
R5	330K		220604B-334	Note 2
R6	22meg		220604B-226	
R7	100Ω		220604B-101	
R8	33K		220604B-333	
R9	5.6meg		220603B-565	
R10	10meg		220604B-106	
R11	2.2meg		220604B-225	Note 3

ITEM No.	RATING OHMS	RATING WATT	BENDIX PART No.	NOTES
R12	68K		220603B-683	Note4
R13	10Ω		220603B-100	Note 5
R14	330Ω		220603B-331	Note 5
R15	1Ω		2090438-5	Note 6
R16			220629-4	Note 7
R17	1000Ω		220604B-102	Note 8
R18	1Ω		2090438-6	Note 9

Note 1. 220K Used in Model 84BF (Part #220604B-224)
Note 2.680K Used in Model 84BF (Part #220604B-684)
Note 3. 1.5meg Used in Model 84BF (Part #220604B-155)
Note 4. Some 74BF versions use 47K in this application (Part #220603B-473). Model 84BF use 82K (Part #220603B-823)
Note 5. Not used in model 84BF
Note 6. Cupron wire.Part #2090438-8 used in Model 84BF
Note 7. Temperature compensating resistor 28Ω@25°C.Part # 2090574-2 (150Ω@25°C) used in Model 84BF
Note 8. Not used in some versions.
Note 9. Cupron wire. Part #2090438-9 used in Model 84BF.

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO PRI.	TURNS RATIO SEC.	REPLACEMENT DATA BENDIX PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordorson PART No.	Triod PART No.	NOTES
T1	15:	1	2090037-1①						A-3X ②	①Part #2090576-2 used in Model 84BF ② Drill new mounting hole

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE PRI.	IMPEDANCE SEC.	REPLACEMENT DATA BENDIX PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordorson PART No.	Triod PART No.	NOTES
T2	8Ω	3-4Ω	2090038-1							Part#2090038-2 Used in Model 84BF

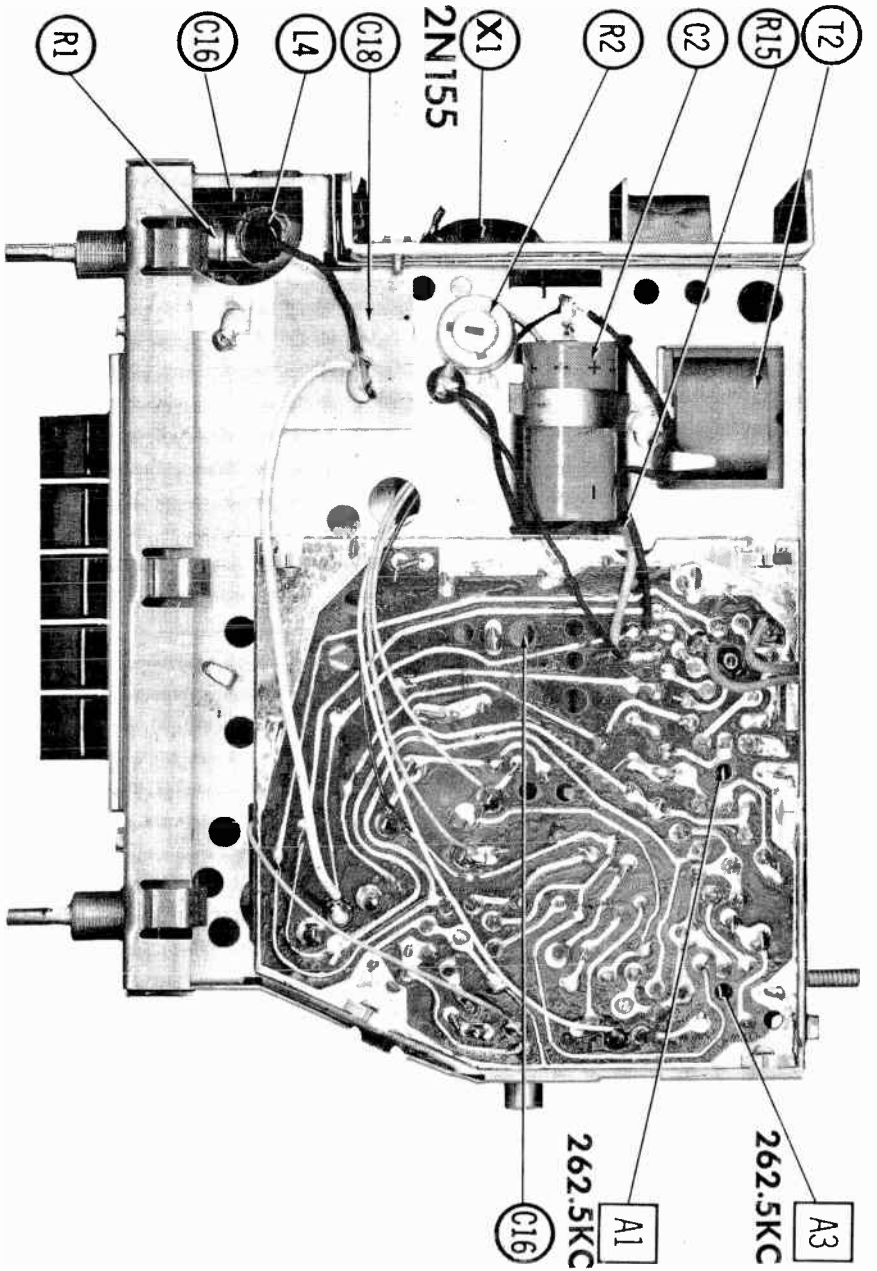
SPEAKER

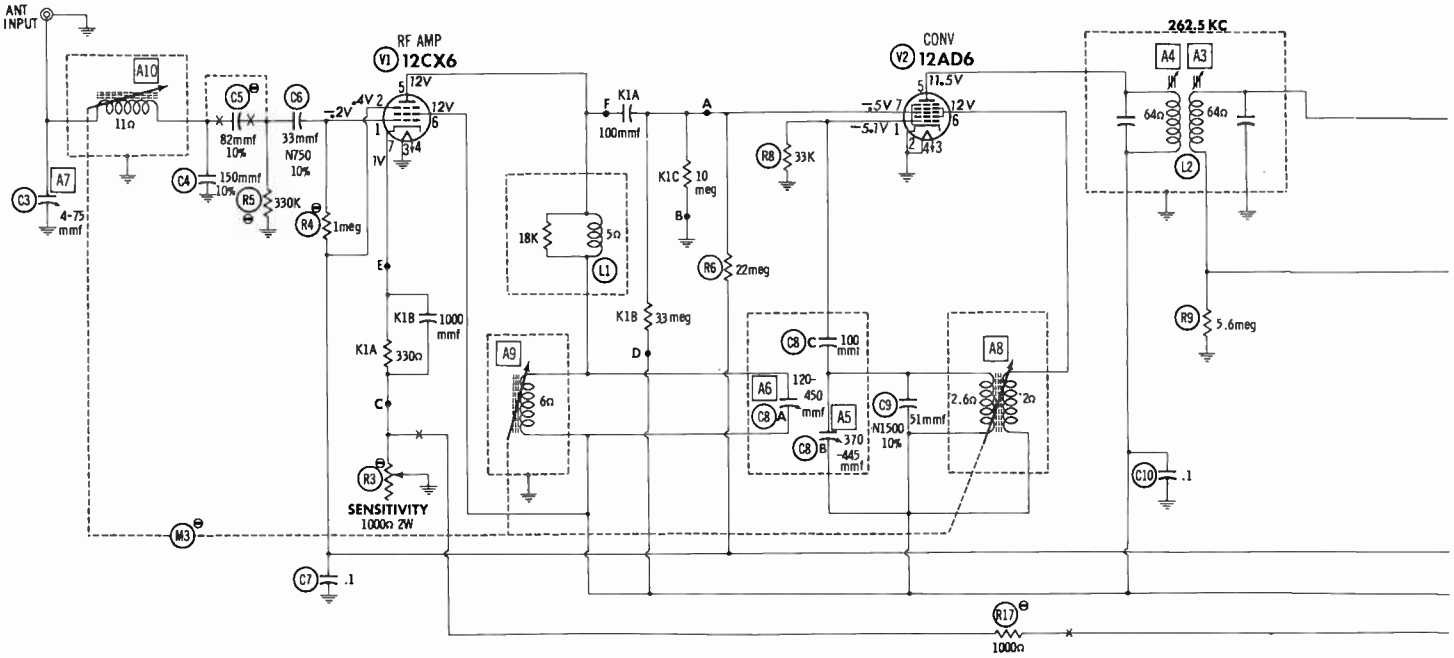
ITEM No.	TYPE SIZE	TYPE FIELD	TYPE V. C. IMP.	REPLACEMENT DATA BENDIX PART No.	REPLACEMENT DATA QUAM PART No.	NOTES
SP1		PM	3-4Ω	282634-3		

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA BENDIX PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Ram PART No.	NOTES
L1	RF Coil	2090088-1					50 Microhenries wound on 18K Resistor
L2	Input IF	2090239-2					
L3	Output IF	2090237-2					
L4	Hash Choke	216188-11					130 Microhenries

CHASSIS—BOTTOM VIEW

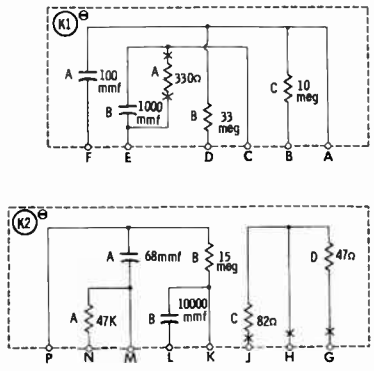




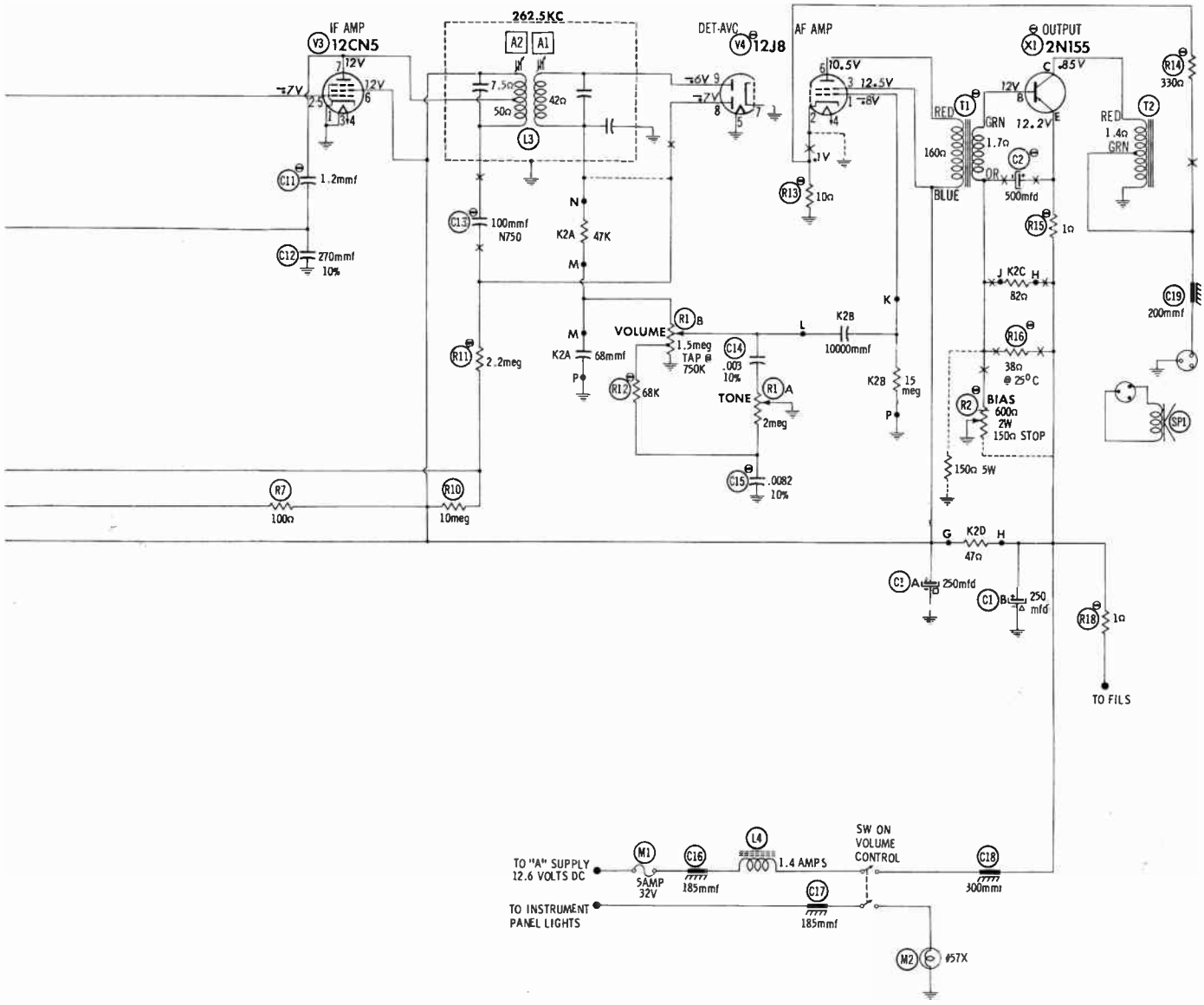
RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12CX6	8.5meg	7.5meg	0Ω	1.5Ω	†160Ω	†150Ω	350Ω		
V2	12AD6	33K	0Ω	1.5Ω	0Ω	†210Ω	†150Ω	7meg		
V3	12CN5	0Ω	5.6meg	0Ω	1.5Ω	5.6meg	†47Ω	†55Ω		
V4	12J8	15meg	10Ω	†47Ω	1.5Ω	0Ω	†205Ω	0Ω	10meg	770K

TRANSISTOR CIRCUIT RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE
† MEASURED FROM JUNCTION OF R18 AND C18



A PHOTOFACT STANDARD NOTATION SCHEMATIC



1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured at 1000 ohms per volt.
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

Θ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

PARTS LIST AND DESCRIPTIONS (Continued)

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	BENDIX PART No.	REPLACEMENT DATA
K1	RF Amplifier Cathode and Mixer Grid	100mmf, 1000mmf 10%, 33meg, 330Ω (Seperate Item in Model 84BF), 10meg,	2090401-1 ① 2090578-1 ②	Erie 707-04 ①
K2	Audio Network	10000mmf, 68mmf, 15meg, 47K, 82Ω (Not used in Model 84BF), 47Ω (Seperate Item in Model 84BF)	2090402-1 ① 2090579-1 ②	Erie 709-09 ①

① Used in Model 74BF
② Used in Model 84BF

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			BENDIX PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	1AG	5A 32V	AGA-5	221633-6	301005. (1AG 5A 32V)	155004	AGA5	HAF

MISCELLANEOUS

ITEM No.	PART NAME	BENDIX PART No.	NOTES
M2	Dial Lamp	57X	#57X
M3	Tuner	221470-3	(Complete) Model 74BF
	Tuner	221470-5	(Complete) Model 84BF
	Tuner Coil Ass'y	2090131-1	(RCC)
	Tuner Coil Ass'y	2090131-2	(OAK) Model 74BF
	Tuner Coil Ass'y	2090131-9	(GIC) Model 84BF
	Printed Circuit Board	2090510-1	Model 74BF
	Printed Circuit Board	2090710-1	Model 84BF

PARTS LIST AND DESCRIPTIONS (Continued)

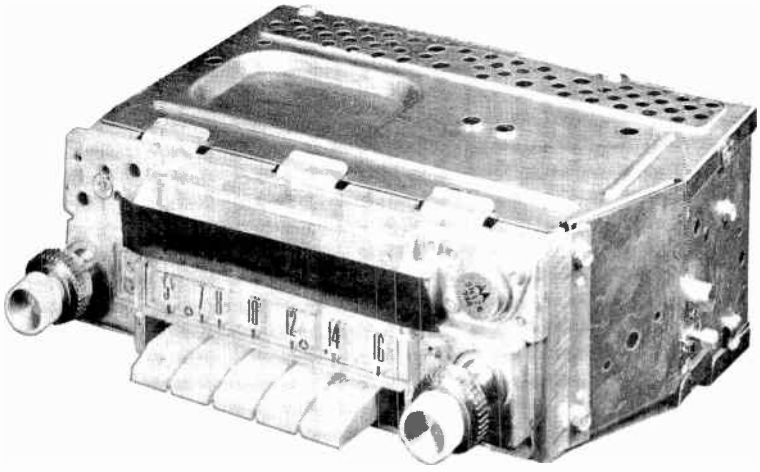
CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

NAME	PART NO.	DESCRIPTION
Bezel	2090366-1	Model 84BF
Bezel	2090008-1	Model 74BF
Knob	2090007-1	Tone Control (2 Used)
Knob	2090016-1	On-Off-Volume and Tuning
Dial Pointer	2090130-1	(RCC)
Dial Pointer	2090130-9	(GIC)
Pushbutton	686576-1	5Used. Model 74BF
Pushbutton	686576-2	5Used Model 84BF

WIRING DATA

General-use Unshielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors
Shielded Hook-up Wire ..... Use BELDEN No. 8885
Bonding Strap ..... Use BELDEN No. 8661



TRADE NAME	Ford Models 74MF (B7A-18805-A1) For 1957 Ford Automobiles; 84MF (B8A-18805-B) For 1958 Ford Automobiles
MANUFACTURER	Motorola Inc., 4545 W. Augusta Blvd., Chicago 51, Illinois
TYPE SET	Battery Operated Custom Built AM Automobile Receiver With Transistorized Output
TUBES (Four)	Types 12BL6 RF Amplifier, 12AD6 Converter, 12BL6 IF Amplifier, 12DL8 Det.-AVC- AF Amp.

POWER SUPPLY 12 Volt Storage Battery RATING 1.3 Amp. @ 12.6 Volts DC
TUNING RANGE—BROADCAST 540-1610KC

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING 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.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.1mfd	High side to pin 7 (grid) of 12AD6 (V2). Low side to chassis.	262.5KC (400~ Mod)	High frequency end stop	Across voice coil	A1, A2, A3, A4	Adjust for maximum output.
2.	Fig. 1	Thru dummy to antenna receptacle	1610KC	"	"	A5, A6, A7	"
	Steps 3, 4 & 5 are not necessary unless tuner has been tampered with or associated components have been replaced. If necessary, back tuning cores (A8, A9, A10) 1 3/8" out of coils.						
3.	Fig. 1	Thru dummy to antenna receptacle	1610KC	High frequency end stop	Across voice coil	A5, A6, A7	Adjust for maximum output.
4.	"	"	1020KC	49/64" from high freq. end stop	"	A8, A9, A10	"
5.	"	"	1610KC	High frequency end stop	"	A5, A6, A7	Adjust for maximum output. Repeat steps 4 & 5. Cement cores.
6.	"	"	600KC (5 Microvolt)	Maximum signal	"	R2	Adjust R2 for 1.79 Volts output.

With radio installed in car and antenna fully extended, tune in a weak station near 1200KC and adjust A7 for maximum output.

POINTER ADJUSTMENT

With receiver tuned to a 1000KC signal, adjust pointer adjusting screw until pointer coincides with the 1000KC dial calibration.

PUSHBUTTON ADJUSTMENT

1. Allow receiver to warm up for 15 minutes. Extend antenna.
2. Pull pushbutton out.
3. Tune manually to desired station.
4. Press pushbutton in firmly.
5. Repeat for remaining pushbuttons.

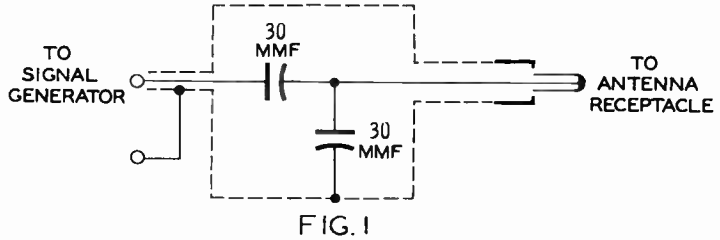
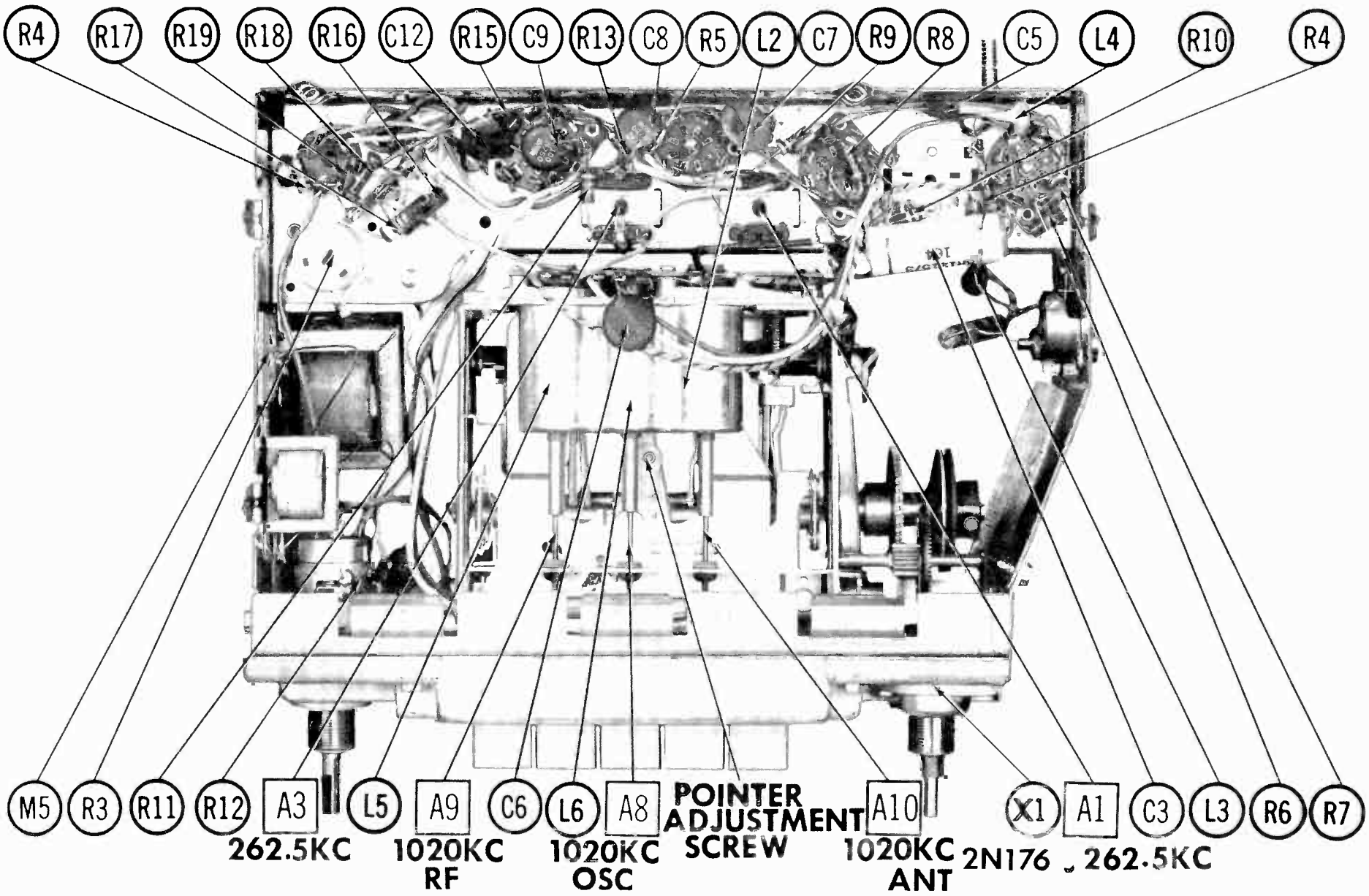


FIG. 1

FORD MODELS 74MF (B7A-18805-A1), 84MF (B8A-18805-B)



CHASSIS BOTTOM VIEW

PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier	12BL6	
V2	Converter	12AD6	
V3	IF Amplifier	12BL6	
V4	Det. - AVC - AF Amp.	12DL8	

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA				NOTES
			CBS PART No.	RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	2N176	Output	CBS2N155	2N301			

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	MOTOROLA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	■400	16	23B542329	AFH3-00-90	B0045	WP300.5			R2634 *
B	100	16			BBR100-15				
C	▲100	16							

* Non Catalog Item

FIXED CAPACITORS

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

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT	MOTOROLA PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
C2	20-180		20B534809						
C3	.1	200	8R121573	P288N-1	DF-104	CUB2P1	GEM-201	2TM-P1	
C4A	50-260		20B542372						
B	47								
C	120-210								N150 10% N220 5%
C5	18		21R120578						
C6	100		21R124032						
C7	10000		21R482726	BPD-01	DD-103	BYA10S1	DC511	5HK-S1	
C8	100		21R400537	N750-D1 100	TCN-100	C10T1U	NT-531	5TCU-T1	N750
C9	100		21R400537	N750-D1 100	TCN-100	C10T1U	NT-531	5TCU-T1	N750
C10	3300		21R120422	BPD-0033	DD-332	BYA10D33	UC-5233	5HK-D33	
C11	1000		21R410127	BPD-001	DD-102	BYA10D1M	DC521	5HK-D1	
C12	5000		21R115312	BPD-005	DD-502	BYA10D5	DC525	5HK-D5	

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	MOTOROLA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1A	4meg	½	18B541819	F1-82	RTV-616C		■	Tone
B	1meg	½		R2-56 KB-7 or KR-7 *				Volume, Tap @ 600K
C	Switch							Power On-Off
R2	1000Ω	1	18K732740		39-100		FL-1K	Sensitivity
R3	200Ω	1.5	18K540718		39-150			Bias (Wire wound)

■ "STA-LOC" Equivalent : FB46L, OS1500, RU16T55, IS2000, US-42
* Use KR on CRL "red label" controls & KB on "blue label" controls

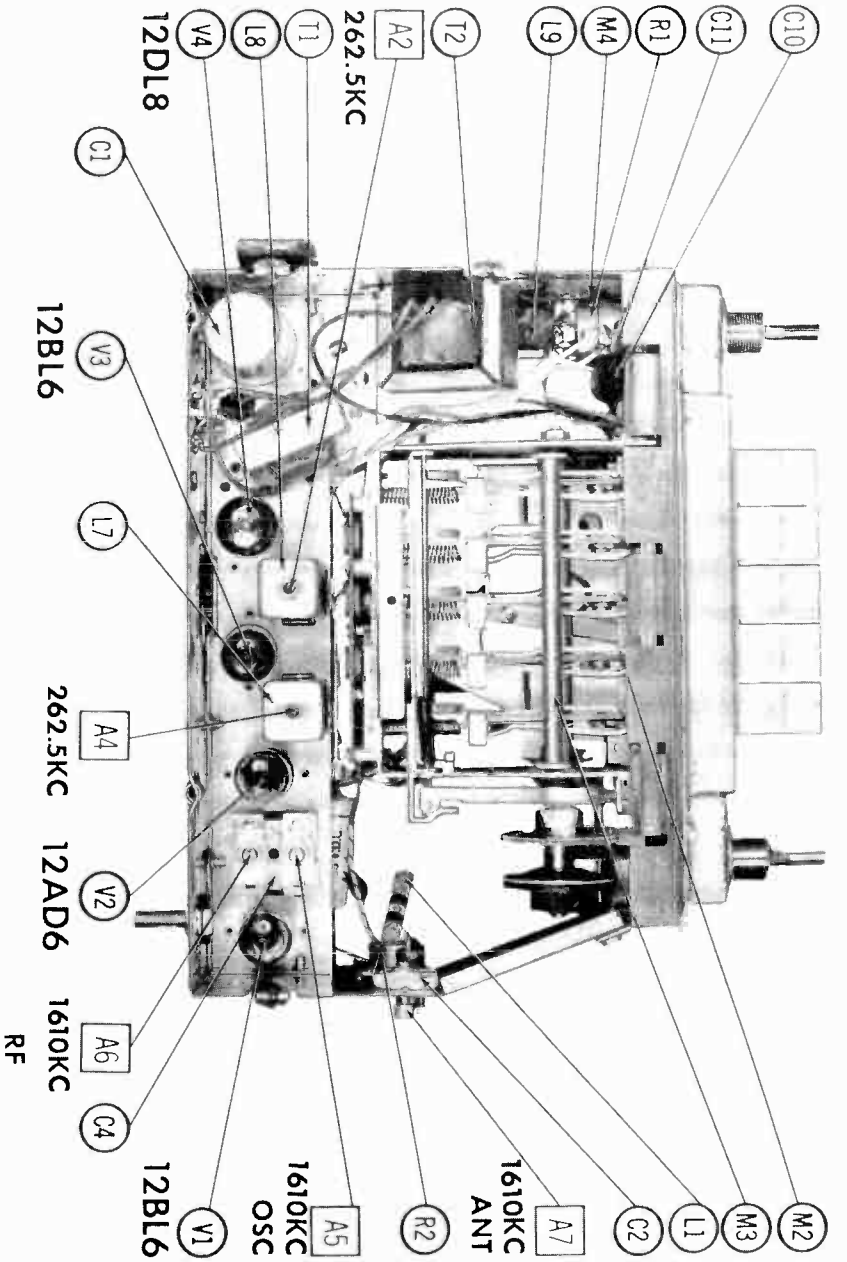
RESISTORS

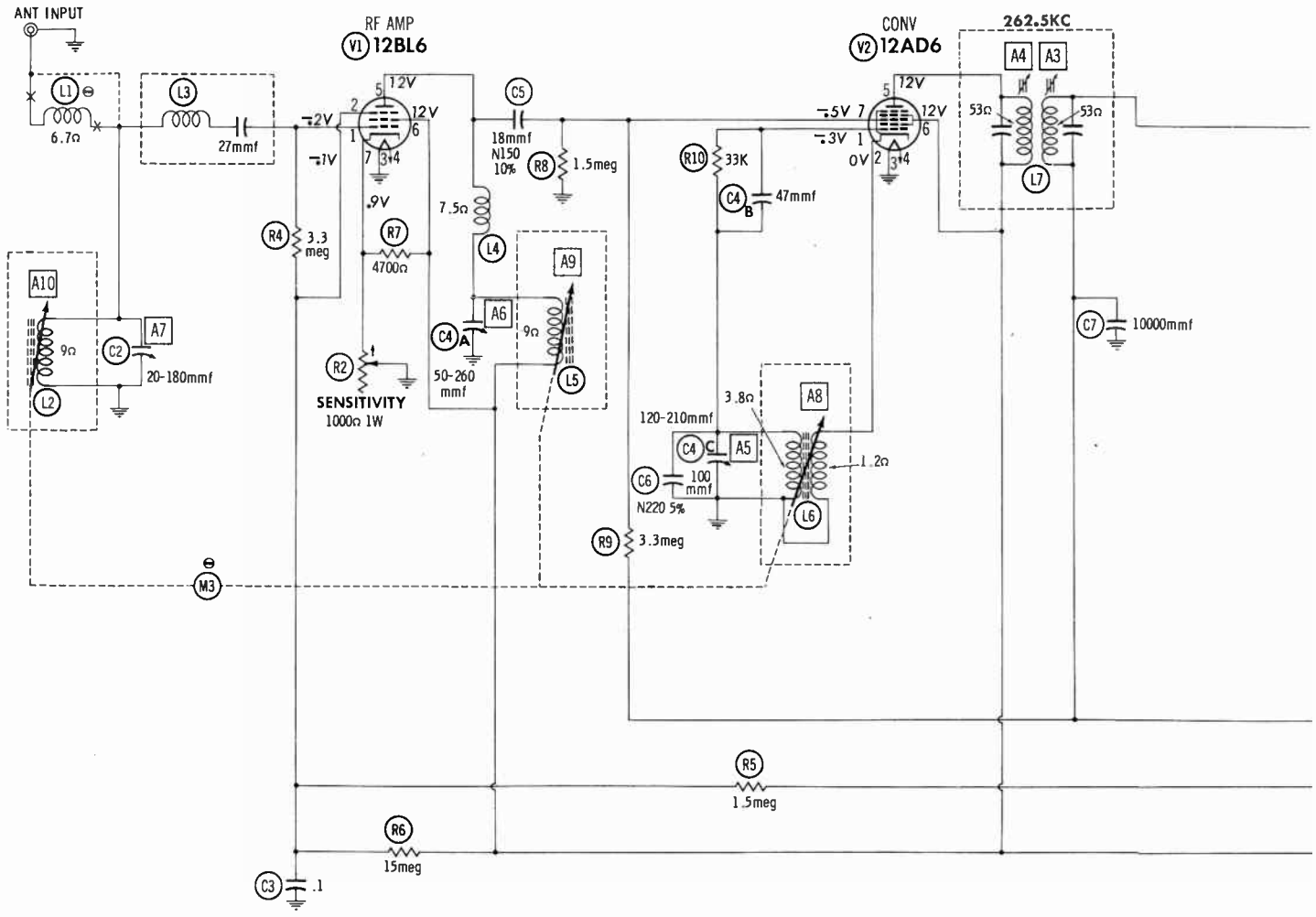
All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING		MOTOROLA PART No.	NOTES
	OHMS	WATT		
R4	3.3meg		6K119407	
R5	1.5meg		6R6460	
R6	15meg		6R476065	
R7	4700Ω		6R6039	
R8	1.5meg		6R6460	
R9	3.3meg		6K119407	
R10	33K		6K121704	
R11	47K		6K121687	

ITEM No.	RATING		MOTOROLA PART No.	NOTES
	OHMS	WATT		
R12	68K		6R6001	
R13	12meg		6R400334	
R14	33Ω		6K121304	
R15	10meg		6K119408	
R16	5.6Ω		17K739323	
R17	.47Ω		17K488266	
R18	10Ω Cold		6K540634	
R19	100Ω		6K119402	

CHASSIS—TOP VIEW





RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12BL6	10meg	7meg	0Ω	1.5Ω	†120Ω	†100Ω	230Ω		
V2	12AD6	33K	1.2Ω	0Ω	1.5Ω	†150Ω	†100Ω	1.3meg		
V3	12BL6	4meg	0Ω	0Ω	1.5Ω	†135Ω	†100Ω	0Ω		
V4	12DL8	1meg	0Ω	†33Ω	1.5Ω	0Ω	†82Ω	10meg	0Ω	7meg

TRANSISTOR CIRCUIT RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE

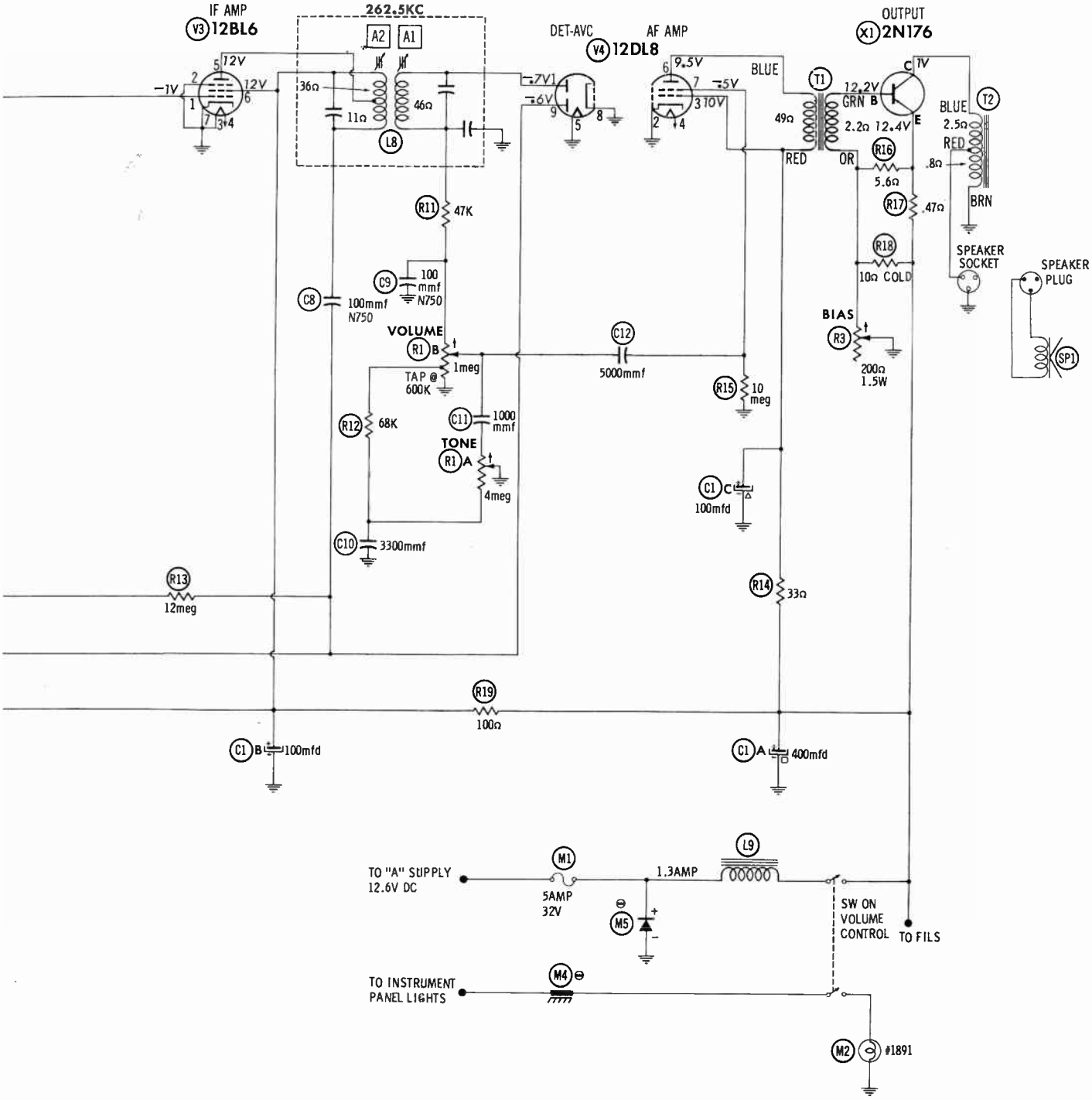
† MEASURED FROM POSITIVE TERMINAL OF C1B

Θ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)

A PHOTOFACT STANDARD NOTATION SCHEMATIC



1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured at 1000 ohms per volt.
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA							NOTES
	PRI.	SEC.	MOTOROLA PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T1	6.3:	1	25C542375							

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA							NOTES
	PRI.	MOTOROLA PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	22Ω Tap ⓐ 3.5Ω	25K542236							

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	MOTOROLA PART No.	QUAM PART No.	
SP1	6" X 9"	PM	3-4Ω	50D538018	69A3	

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		MOTOROLA PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Ram PART No.	
L1	Ant. Coil	24K791446	19-1005	BC-566	4612		10 Microhenries; IRC Part #CL-1 (Note 1)
L2	Ant. Coil	24C536308 *					
L3	RF Choke	24K539955					Includes 27mmf Cap.
L4	IF Trap Coil	24K539616	19-3125	TV-195			133 Microhenries
L5	RF Coil	24C536308 *					
L6	Osc. Coil	24C536300 *					
L7	Input IF	24K560418	16-6752	BC-350	12-H1	RF-3	
L8	Output IF	24B542371					

Note 1. Used in Model 84MF only.

* Part of Tuner M3.

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA						
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000 ∿)	MOTOROLA PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
L9	1.3A	.4Ω	.0021 Hy.	25K542423						

PARTS LIST AND DESCRIPTIONS (Continued)

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			MOTOROLA PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	LAG	5A 32V	65R122345		301005. (LAG 5A 32V)	155004	AGA5	HAF

MISCELLANEOUS

ITEM No.	PART NAME	MOTOROLA PART No.	NOTES
M2	Dial Lamp	65R533821	#1891
M3	Tuner	77E541940	AT-221, Complete, Model 84MF
	Tuner	77K560557	AT-242, Model 74MF
M4	Spark Plate	64A530176	
M5	Spark Plate	48A539147	Selenium, use #43A539259 Bushing, #5K124633 Eyelet, #4A540423 Mounting Washer
	Spark Plate	48K539953	Selenium, use #43A539954 Bushing, #5K124848 Eyelet, #4A542137 Mounting Washer

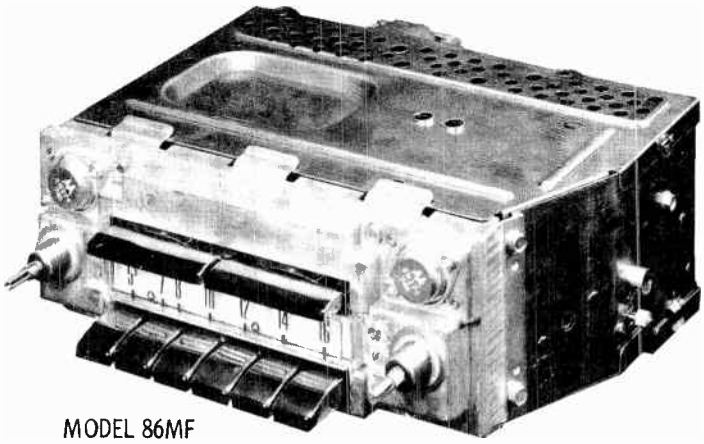
CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

NAME	PART NO.	DESCRIPTION
Knob	36K541850	Volume and Tuning, Model 84MF
Knob	36B539476	Tone and Dummy, Model 84MF
Knob	36B539472	Volume and Tuning, Model 74MF
Knob	36B539476	Tone and Dummy, Model 74MF
Pushbutton	38B538979	Black, Model 74MF
Pushbutton	38K541832	White, Model 84MF

WIRING DATA

General-use Unshielded Hook-up Wire .....Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors
Shielded Hook-up Wire .....Use BELDEN No. 8885
Bonding Strap .....Use BELDEN No. 8661



MODEL 86MF

TRADE NAME	Ford Models 76MF(SR)(B7A-18805-B1) For 1957 Ford Automobiles, 86MF(B8A-18805-A) For 1958 Ford Automobiles
MANUFACTURER	Motorola, Inc., 4545 W. Augusta Blvd., Chicago 51, Illinois
TYPE SET	Battery Operated Custom Built AM Automobile Receiver With Transistorized Output
TUBES (Six)	Types 12EG6 RF Amplifier, 12AD6 Converter, 12BL6 1st. IF Amplifier, 12BL6 2nd. IF Amplifier, 12DL8 Det.-AVC-AF Amp., 12AL8 Trigger-Relay Control
POWER SUPPLY	12 Volt Storage Battery — RATING 2.2 Amp. @ 12.6 Volts DC
TUNING RANGE—BROADCAST	540-1610KC

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING 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.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
1.	.1mfd	High side to pin 7 (grid) of 12AD6 (V2). Low side to chassis.	262.5KC (400∿ Mod)	High Freq. end stop	DC probe to point (A). Common to chassis.	A1, A2, A3	Adjust for maximum deflection.
2.	"	"	"	"	"	A4	Adjust for MINIMUM deflection.
3.	Fig. 1	Thru dummy to antenna receptacle	1610KC	"	"	A5, A6, A7	Adjust for maximum deflection.
	Steps 4 and 5 are not necessary unless tuner has been tampered with or associated components have been replaced. If necessary, back tuning cores (A8, A9, A10) 1 3/8" out of coils. A tool similar to Fig. 2 may be used.						
4.	Fig. 1	Thru dummy to ant. receptacle.	1610KC	High Freq. end stop.	DC probe to point (A). Common to chassis.	A5, A6, A7	Adjust for maximum deflection.
5.	"	"	1020KC	49/64" from High Freq. end stop.	"	A8, A9, A10	Adjust for maximum deflection. Repeat steps 4 and 5.
6.	"	"	1925KC	1400KC	"	A11	Adjust for MINIMUM deflection.
7.	"	"	1000KC @ 5 Microvolts	Tune to 1000KC signal	Output meter across voice coil	R4	Volume at maximum. Adjust for 1.79 volts.
8.	"	"	1000KC @ 100 Microvolts	"	"	R3	Turn set off. Press and release town search button. Short contact C of relay M8 to ground. Turn set on and adjust R3 for 1.79V.
9.	With radio installed in car and antenna fully extended, tune in a weak station near 1200KC and adjust A7 for maximum output.						

POINTER ADJUSTMENT

With radio tuned to a 1000KC signal adjust pointer adjustment so that pointer coincides with 1000KC marker on dial.

NOTE: ALIGNMENT FIG 1 AND FIG 2 ARE LOCATED AT END OF PARTS LIST.
PUSHBUTTON ADJUSTMENT IS LOCATED AT END OF PARTS LIST.

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PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier	12EG6	
V2	Converter	12AD6	
V3	1st. IF Amp.	12BL6	
V4	2nd. IF Amp.	12BL6	
V5	Det.-AVC-AF Amp.	12DL8	
V6	Trigger-Relay Control	12AL8	

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA				NOTES
			CBS PART No.	RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	2N176	Output	CBS-2N155	2N176		2N176	
X2	2N176	Output	CBS-2N155	2N176		2N176	

ELECTROLYTIC CAPACITORS

ITEM No	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	MOTOROLA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	100	16	23B542329	AFH3-00-90		WP300.5			R2634 *
B	■400	16							
C	▲100	16							

* Non-catalog item.

FIXED CAPACITORS

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

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT	MOTOROLA PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
C2	20-180		20K539683						
C3	10000		21R482726	BPD-01	DD-103	BYA10S1	DC511	5HK-S1	
C4	.05	200	8R121005	P288N-05	DF-503	CUB2S5	GEM-415	2TM-S5	
C5	3.9		21R115953						10%
C6	.05	200	8R121005	P288N-05	DF-503	CUB2S5	GEM-415	2TM-S5	
C7A	120-210		20K542318						
B	47								
C	50-260								
C8	100		21R124032						N220 5%
C9	10000		21R482726	BPD-01	DD-103	BYA10S1	DC511	5HK-S1	
C10	220		21K121698		MD-221	LJ0T22		5GA-T22	10%
C11	2.7		21R115950						10%
C12	100		21R410036	N750-DI 100	DTN-100	C10T1U	NT-531	5TCU-T1	N750 10%
C13	1500		21R125986	BPD-0015	DD-152	BYA10D15	DC5215	5HK-D15	
C14	560		21R120936	BPD-00056	DD-561	LJ0T56	UC-5356	5GA-T56	
C15	100		21R120576	N750-DI 100	DTN-100	C10T1U	NT-531	5TCU-T1	N750 10%
C16	10000		21R482726	BPD-01	DD-103	BYA10S1	DC511	5HK-S1	
C17	10000		21R482726	BPD-01	DD-103	BYA10S1	DC511	5HK-S1	
C18			64A530176						
C19			64A530176						

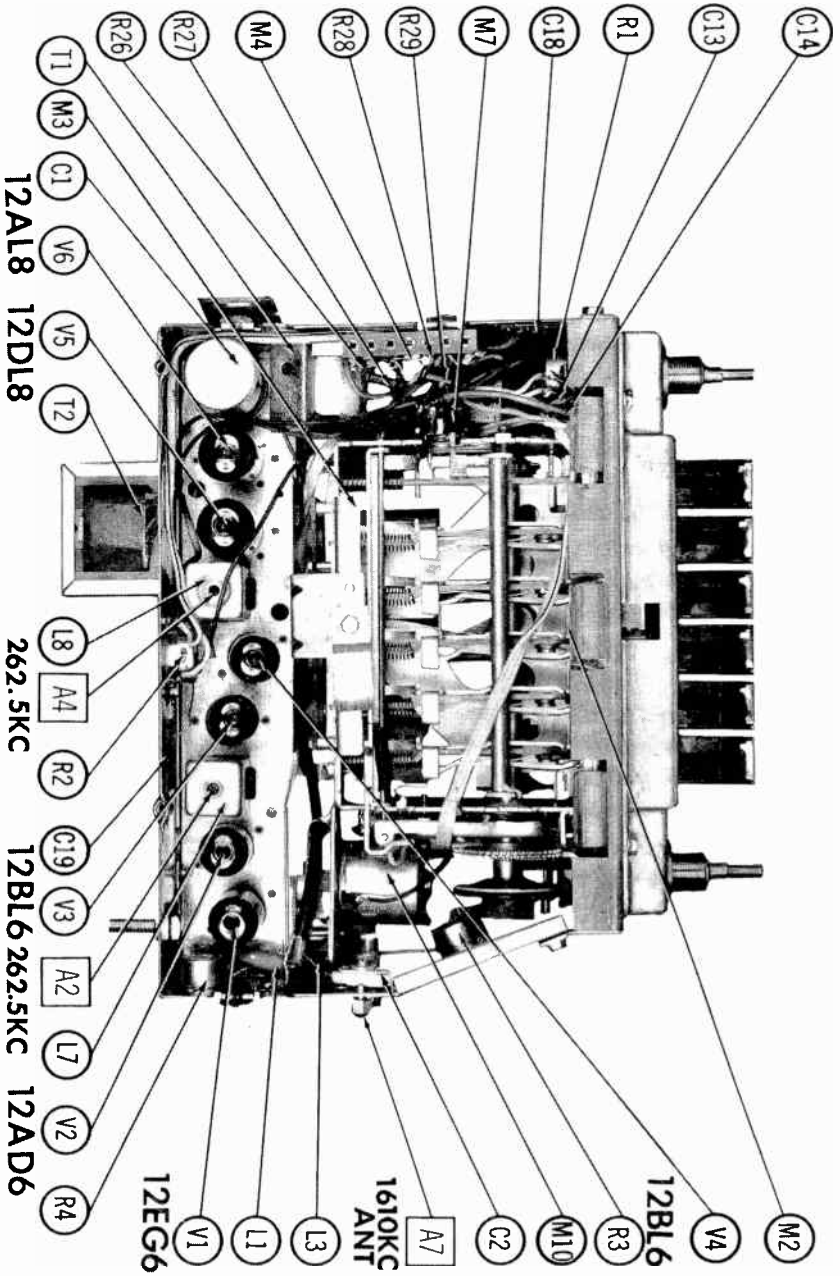
CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	MOTOROLA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1A	4meg	1/2	18K542373	F1-82		♦ QJ-1091A	♦♦ UE3819	Tone
B	2meg	1/2		R2-72				Volume, Tap @ 1meg
R2	400Ω	1(WW)	18B541877					Balance
R3	500Ω	1(WW)	18K542317					Sensitivity (Town)
R4	2000Ω	1(WW)	18K520298		39-2000-100			Sensitivity (Normal) with 100Ω stop

♦ "Concentrikit" Equivalent : K-15 Kit, Base Elements & Shafts B11-141, P14-118 (Panel) B18-139X, R1-130 (Rear)

♦♦ "STA-LOC" Equivalent : FB46L, OS1562, RU26T16, IS2000

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING OHMS	RATING WATT	MOTOROLA PART No.	NOTES
R5	6.8meg		6KI22321	
R6	1.5meg		6R3966	
R7	1meg		6KI22324	
R8	12K		6KI19933	
R9	5.6meg		6R3988	
R10	4.7meg		6KI22326	
R11	47K		6KI21687	
R12	22K		6KI19405	
R13	4700Ω		6R6039	
R14	6.8meg		6KI22321	
R15	120Ω		6R5551	
R16	47K		6KI21687	
R17	2.2meg		6R3927	
R18	180K		6KI25531	

ITEM No.	RATING OHMS	RATING WATT	MOTOROLA PART No.	NOTES
R19	680K		6R6475	
R20	8.2meg		6R5585	
R21	1.5meg		6R3966	
R22	4.7meg		6KI22326	
R23	3300Ω		6R6036	
R24	10meg		6KI19408	
R25	10Ω		6RI18245	
R26	.33Ω		17K542316	
R27	7.5Ω Cold		6K542314	
R28	.33Ω		17K542316	
R29	7.5Ω Cold		6K542314	
R30	330Ω		6R6010	
R31	330Ω		6R6010	
R32	10Ω		6RI18245	

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO PRI.	TURNS RATIO SEC.	REPLACEMENT DATA MOTOROLA PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordorson PART No.	Triod PART No.	NOTES
T1	5.5 :	1 SEC. 1	25C542302						
	5.5 :	1 SEC. 2							

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE PRI.	IMPEDANCE SEC.	REPLACEMENT DATA MOTOROLA PART No.	Halldorson PART No.	Merit PART No.	Rom PART No.	Stancor PART No.	Thordorson PART No.	Triod PART No.	NOTES
T2	31Ω CT	3-4Ω	25C541999							

SPEAKER

ITEM No.	TYPE SIZE	TYPE FIELD	TYPE V. C. IMP.	REPLACEMENT DATA MOTOROLA PART No.	REPLACEMENT DATA QUAM PART No.	NOTES
SP1	6" x 9"	PM	3-4Ω	50D536018	69A3	

COILS (RF-IF)

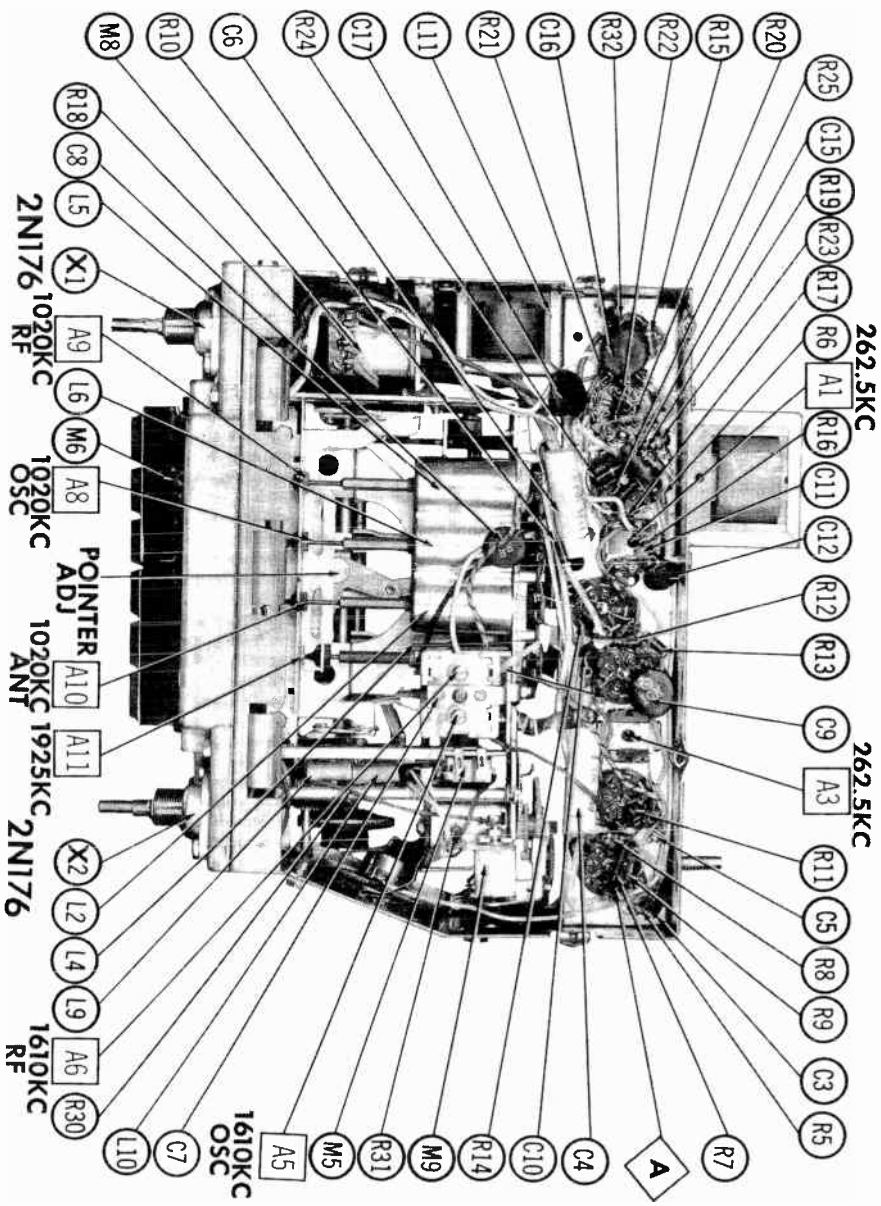
ITEM No.	USE	REPLACEMENT DATA MOTOROLA PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Rom PART No.	NOTES
L1	Ant. Coupling Coil	24K791446	19-1005	BC-566	4622		10 Microhenries, IRC Part #CL-1, Note 1
L2	Ant. Coil	24C536308					Note 2
L3	RF Choke	24A532148	19-6033				31 Microhenries
L4	IF Trap Coil	24K542330					Note 2
L5	RF Coil	24C536308					Note 2
L6	Osc. Coil	24B536300					Note 2
L7	Input IF	24K542374	16-6752	BC-350	12-H1	RF-3	
L8	Output IF	24B533073					
L9	Drive Motor Choke	24A542379					3.2 Microhenries
L10	Drive Motor Choke	24A542379					3.2 Microhenries

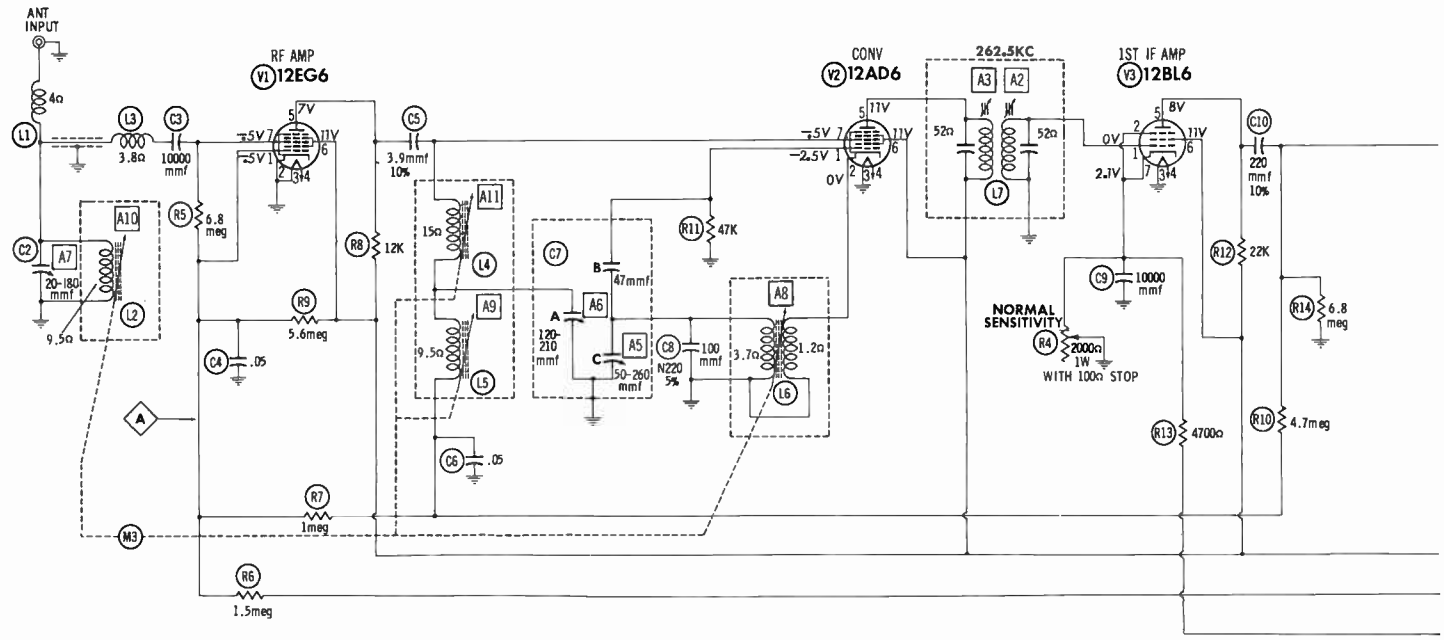
Note 1. Used in Model 86MF only.
Note 2. Part of M3.

FILTER CHOKE

ITEM No.	RATINGS CURRENT (Measured)	RATINGS DC RES.	RATINGS INDUCTANCE (0 CURRENT 1000 ~)	REPLACEMENT DATA MOTOROLA PART No.	Halldorson PART No.	Merit PART No.	Rom PART No.	Stancor PART No.	Thordorson PART No.	Triod PART No.
L11	2A	.3Ω	.0045 Hy.	25C542312						

CHASSIS—BOTTOM VIEW





DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured at 1000 ohms per volt.
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes posssible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

TRANSISTOR BIAS ADJUSTMENT (R2)

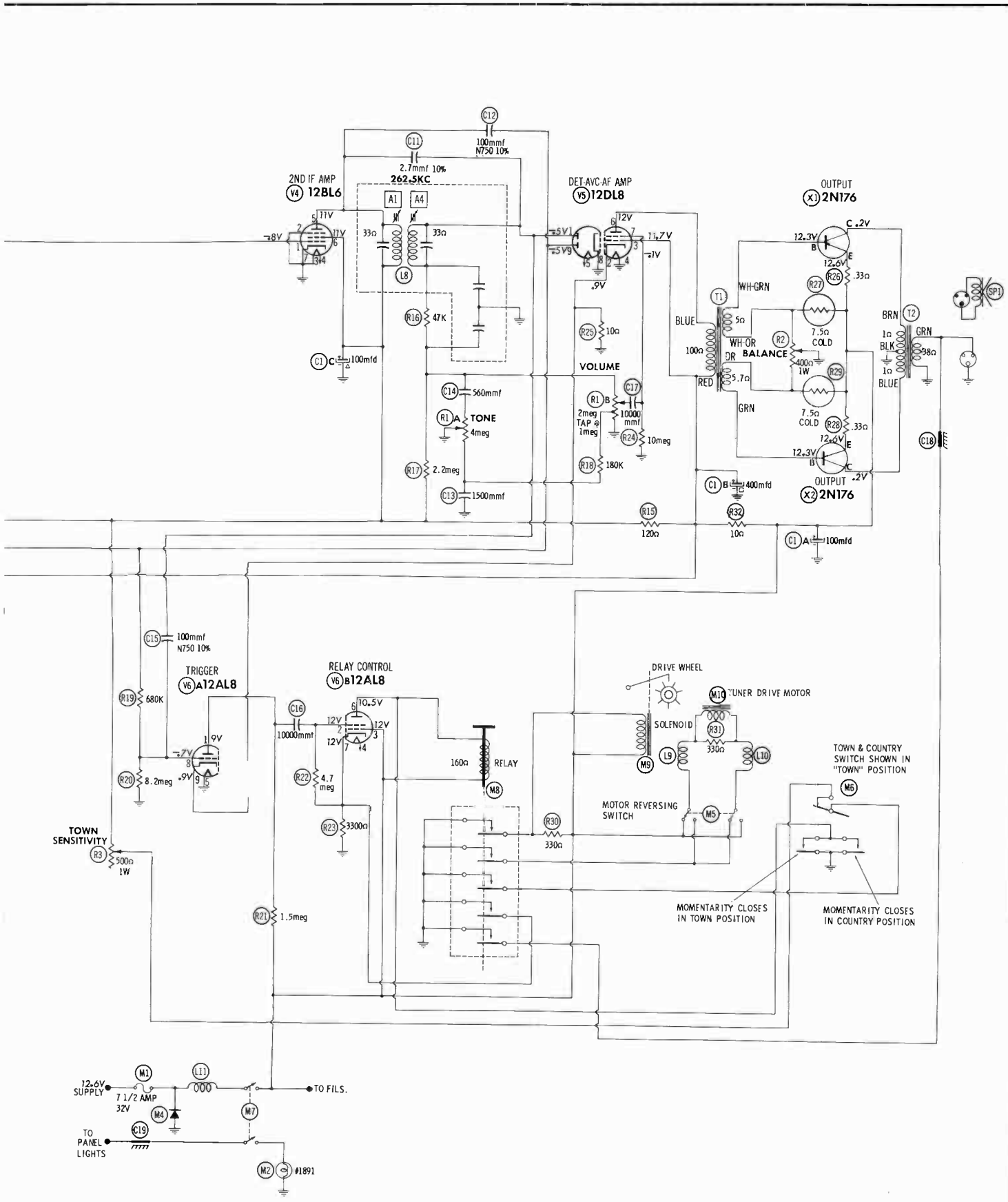
Transistor bias should be checked after a transistor is replaced.
1. Set Balance control (R2) at mid-range.
2. Connect an accurate low range VTVM across the primary of output transformer (T2).
3. Allow the receiver to warm up for 15 minutes.
4. Adjust R2 for a zero meter reading.

RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12EG6	2.8meg	0Ω	0Ω	.9Ω	†12K	†130Ω	10meg		
V2	12AD6	47K	1.2Ω	0Ω	.9Ω	†180Ω	†130Ω	3meg		
V3	12BL6	52Ω	750Ω	0Ω	.9Ω	†22K	†130Ω	750Ω		
V4	12BL6	3.5meg	0Ω	0Ω	.9Ω	†160Ω	†130Ω	0Ω		
V5	12DL8	1meg	10Ω	†10Ω	0Ω	.9Ω	†110Ω	10meg	0Ω	3.2meg
V6	12AL8	†1.5meg	4.7meg	†0Ω	.9Ω	0Ω	†160Ω	3300Ω	3.5meg	10Ω

TRANSISTOR CIRCUIT RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.
† MEASURED FROM JUNCTION OF C1A AND R32.

A PHOTOFACT STANDARD NOTATION SCHEMATIC



PARTS LIST AND DESCRIPTIONS (Continued)

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			MOTOROLA PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	SFE	7½A 32V	65R122346	9K560762	30707.5 (7AG-7½A-32V)	155009	SFE 7½	HDH

MISCELLANEOUS

ITEM No.	PART NAME	MOTOROLA PART No.	NOTES
M2	Lamp	65R533B21	#1891
M3	Tuner	77E541960	ST-222, Complete
M4	Spark Plate	48A539147	Selenium Type (Use #43A539259 Bushing, #5K124633 Eyelet and #4A540423 Washer for Mounting)
	Spark Plate	48K539953	Selenium Type (Use #43A539954 Bushing, #5K124848 Eyelet and #4A542137 Washer for Mounting)
M5	Switch	40B535396	Motor Reversing
M6	Switch	1V542282	Search Selector and Button Assy.
M7	Switch	40A536283	Power On-Off
M8	Relay	1V540128	
M9	Solenoid	59A537563	
M10	Motor	59C540838	Tuner Drive, Incl. Drive Gear

CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

NAME	PART NO.	DESCRIPTION
Knob	36K541850	Volume and Tuning, Model 86MF
Knob	36B539476	Tone and Dummy
Knob	36B539472	Volume and Tuning, Model 76MF(SR)
Pushbutton	1B539242	5 Used
Pushbutton	1K539243	Off
Cover	15C539071	Wiring Side
Cover	15K539596	Tube Side
Pointer	1A538977	
Dial Scale	34K541831	Model 86MF
Dial Scale	34C539063	Model 76MF (SR)

PARTS LIST AND DESCRIPTIONS (Continued)

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in Ten Colors 8524 (Stranded) Available in Ten Colors
Shielded Hook-up Wire	Use BELDEN No. 8885
Bonding Strap	Use BELDEN No. 8661

PUSHBUTTON ADJUSTMENT

1. Pull pushbutton out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.

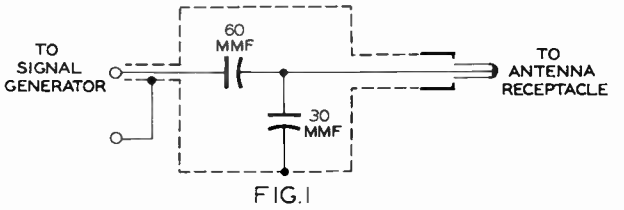


FIG. 1

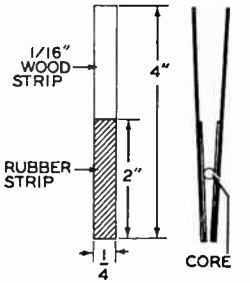
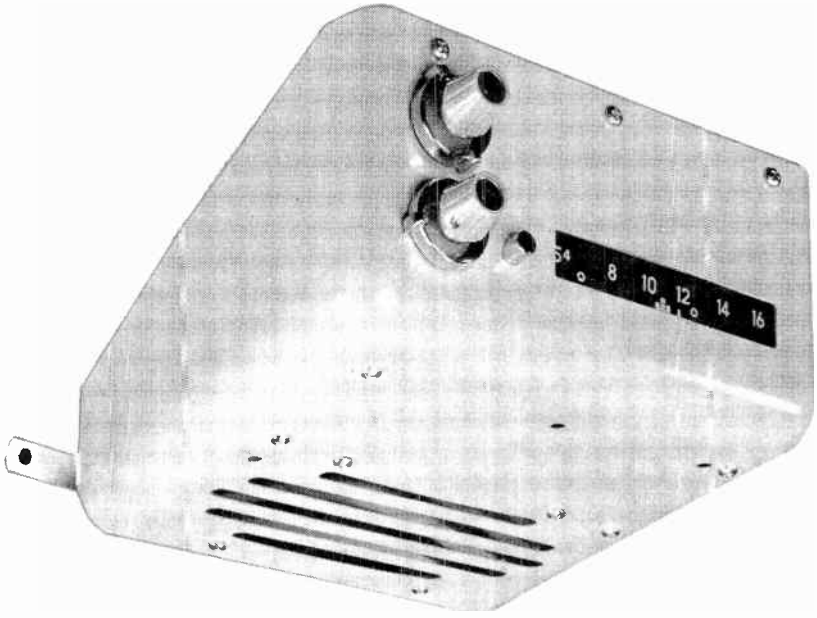


FIG. 2



TRADE NAME	International Model 86M1 (For 1958 International "A" Line Trucks)
MANUFACTURER	Motorola Inc., 4545 W. Augusta Blvd., Chicago 51, Illinois
TYPE SET	Battery Operated Custom Built AM Automobile Receiver With Transistorized Output
TUBES(Six)	Types 12BL6 RF Amplifier, 12AD6 Converter, 12BL6 1st IF Amplifier, 12BL6 2nd IF Amplifier, 12DL8 Det.-AVC-AF Amplifier, 12AL8 Trigger
POWER SUPPLY	12 Volt Storage Battery RATING 2.2 Amp. @12.6 Volts DC
TUNING RANGE—BROADCAST	540-1600KC

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING 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

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
1.	.1mfd	High Side to Pin 7 (Grid) of 12AD6 (V2). Low Side to Chassis.	262.5KC (400~ Mod.)	High Freq. End Stop	DC Probe to Point (A) Common to Chassis.	A1, A2, A3	Adjust For Maximum Deflection
2.	.1mfd	"	"	"	"	A4	Adjust For MINIMUM Deflection
3.	Fig. 1	Thru Dummy to Antenna Receptacle	1610KC	"	"	A5, A6, A7	Adjust For Maximum Deflection
	It is not necessary to perform steps 4 and 5 unless tuner has been tampered with or associated components have been replaced. If necessary, back tuning cores (A8, A9, A10) out of coils but not out of coil forms.						
4.	Fig. 1	Thru Dummy to Antenna Receptacle	1610KC	High Freq. End Stop.	DC Probe to Point (A) Common to Chassis.	A5, A6, A7	Adjust For Maximum Deflection
5.	Fig. 1	"	1020KC	Tuner Carriage 9/16" From High Freq. End Stop.	"	A8, A9, A10	Adjust For Maximum Deflection Repeat Steps 4 & 5 With Step 4 Last.
6.	With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A7 for maximum output.						

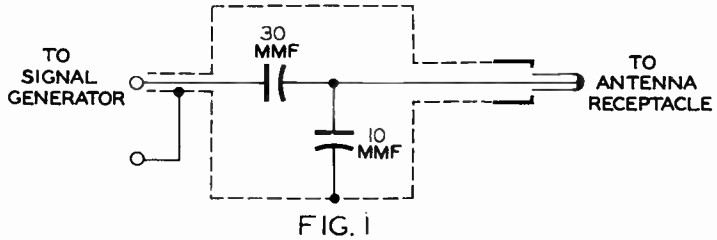


FIG. 1

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PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier	12BL6	
V2	Converter	12AD6	
V3	1st IF Amplifier	12BL6	

ITEM No.	USE	TYPE	NOTES
V4	2nd IF Amplifier	12BL6	
V5	Det. -AVC-AF Amplifier	12DL8	
V6	Trigger	12AL8	

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			CBS PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	2N176	Output	2N155		2N176/ 2N242	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	MOTOROLA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	■ 500	16	23B539261	AFH2-02-10	B0045	WP200, 5			R2452 *
B	▲ 100	16							

* Non Catalog Item

FIXED CAPACITORS

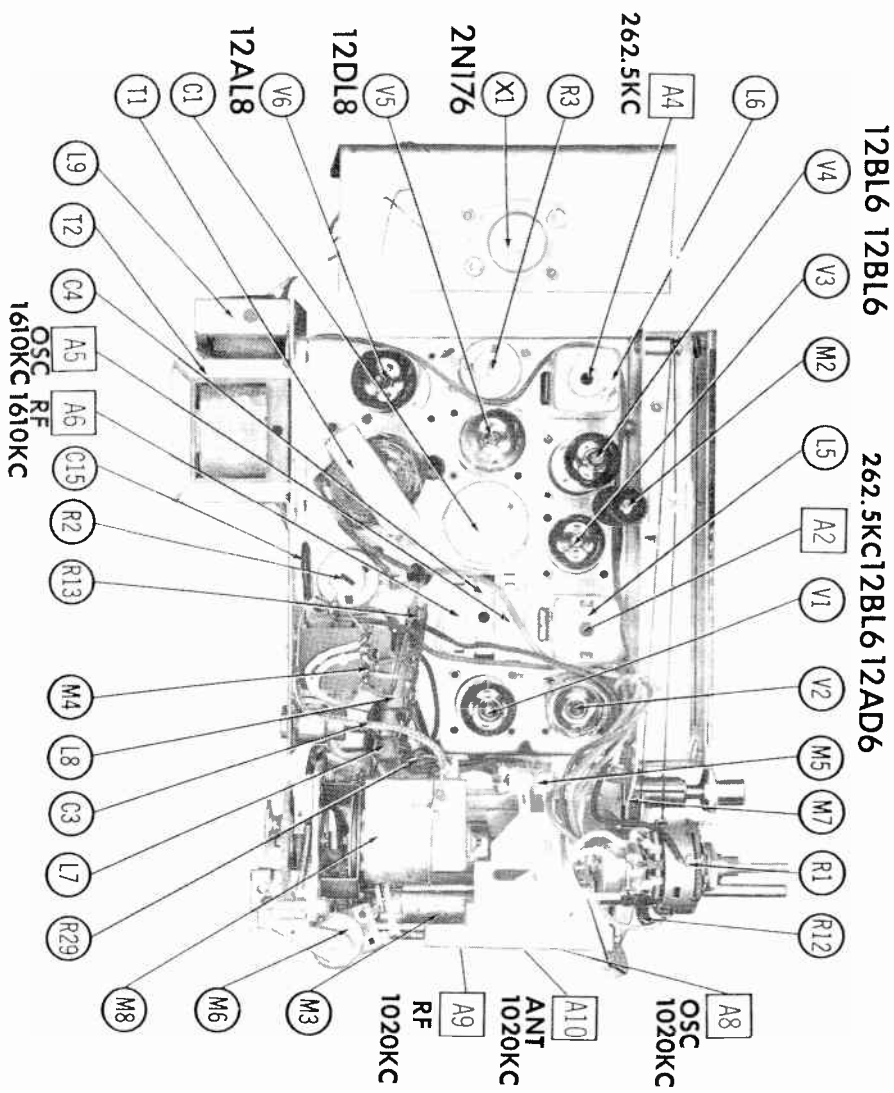
Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING		REPLACEMENT DATA							NOTES
	CAP.	VOLT	MOTOROLA PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	
C2	20-180		20A481526							
C3	10000		21R482726	BPD-01	DD-103	BYA6S1	ED-01	DC511	5HK-S1	
C4A	50-260									
B	27		20B542094							
C	47									
D	420-490									
C5	.05	200	8R121005	P288N-05	DF-503	CUB2S5		GEM-215	4TM-S5	
C6	220		21K121698		D6-221	L10T22	ED-220		MS-322	10%
C7	10000		21R482726	BPD-01	DD-103	BYA6S1	ED-01	DC511	5HK-S1	
C8	220		21K121698		D6-221	L10T22	ED-220		MS-322	10%
C9	1.5		21R115959	NPO-S11.5	TCZ-1R5	C10V15C	TCO-1.5	ZT-5515	5TCCB-V15	
C10	100		21R410036	N750-D1100	TCN-100	C10T1U	TC7-100	NT531	5TCU-T1	N750 10%
C11	10000		21R482726	BPD-01	DD-103	BYA6S1	ED-01	DC511	5HK-S1	
C12	100		21R410036	N750-D1100	TCN-100	C10T1U	TC7-100	NT-531	5TCU-T1	N750 10%
C13	10000		21R482726	BPD-01	DD-103	BYA6S1	ED-01	DC-511	5HK-S1	
C14	10000		21R482726	BPD-01	DD-103	BYA6S1	ED-01	DC-511	5HK-S1	
C15	10000		21R482726	BPD-01	DD-103	BYA6S1	ED-01	DC-511	5HK-S1	

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	MOTOROLA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1A	Switch		18B542219					Sensitivity
B	1meg	½						Volume
C	Switch							
R2	210Ω	2	18K540718		39-200			Bias (Wire Wound)
R3	2000Ω	2	18K520298		39-2000		FL-2, 5K	Sensitivity

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING OHMS	RATING WATT	MOTOROLA PART No.	NOTES
R4	3.3meg		6KI19407	
R5	10meg		6R5622	
R6	8200Ω		6KI19931	
R7	1800Ω		6K122445	
R8	100K		6K125534	
R9	47K		6KI21299	
R10	22K		6KI19935	
R11	4700Ω		6KI21047	
R12	100Ω		6R6326	
R13	120Ω		6R6270	
R14	6.8meg		6K122321	
R15	5.6meg		6R3988	
R16	1.5meg		6R6460	
R17	47K		6KI21299	
R18	2.2meg		6K127001	
R19	6.8meg		6K122321	
R20	10Ω		6K124668	
R21	5.6Ω		17K739323	
R22	0.47Ω		17K488266	
R23			6K540634	Note 1
R24	6.8meg		6KI21933	
R25	1.5meg		6R6460	
R26	5600Ω		6R6117	
R27	3.3meg		6KI21278	
R28	3300Ω		6R6036	
R29	330Ω		6R6010	
R30	100Ω		6R6326	

Note 1. Temperature compensating unit, 10Ω @ 25° C

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO PRI.	TURNS RATIO SEC.	REPLACEMENT DATA MOTOROLA PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triod PART No.	NOTES
T1	10:	1	25C542378						

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE PRI.	IMPEDANCE SEC.	REPLACEMENT DATA MOTOROLA PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
T2	10Ω	3-4Ω	25K542338						

SPEAKER

ITEM No.	TYPE SIZE	TYPE FIELD	TYPE V. C. IMP.	REPLACEMENT DATA MOTOROLA PART No.	REPLACEMENT DATA QUAM PART No.	NOTES
SP1	5½"x7½"	PM	3-4Ω	50C542399	57A1	

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA MOTOROLA PART No.	Meissner PART No.	Merit PART No.	Millier PART No.	Rom PART No.	NOTES
L1	Ant. Coil	24B537932					Note 1
L2	RF Coil	24B537932					Note 1
L3	RF Choke	24A560200					1120Microhenries
L4	Osc. Coil	24B537931					Note 1
L5	Input IF	24B536693	16-6752	BC-350	12-H1	RF-3	
L6	Output IF	24B533073		BC-316			
L7	RF Choke	24A542379					3.2 Microhenries
L8	RF Choke	24A542379					3.2 Microhenries

Note 1. Part of coil and plate assembly 1V542431

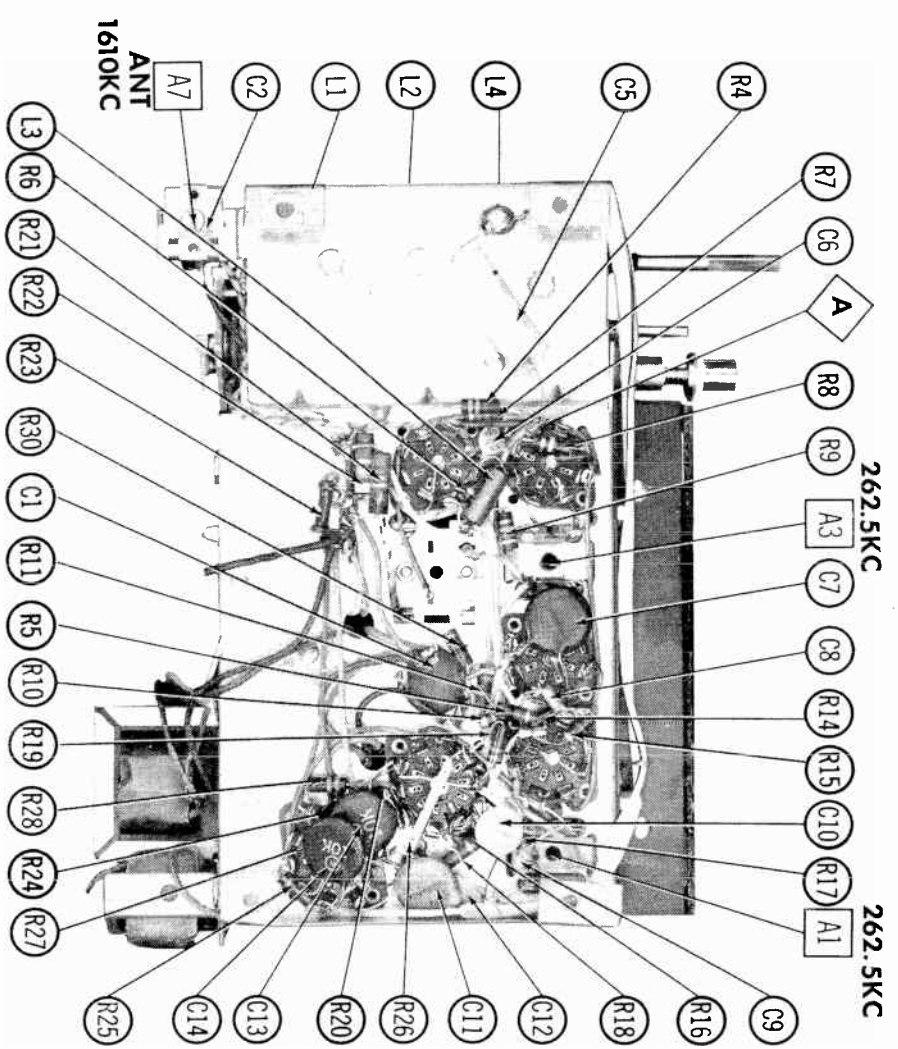
FILTER CHOKE

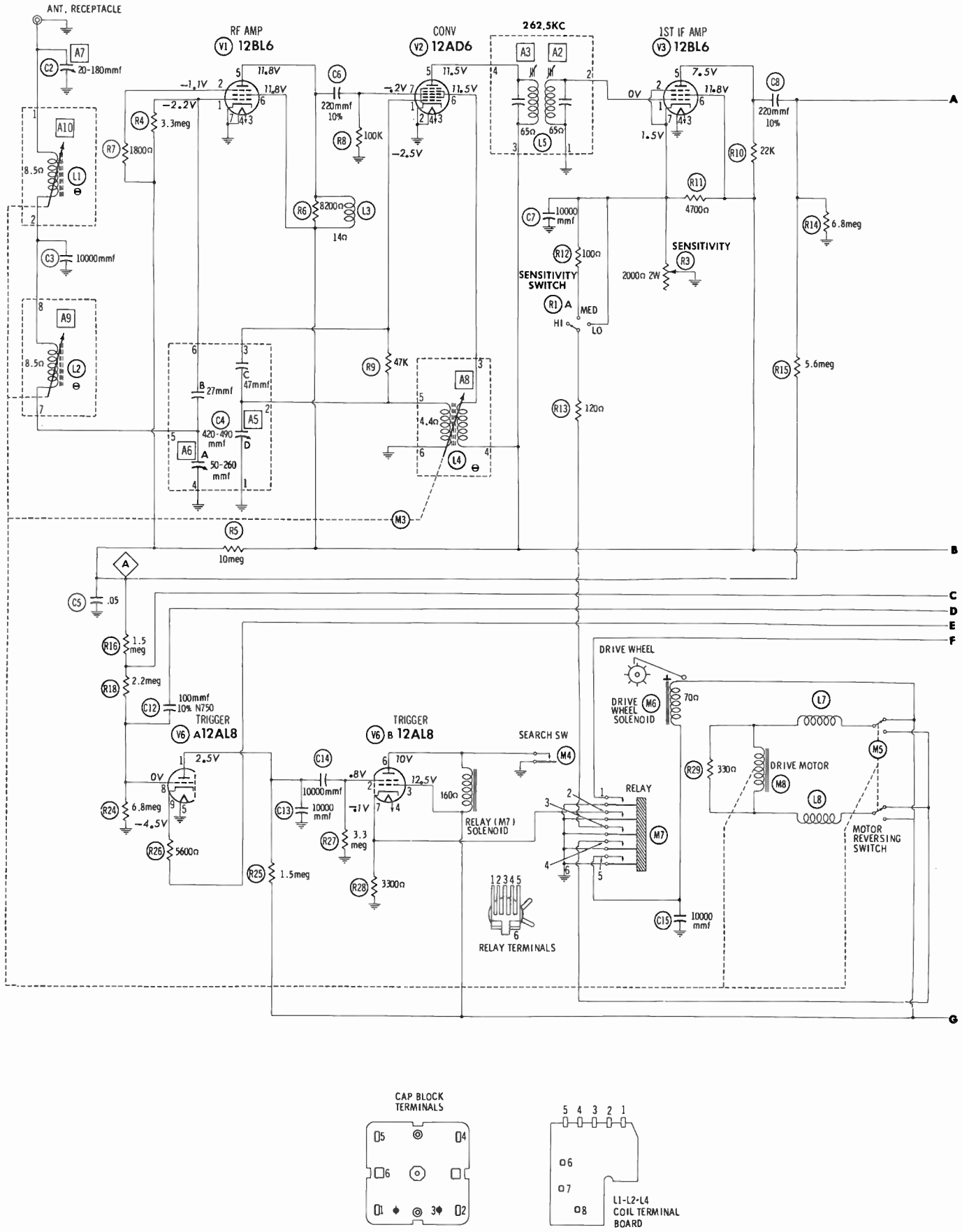
ITEM No.	RATINGS TOTAL DIRECT CURRENT	RATINGS D.C. RESISTANCE	RATINGS INDUCTANCE (0 CURRENT 1000 ~)	REPLACEMENT DATA MOTOROLA PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
L9	2.2A	.9Ω	4Mil. Hy.	25K560034					

FUSES

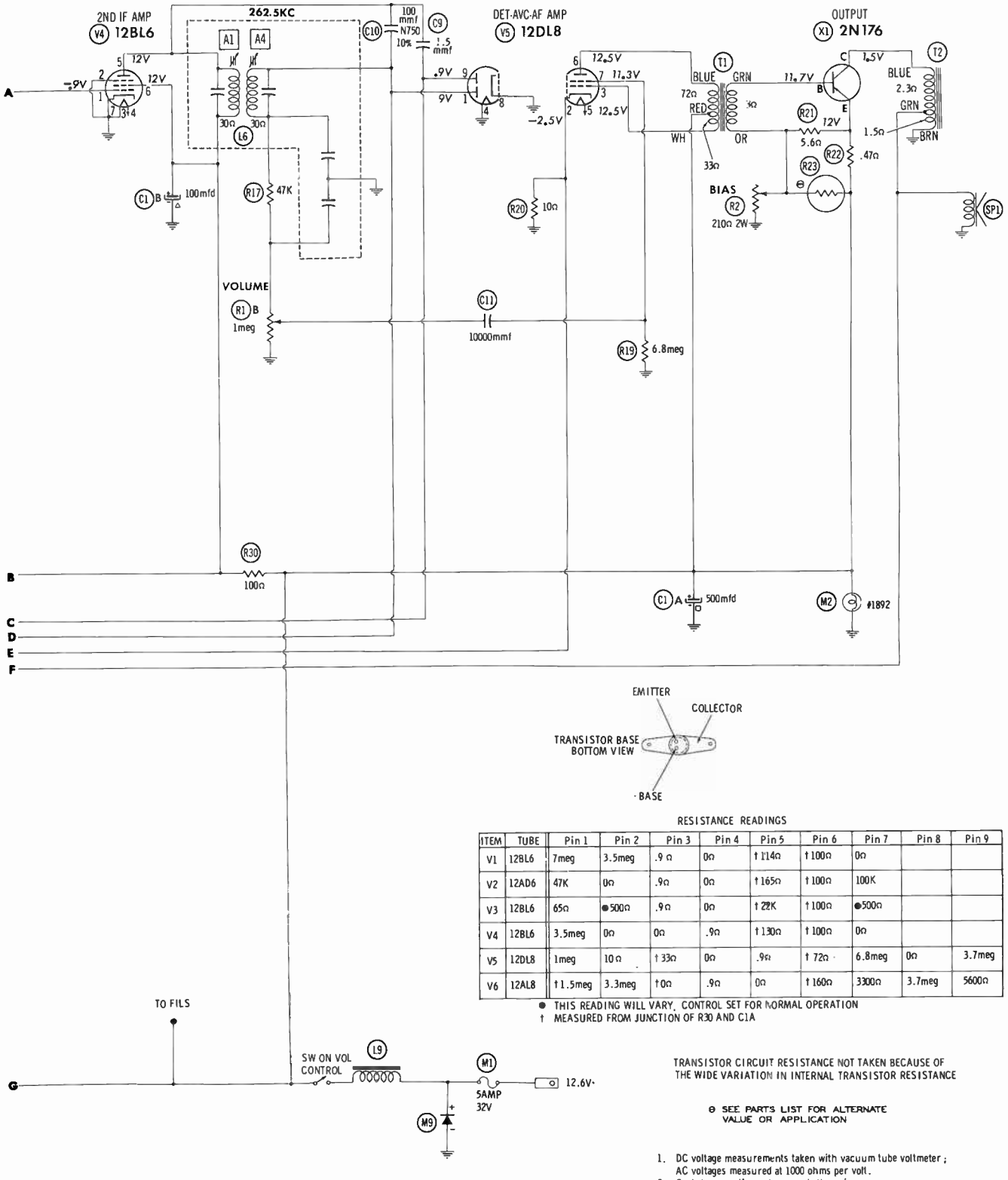
ITEM No.	TYPE	RATING	REPLACEMENT DATA MOTOROLA PART No. FUSE	MOTOROLA PART No. HOLDER	LITTELFUSE PART No. FUSE	LITTELFUSE PART No. HOLDER	BUSS PART No. FUSE	BUSS PART No. HOLDER
M1	1AG	5A 32V	65R122345	9C542395	301005. (1AG 5A 32V)	155004	AGA5	HAF

CHASSIS—BOTTOM VIEW





A PHOTOFACT STANDARD NOTATION SCHEMATIC
Howard W. Sams & Co., Inc. 1958



RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12BL6	7meg	3.5meg	.9 Ω	0Ω	†114Ω	†100Ω	0Ω		
V2	12AD6	47K	0Ω	.9Ω	0Ω	†165Ω	†100Ω	100K		
V3	12BL6	65Ω	●500Ω	.9Ω	0Ω	†22K	†100Ω	●500Ω		
V4	12BL6	3.5meg	0Ω	0Ω	.9Ω	†130Ω	†100Ω	0Ω		
V5	12DL8	1meg	10Ω	†33Ω	0Ω	.9Ω	†72Ω	6.8meg	0Ω	3.7meg
V6	12AL8	†1.5meg	3.3meg	†0Ω	.9Ω	0Ω	†160Ω	3300Ω	3.7meg	5600Ω

● THIS READING WILL VARY, CONTROL SET FOR NORMAL OPERATION
† MEASURED FROM JUNCTION OF R30 AND C1A

TRANSISTOR CIRCUIT RESISTANCE NOT TAKEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE

Θ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC

1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured at 1000 ohms per volt.
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes posssible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

PARTS LIST AND DESCRIPTIONS (Continued)

MISCELLANEOUS

ITEM No.	PART NAME	MOTOROLA PART No.	NOTES
M2	Pilot Light	65R538410	#1892
M3	Tuner	77K542324	MST-237 (Complete)
M4	Switch	40A542391	Search (Leaf Type)
M5	Switch	40K537765	Motor Reversing (Leaf Type)
M6	Solenoid	59A537563	Drive Wheel
M7	Relay	80C539576	Search Button
M8	Motor	59K542419	Tuner Drive
M9	Spark Plate	48K539953	Selenium Type

CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

NAME	PART NO.	DESCRIPTION
Knob	36K592302	Dummy
Knob	36K473550	Search Sensitivity
Knob	36K542332	On-Off-Volume & Tuning
Button	38A542400	Search
Dial Scale	34B542223	
Dial Pointer	52A542227	

WIRING DATA

General-use Unshielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors
Shielded Hook-up Wire ..... Use BELDEN No. 8885
Bonding Strap ..... Use BELDEN No. 8661

TRANSISTOR BIAS ADJUSTMENT (R2)

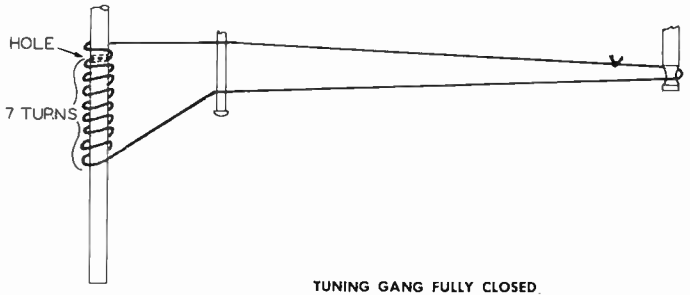
The transistor current should be checked after the transistor is replaced.

1. Set bias control (R2) fully counter-clockwise (maximum resistance)

2. Connect an accurate low range VTVM from the transistor collector (outer case) to chassis.

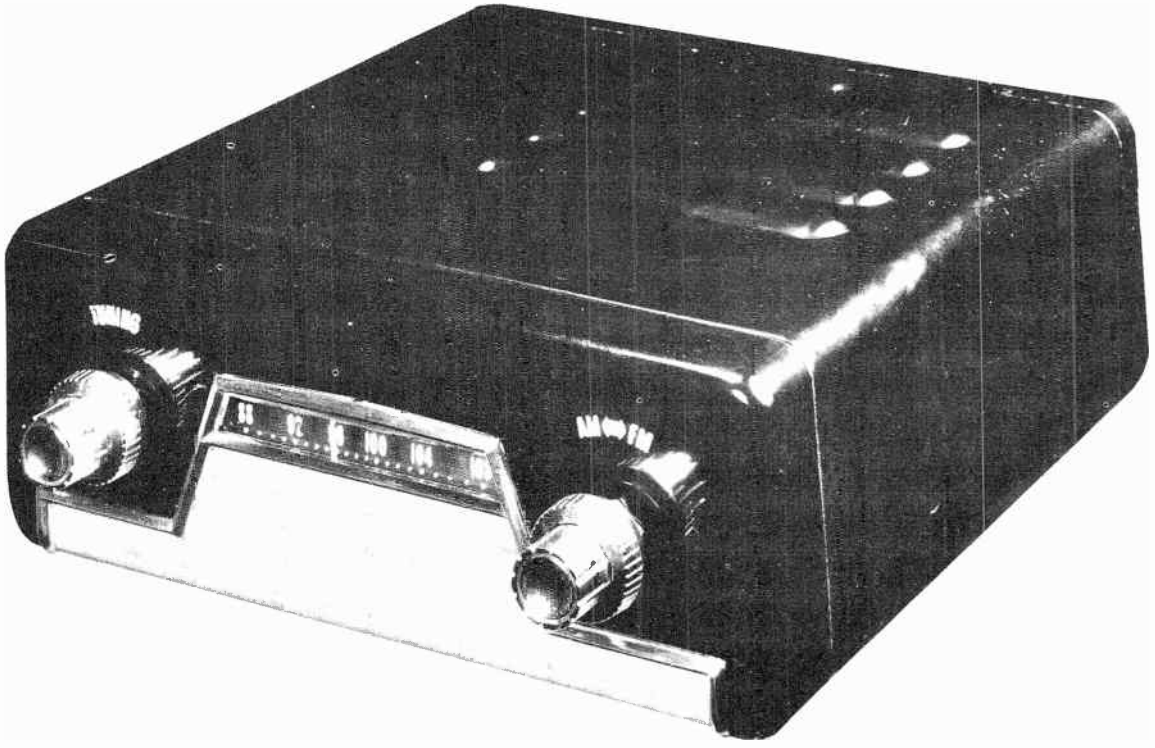
3. Apply power to the receiver and allow a 15 minute warm-up period.

4. Adjust R2 for a reading of .75 volts on the VTVM. This is equivalent to a collector current of 425MA.



TUNING GANG FULLY CLOSED

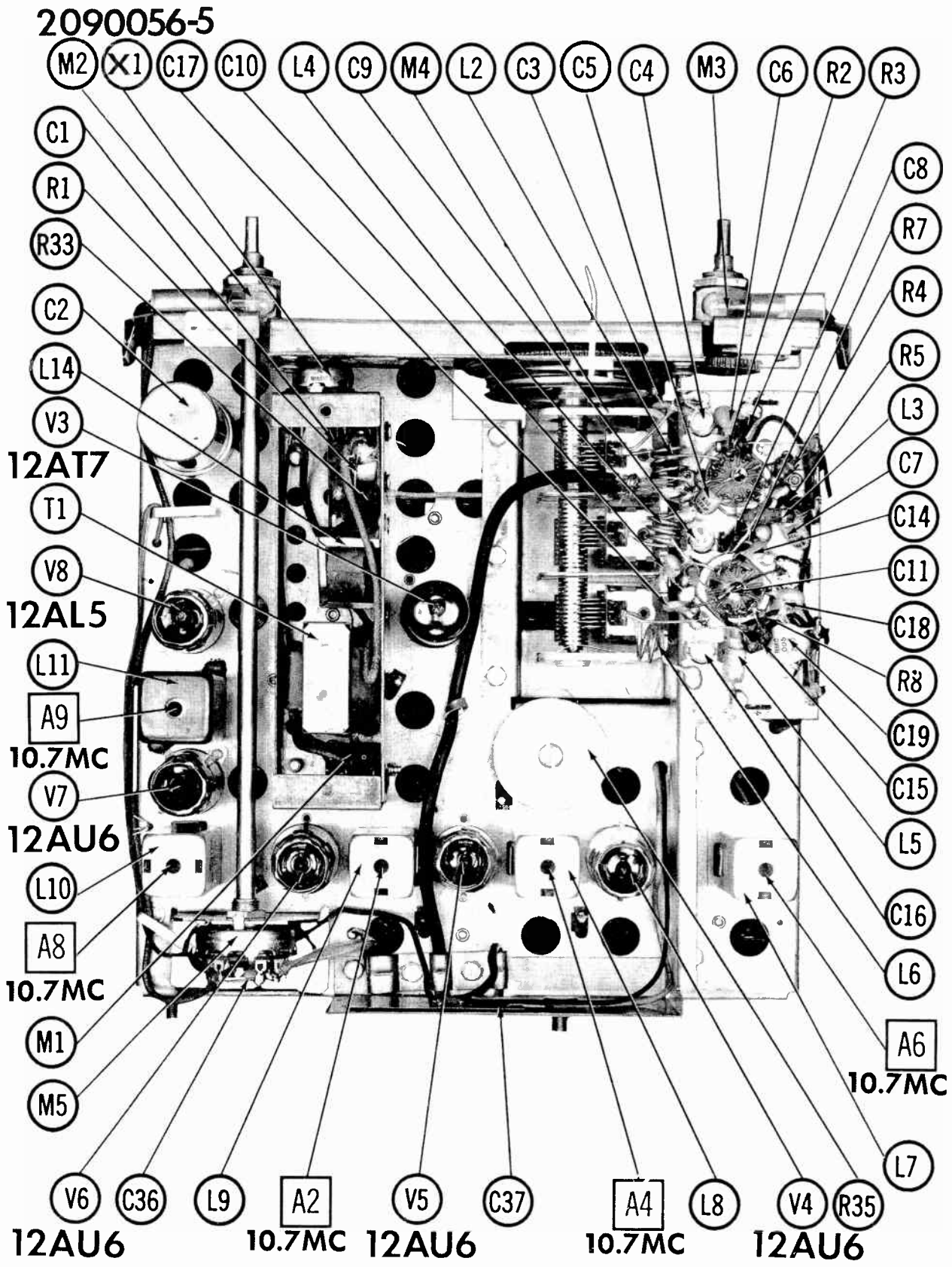
DIAL CORD STRINGING



LINCOLN MODEL
88BH (FFC-15491-B)

TRADE NAME	Lincoln Model 88BH (FFC-15491-B) For 1958 Lincoln Automobiles		
MANUFACTURER	Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, Maryland		
TYPE SET	Battery Operated Custom Built Automobile FM Tuner		
TUBES (Eight)	Types 12AT7 RF Amplifier, 12AT7 Mixer-Osc., 12AT7 AFC-AF Amp., 12AU6 1st IF Amplifier, 12AU6 2nd IF Amplifier, 12AU6 1st Limiter, 12AU6 2nd Limiter, 12AL5 Discriminator		
POWER SUPPLY	12 Volts DC	RATING	2 Amp. @ 12.6 Volts DC
FREQ. MOD.	88 - 108MC		

HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana



CHASSIS-TOP VIEW

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Disable AFC by shorting C20 to chassis. After completing alignment remove short.

FM IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
1.		High side to ungrounded tube shield on 12AT7 (V2). Low side to chassis.	10.7MC (Unmod)	FM	Point of non-interference	DC probe to point Ⓐ. Common to chassis.	A1, A2, A3, A4, A5, A6	Adjust for maximum deflection.
2.		"	"	"	"	DC probe to point Ⓑ. Common to chassis.	A7, A8	"
3.		"	"	"	"	"	A9	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.

FM IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE

Use frequency modulated signal with 60~ modulation and 450KC sweep. Use 120~ 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
1.		High side to ungrounded tube shield on 12AT7 (V2). Low side to chassis.	10.7MC (450KC Swp)	FM	Point of non-interference	Vert. Amp. to point Ⓐ. Low side to chassis.	A1, A2, A3, A4 A5, A6	Adjust for curve of maximum amplitude and symmetry similar to Fig. 1.
2.		"	"	"	"	Vert. Amp. to point Ⓑ. Low side to chassis.	A7, A8	"
3.		"	"	"	"	Vert. Amp. to point Ⓒ. Low side to chassis.	A9	Adjust so that 10.7MC occurs at center of crossover lines similar to Fig. 2. SLIGHTLY retouch A7 for maximum amplitude and straightness of crossover lines.

FM RF ALIGNMENT

Adjust C4, C9, and C16 until studs are about three-fourths out.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
4.	100Ω Carbon Resistor	High side thru 100Ω to FM antenna receptacle.	108.5MC (Unmod)	FM	Tuning gang fully open	DC probe to point Ⓐ. Common to chassis.	A10	Adjust for maximum deflection.
5.	"	"	86.5MC	"	Tuning gang fully closed	"	L6	Adjust for maximum deflection by compressing or expanding coil turns. Repeat steps 4 and 5.
6.	"	"	108MC	"	Tune to 108MC signal	"	A11, A12	Adjust for maximum deflection.
7.	"	"	88MC	"	Tune to 88MC signal		L4, L2	Adjust for maximum deflection by compressing or expanding coil turns. Repeat steps 6 and 7. Remove short from C20.

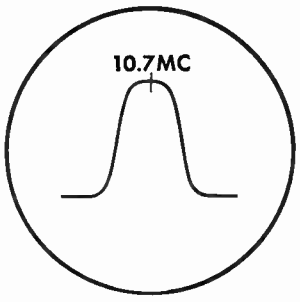


FIG. 1

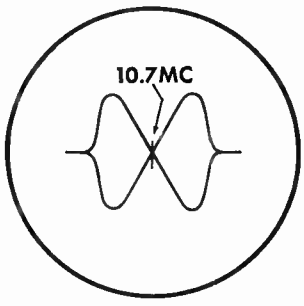
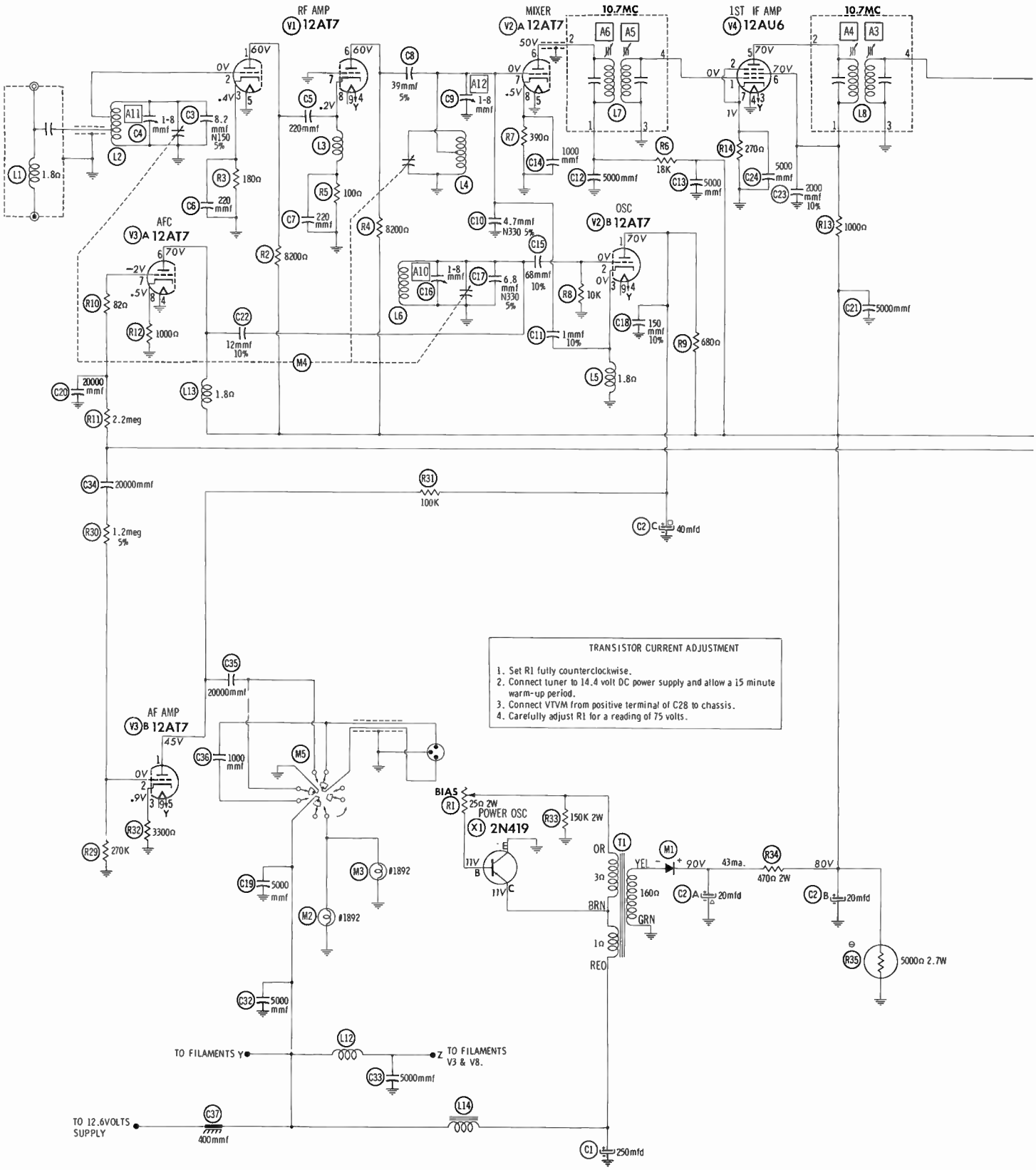
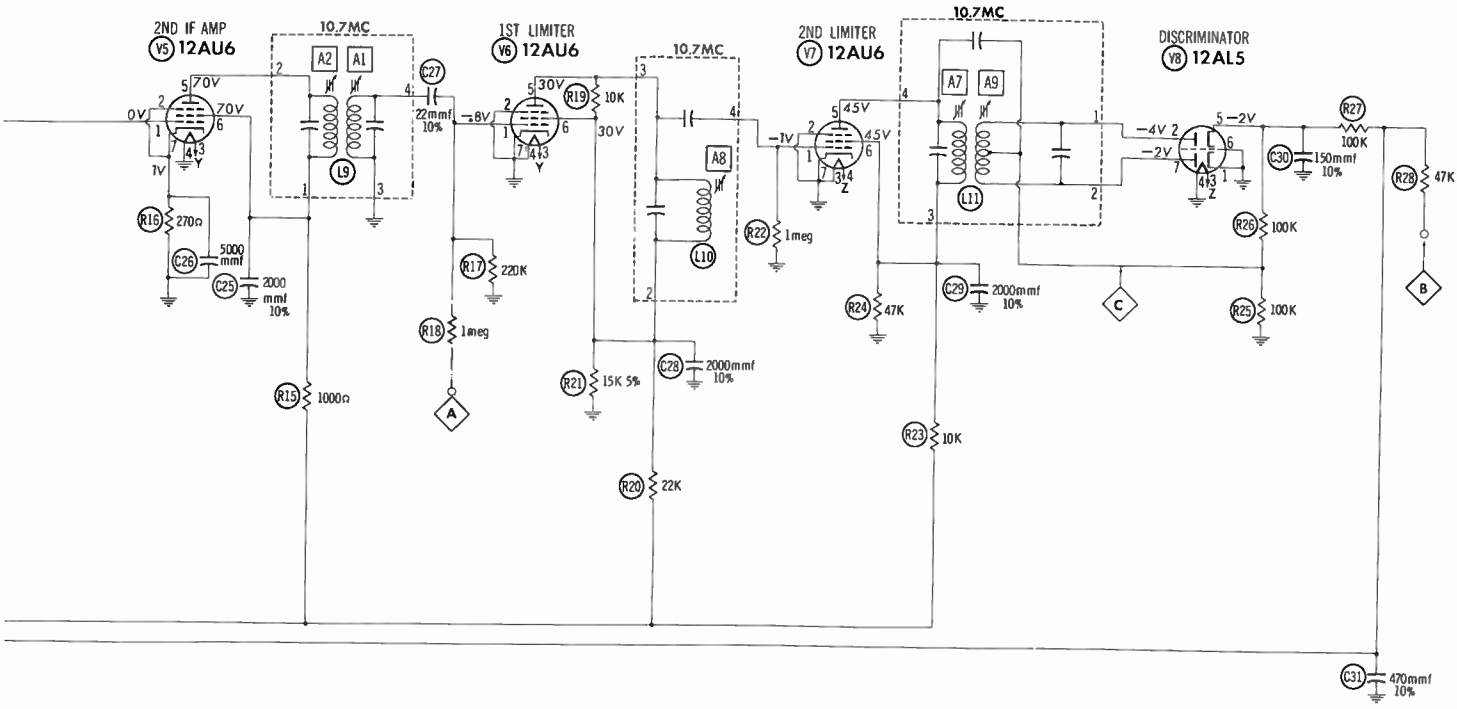


FIG. 2



A PHOTOFACT STANDARD NOTATION SCHEMATIC
Howard W. Sams & Co., Inc. 1958



RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12AT7	†8500Ω	0Ω	180Ω	1.2Ω	0Ω	†8500Ω	0Ω	100Ω	.6Ω
V2	12AT7	†1200Ω	10K	1.8Ω	1.2Ω	0Ω	†17K	0Ω	390Ω	.6Ω
V3	12AT7	†100K	270K	3300Ω	0Ω	1.2Ω	†1.8Ω	2.5meg	1000Ω	.6Ω
V4	12AU6	1Ω	270Ω	1.2Ω	0Ω	†1500Ω	†1500Ω	270Ω		
V5	12AU6	1Ω	270Ω	1.2Ω	0Ω	†1500Ω	†1500Ω	270Ω		
V6	12AU6	220K	0Ω	1.2Ω	0Ω	†16K	†16K	0Ω		
V7	12AU6	1meg	0Ω	0Ω	1.2Ω	†9K	†9K	0Ω		
V8	12AL5	0Ω	100K	1.2Ω	0Ω	200K	0Ω	100K		

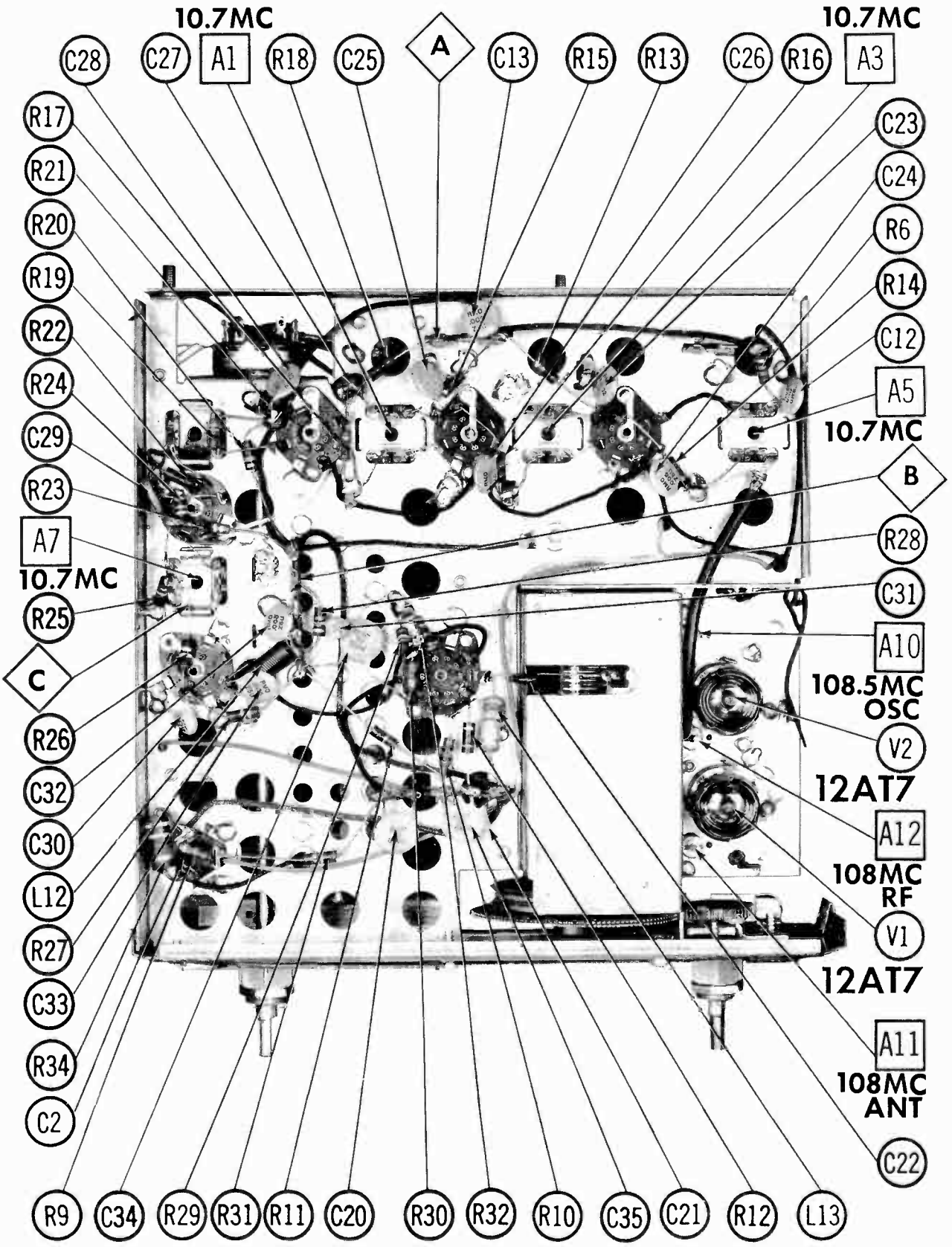
TRANSISTOR CIRCUIT RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.

† MEASURED FROM OUTPUT OF M1
NC NO CONNECTION

1. DC voltage measurements taken with vacuum tube voltmeter.
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes posssible a variation of ±15%in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

Θ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM



CHASSIS-BOTTOM VIEW

PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier	12AT7	
V2	Mixer-Oscillator	12AT7	
V3	AFC-AF Amp.	12AT7	
V4	1st IF Amplifier	12AU6	
V5	2nd IF Amplifier	12AU6	
V6	1st Limiter	12AU6	
V7	2nd Limiter	12AU6	
V8	Discriminator	12AL5	

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA				NOTES
			CBS PART No.	RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	2N419	Power Oscillator	CBS LT-52			2N242	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	BENDIX PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1	250	15	220483-4	PRS250V15	BR2501	TC50025	TD-250-15	MTH-1525	TVA-1161
C2A	▲20	150	220108-8	AFH3-08	C0070	FP311.2	TMT-7	T-035	R2312 *
B	20	150				TC45			
C	■40	150							

* Non-Catalog Item.

FIXED CAPACITORS

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

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT	BENDIX PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
C3	8.2		2090058E-829J						N150 5%
C4	1-8		2090517-1						
C5	220		2090058R-221M	BPD-00022	DD-221	L10T22	UC-5322	5GA-T22	
C6	220		2090058R-221M	BPD-00022	DD-221	L10T22	UC-5322	5GA-T22	
C7	220		2090058R-221M	BPD-00022	DD-221	L10T22	UC-5322	5GA-T22	
C8	39		220347-415		DD-390	5R5T39			5%
C9	1-8		2090517-1						
C10	4.7		2090058G-479J						N330 5%
C11	1		220212-10						10%
C12	5000		2090058T-502P	BPD-005	DD-502	BYA10D5	DC525	5HK-D5	
C13	5000		2090058T-502P	BPD-005	DD-502	BYA10D5	DC525	5HK-D5	
C14	1000		2090058T-102P	BPD-001	DD-102	BYA6D1	DC521	5HK-D1	
C15	88		220347-511	1469-000088	DD-680	22R5Q68		MS-468	10%
C16	1-8		2090517-1						
C17	6.8		2090058G-689J						N330 5%
C18	150		2090058R-151K	NPO-DI 150	DD-151	L10T15	ZT-5315	5TCC-T15	10%
C19	5000		2090058T-502P	BPD-005	DD-502	BYA10D5	DC525	5HK-D5	
C20	20000		22095-42	BPD-02	DD-203	BYB6S2		5HK-S2	
C21	5000		2090058T-502P	BPD-005	DD-502	BYA10D5	DC525	5HK-D5	
C22	12		220347-502	1489-000012	DD-120	22R5Q12		MS-412	10%
C23	2000		2090058R-202K						10%
C24	5000		2090058T-502P	BPD-005	DD-502	BYA10D5	DC525	5HK-D5	
C25	2000		2090058R-202K						10%
C26	5000		2090058T-502P	BPD-005	DD-502	BYA10D5	DC525	5HK-D5	
C27	22		220347-505	1489-000022	DD-220	22R5Q22		MS-422	10%
C28	2000		2090058R-202K						10%
C29	2000		2090058R-202K						10%
C30	150		2090058R-151K		DD-151	L10T15			10%
C31	470		2090058R-471K		MD-470				10%
C32	5000		2090058T-502P	BPD-005	DD-502	BYA10D5	DC525	5HK-D5	
C33	5000		2090058T-502P	BPD-005	DD-502	BYA10D5	DC525	5HK-D5	
C34	20000		220095-42	BPD-02	DD-203	BYB6S2		5HK-S2	
C35	20000		220095-42	BPD-02	DD-203	BYB6S2		5HK-S2	
C36	1000		2090058T-102P	BPD-001	DD-102	BYA6D1	DC521	5HK-D1	
C37	400		220267-2						

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	BENDIX PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1	25Ω	2(WW)	219555-12					Transistor Bias

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING		BENDIX PART No.	NOTES
	OHMS	WATT		
R2	8200Ω		220551B-822K	
R3	180Ω		220551B-181K	
R4	8200Ω		220551B-822K	
R5	100Ω		220551B-101K	
R6	18K		220551B-183K	
R7	390Ω		220551B-391K	
R8	10K		220551B-103M	
R9	680Ω		220551B-681K	
R10	82Ω		220551B-820K	
R11	2.2meg		220551B-225K	
R12	1000Ω		220551B-102K	
R13	1000Ω		220551B-102K	
R14	270Ω		220551B-271K	
R15	1000Ω		220551B-102K	
R16	270Ω		220551B-271K	
R17	220K		220551B-224K	
R18	1meg		220551B-105M	

ITEM No.	RATING		BENDIX PART No.	NOTES
	OHMS	WATT		
R19	10K		220551B-103K	
R20	22K		220551B-223K	
R21	15K 5%		220551B-153K	
R22	1meg		220551B-105M	
R23	10K		220551B-103K	
R24	47K		220551B-473K	
R25	100K		220551B-104K	
R26	100K		220551B-104K	
R27	100K		220551B-104K	
R28	47K		220551B-473M	
R29	270K		220551B-274K	
R30	1.2meg 5%		220551B-125K	
R31	100K		220551B-104K	
R32	3300Ω		220551B-332K	
R33	150K	2	220803D-151	
R34	470Ω	2	220803D-471	
R35	5000Ω	2.7	2090516-1	

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		BENDIX PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Rom PART No.	
L1	Antenna Coupling Coil	2090340-3	19-1002	BC-563	4606		2.2 Microhenries *
L2	Antenna Coil	2090356-1					
L3	Cathode Choke	2090531-1			4584		.22 Microhenry
L4	Mixer Grid Coil	2090355-1					
L5	Cathode Choke	2090340-3	19-1002	BC-563	4606		2.2 Microhenries *
L6	Osc. Coil	2090357-1					
L7	1st IF	2090351-1	16-3487	FM-254	1463		
L8	2nd IF	2090351-1	16-3487	FM-254	1463		
L9	3rd IF	2090351-1	16-3487	FM-254	1463		
L10	Limiter	2090353-1					
L11	Discriminator	2090354-1	17-3491	FM-253	1464		
L12	Fil. Choke	2090341-1	19-1001	BC-582	4604		1.5 Microhenries
L13	RF Choke	2090340-3	19-1002	BC-563	4606		2.2 Microhenries *

* IRC Part # CLA.

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA						
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000 ~)	BENDIX PART No.	Halldorson PART No.	Merit PART No.	Rom PART No.	Stancor PART No.	Thordorson PART No.	Triad PART No.
L14	.7A @ 12V DC	.5Ω	.004 Hy.	2090520-4						

TRANSFORMER (POWER)

ITEM No.	RATING			REPLACEMENT DATA						
	PRI.	SEC. 1	SEC. 2	BENDIX PART No.	Halldorson PART No.	Merit PART No.	Rom PART No.	Stancor PART No.	Thordorson PART No.	Triad PART No.
T1	12VCT @ .7A	85V @ .030A		2090534-1						

PARTS LIST AND DESCRIPTIONS (Continued)

SELENIUM RECTIFIER

ITEM No.	RATING	REPLACEMENT DATA				NOTES
	CURRENT (Measured)	BENDIX PART No.	FEDERAL PART No.	INTERNATIONAL PART No.	SARKES TARZIAN PART No.	
M1	.043A	2090526-1	1234AH	RS050	50	

MISCELLANEOUS

ITEM No.	PART NAME	BENDIX PART No.	NOTES
M2	Lamp	1892	#1892
M3	Lamp	1892	#1892
M4	Tuning Cap.	2090277-1	3 Gang
M5	Switch	2090400-2	AM-FM (Rotary, Wafer Type)

CABINETS & CABINET PARTS

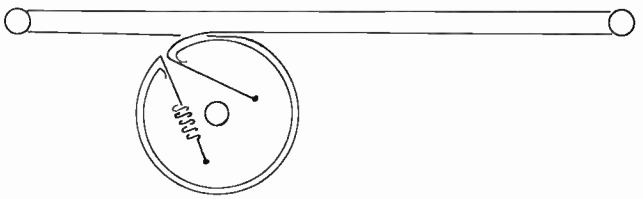
(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

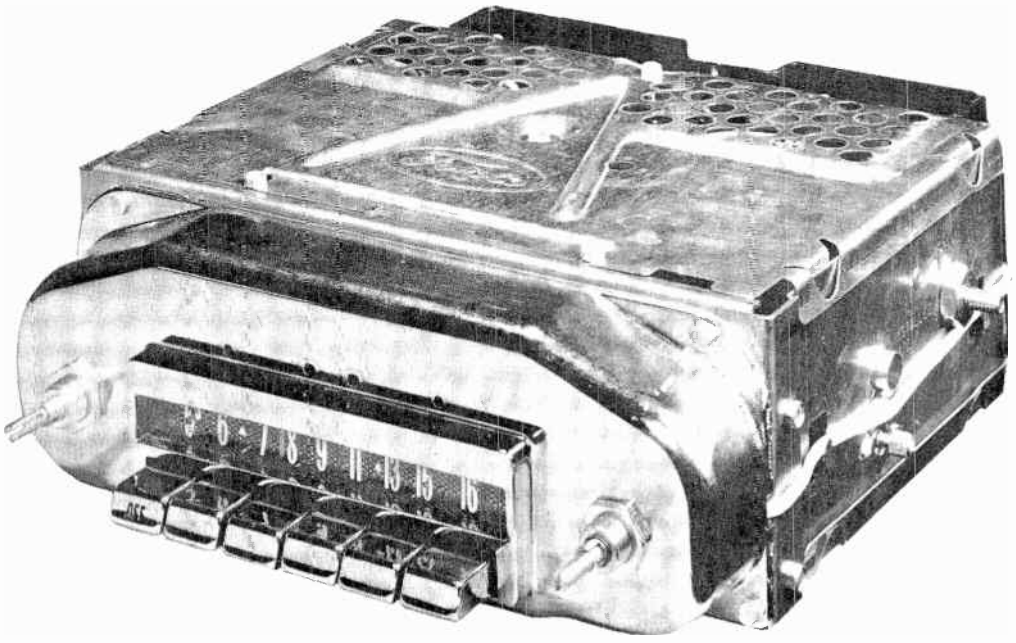
NAME	PART NO.	DESCRIPTION
Knob Ass'y	2090282-1	
Disc	686727-1	Control
Case Ass'y	2090273-1	
Pointer	2090223-1	
Dial Glass	2090211-1	Calibrated
Sub Dial	2090320-1	

WIRING DATA

General-use Unshielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors
Shielded Hook-up Wire ..... Use BELDEN No. 8885
Bonding Strap ..... Use BELDEN No. 8661

DIAL CORD STRINGING





TRADE NAME	Mercury Model 84BM (FEW-18805-U) For 1958 Mercury Automobiles
MANUFACTURER	Bendix Radio Div., Bendix Aviation Corp., Baltimore 4, Maryland
TYPE SET	Battery Operated Custom Built AM Automobile Receiver With Transistorized Output
TUBES (Four)	Types 12CX6 RF Amplifier, 12AD6 Converter, 12CX6 IF Amplifier, 12J8 Det.-AVC-AF Amp.
POWER SUPPLY	12 Volt Storage Battery — RATING 1.4 Amp. @ 12.6 Volts DC
TUNING RANGE—BROADCAST	540-1600KC

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING 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.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.1mfd	High side to pin 7 (grid) of 12AD6 (V2). Low side to chassis.	262.5KC (400~ Mod)	High Freq. End Stop	Across Voice Coil	A1, A2, A3, A4	Adjust for maximum output.
2.	Fig. 1	Thru dummy to antenna receptacle.	1605KC	"	"	A5, A6, A7	"
3.	With radio installed in car and antenna fully extended, tune in a weak station near 1600KC and adjust A7 for maximum output.						
	The following steps are not necessary unless tuner has been tampered with or associated components have been replaced. Back tuning cores A8, A9, A10 out of coils but not out of coil forms.						
4.	Fig. 1	Thru dummy to antenna receptacle.	1605KC	High Freq. End Stop	Across Voice Coil	A5, A6 A7	Adjust for maximum output.
5.	"	"	1200KC	Carriage .285" from High End Stop	"	A8, A9, A10	Adjust for maximum output. Repeat steps 4 and 5.

PUSHBUTTON ADJUSTMENT

1. Tune manually to desired station.
2. Pull out pushbutton, then press in firmly.
3. Repeat for remaining buttons.

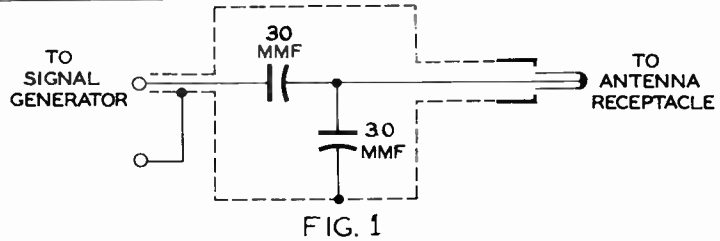


FIG. 1

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H600

PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier	12CX6	
V2	Converter	12AD6	
V3	IF Amplifier	12CX6	
V4	Det.-AVC-AF Amp.	12J8	

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA				NOTES
			CBS PART No.	RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	2N236B	Output	CBS-2N236B			2N235A	PNP

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	BENDIX PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	■250	16	220353-4	AFH2-02-05					R2564 *
B	▲250	16							

* Non-catalog item.

FIXED CAPACITORS

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

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT	BENDIX PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
C2	4-75		219083-1						
C3	120		220348-407	1469-00012	DTZ-120	22R5T12		MS-312	5%
C4	33	500	220332-19	N750-DI 33	TCN-33	C10Q33U	NT-5433	5TCU-Q33	N750 10%
C5	.05	100	2090059A-503Y	P288N-05	DF-503	CUB2S5	GEM-415	2TM-S5	
C6A	120-450								
B	370-445	150	219092-2						
C	100								
C7	750	500	220332-27	DI 750	DD-751	L10T75	UC-5375	5GA-T75	
C8	100	500	220332-14	BPD-0001	DD-101	L10T1	UC-531	5GA-T1	
C9	51	500	220332-16			C10Q51U			N750 10%
C10	68	500	220332-12	BPD-000068	DD-680	L10Q68	UC-5468	5GA-Q68	
C11	22	500	220332-30	BPD-000022	DD-220	L10Q22	UC-5422	5GA-Q22	
C12	.003	100	2090059A-302M	P288N-003	D6-302	CUB6D3	GEM-623	6TM-D3	
C13	.001	100	2090059A-102M	P288N-001	D6-102	CUB6D1	GEM-421	6TM-D1	
C14	10000	500	220332-3	BPD-01	DD-103	BYA10S1	DC511	5HK-S1	
C15	300		220267-12						
C16	200		220267-1						
C17	.1	100	2090059A-104Y	P288N-1	DF-104	CUB2P1	GEM-201	2TM-P1	

CONTROLS

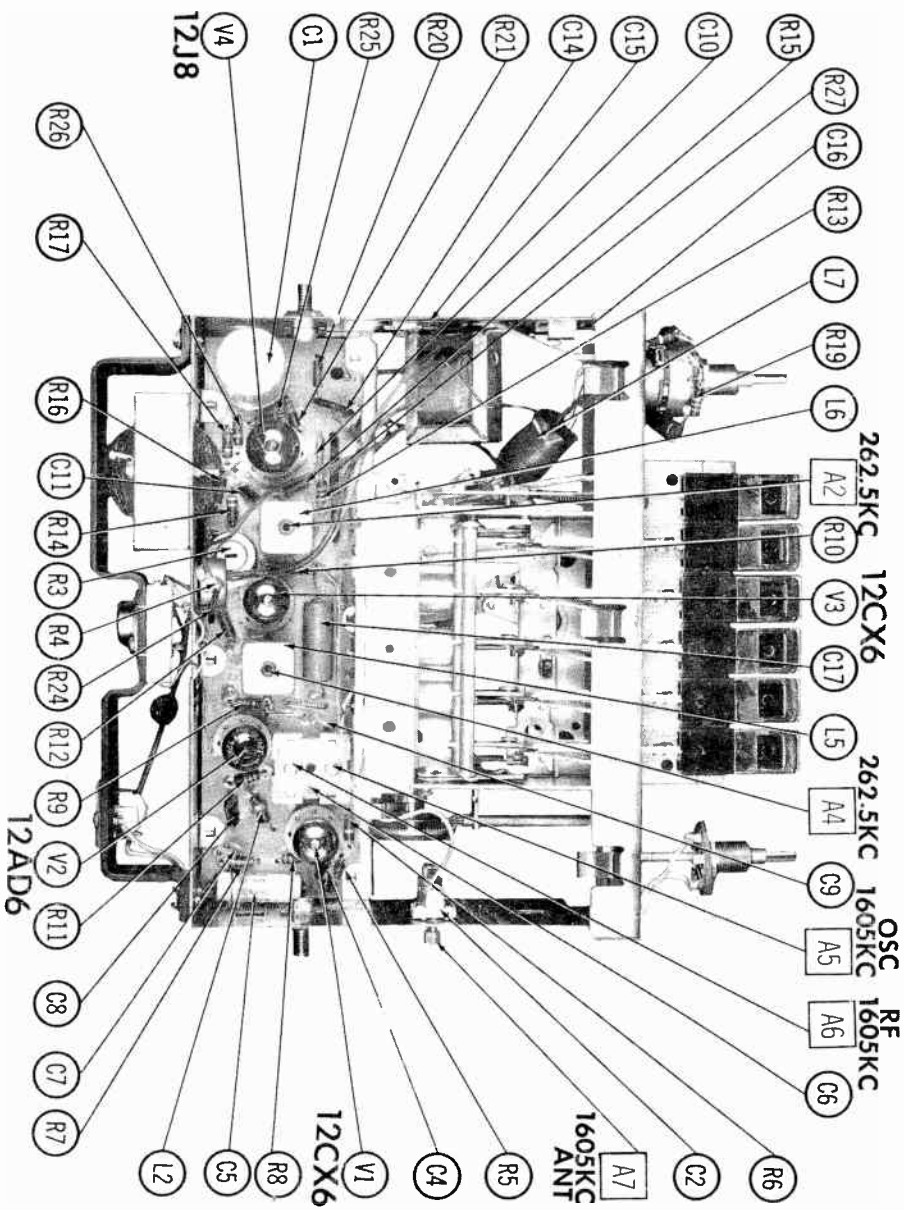
ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	BENDIX PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1A	Switch							Tone
B	2meg	½	219689-4					Volume, Tap @ 1meg
R2	11.5Ω	1(WW)	219679-1					Speaker Fader
R3	500Ω	1.5(WW)	219682-4					Sensitivity
R4	15Ω	1.5(WW)	2090573-3					Transistor Bias

RESISTORS

All wattages 1/2 watt, or less. unless otherwise listed.

ITEM No.	RATING		BENDIX PART No.	NOTES
	OHMS	WATT		
R5	680K		220604B-684	
R6	220K		220604B-224	
R7	680Ω		220604B-681	
R8	33meg		220604B-336	
R9	27meg		220603B-276	
R10	100Ω		220604B-101	
R11	33K		220604B-333	
R12	2.2meg		220604B-225	
R13	47K		220604B-473	
R14	4.7meg		220604B-475	
R15	2.2meg		220604B-225	
R16	270Ω		220604B-271	
R17	820Ω		220604B-821	
R18	150K		220604B-154	
R19	68K		220604B-683	
R20	10meg		220604B-106	

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS (cont)

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING OHMS	RATING WATT	BENDIX PART No.	NOTES
R21	33Ω	5	220604B-330	
R22	150Ω		2090574-2	
R23			2090516-2	Note 1
R24	.33Ω		2090438-13	3" Cupron Wire
R25	47Ω		220604B-470	
R26	10K		220604B-103	
R27	1Ω		2090438-14	10" Cupron Wire

Note 1. 1000Ω 25% @ 10.5VDC.

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO PRI.	TURNS RATIO SEC.	REPLACEMENT DATA BENDIX PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
T1	7.5 :	1	2090576-4						

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	TURNS RATIO PRI.	TURNS RATIO TAP	REPLACEMENT DATA BENDIX PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
T2	2:	1	2090553-1							

SPEAKER

ITEM No.	TYPE SIZE	TYPE FIELD	TYPE V. C. IMP.	REPLACEMENT DATA BENDIX PART No.	REPLACEMENT DATA QUAM PART No.	NOTES
SP1	6" x 9"	PM		282634-6		Front Speaker
SP2	6" x 9"	PM		282634-8		Rear Speaker

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA BENDIX PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Ram PART No.	NOTES
L1	Ant. Coil	*					
L2	IF Trap Coil	2090088-1					50 Microhenries, wound on 18K
L3	RF Coil	*					
L4	Osc. Coil	*					
L5	Input IF	2090513-1	16-6756	BC-317	13-PH1		
L6	Output IF	2090549-1					
L7	"A" Lead Choke	216188-15					

* Part of Tuner Coil Assembly Part #2090131-12.

MISCELLANEOUS

ITEM No.	PART NAME	BENDIX PART No.	NOTES
M1	Lamp	1891	#1891
M2	Tuner Ass'y.	2090550-2	Includes mounting plate and pushbuttons
M3	Switch	218669-1	On-off, DPST Type
	Printed Board	2090750-1	

CABINETS & CABINET PARTS

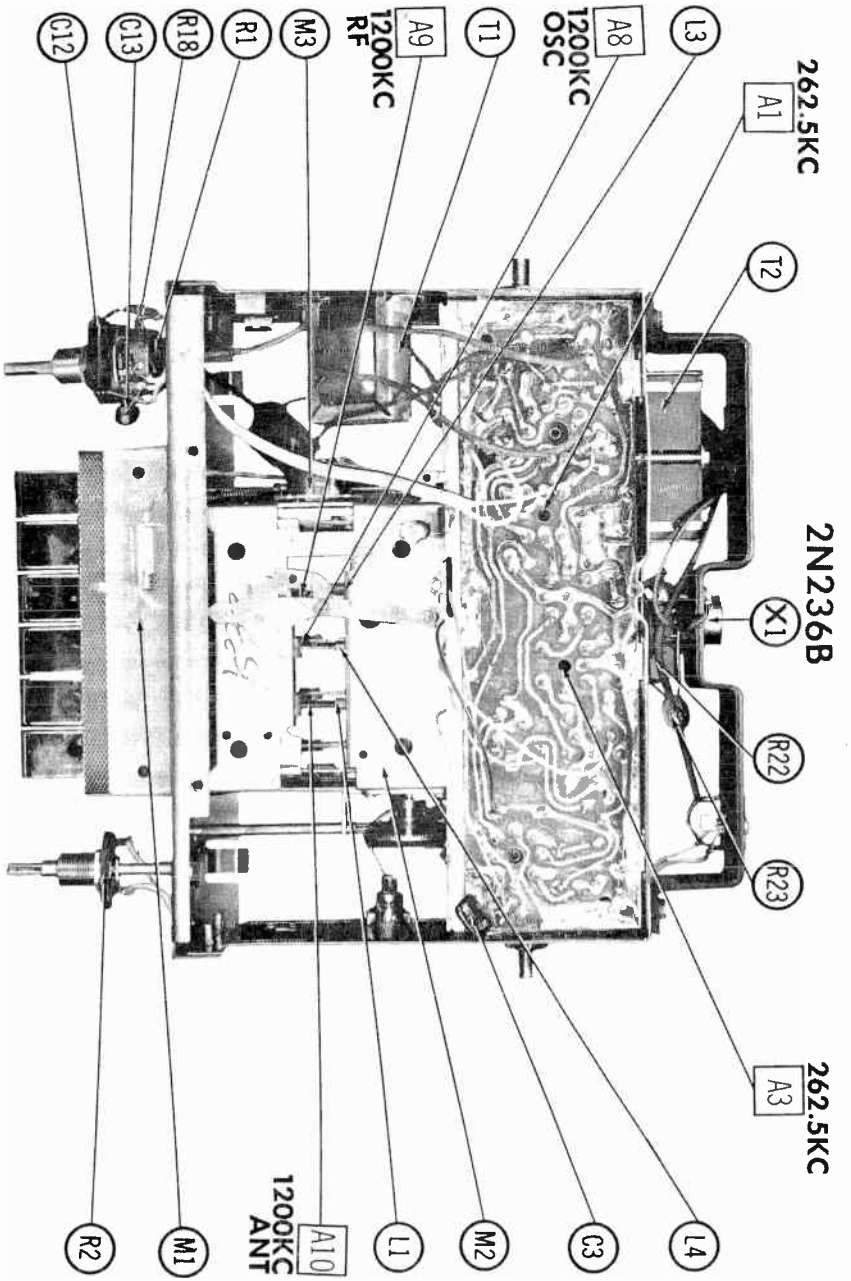
(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

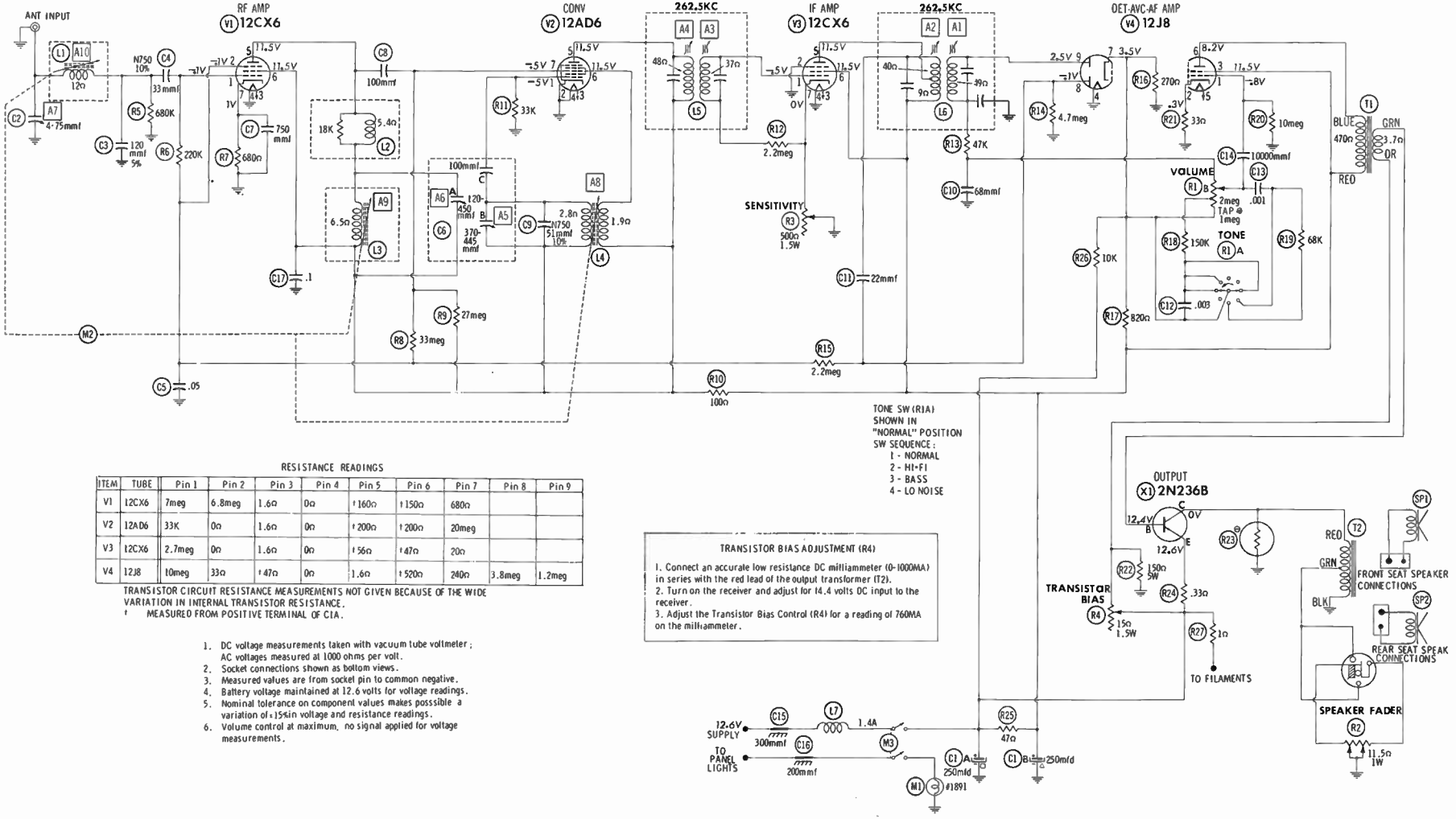
NAME	PART NO.	DESCRIPTION
Knob	2090685-1	Tuning, On-Off-Volume
Disc	2090007-1	Tone, Fader
Pushbutton	656085-1	"Off"
Pushbutton	656085-2	Station Selectors

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in Ten Colors 8524 (Stranded) Available in Ten Colors
Shielded Hook-up Wire	Use BELDEN No. 8885
Bonding Strap	Use BELDEN No. 8661

CHASSIS—BOTTOM VIEW





RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12CX6	7meg	6.8meg	1.6Ω	0Ω	†160Ω	†150Ω	680Ω		
V2	12AD6	33K	0Ω	1.6Ω	0Ω	†200Ω	†200Ω	20meg		
V3	12CX6	2.7meg	0Ω	1.6Ω	0Ω	†56Ω	†47Ω	20Ω		
V4	12J8	10meg	33Ω	†47Ω	0Ω	1.6Ω	†520Ω	240Ω	3.8meg	1.2meg

TRANSISTOR CIRCUIT RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.
† MEASURED FROM POSITIVE TERMINAL OF C1A

1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured at 1000 ohms per volt.
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

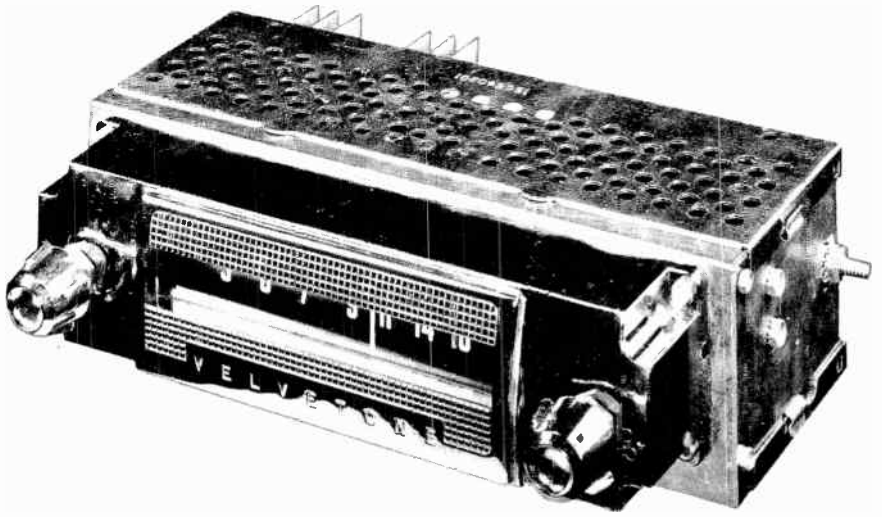
TRANSISTOR BIAS ADJUSTMENT (R4)

1. Connect an accurate low resistance DC milliammeter (0-1000MA) in series with the red lead of the output transformer (T2).
2. Turn on the receiver and adjust for 14.4 volts DC input to the receiver.
3. Adjust the Transistor Bias Control (R4) for a reading of 760MA on the milliammeter.

Θ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

OC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

A PHOTOFACT STANDARD NOTATION SCHEMATIC



TRADE NAME	Mopar Model 624 (For 1957 Dodge D66, D67, D70, D71, D72 Automobiles)
MANUFACTURER	Motorola Inc., 4545 W. Augusta Blvd., Chicago 51, Illinois
TYPE SET	Battery Operated Custom Built AM Automobile Receiver
TUBES (Five)	Types 12BL6 RF Amplifier, 12AD6 Converter, 12BL6 IF Amplifier, 12AE6 Det.-AVC-AF Amp., 12K5 Driver
POWER SUPPLY	12 Volt Storage Battery
RATING	1.6 Amp @ 12.6 Volts DC
TUNING RANGE—BROADCAST	540KC-1600KC

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Set volume control to maximum. Attenuate generator output to maintain 1.79 volts on output meter at all times. Use insulated alignment screwdriver for adjusting.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.1MFD	High side to pin 7 (grid) of 12AD6 (V2). Low side to chassis.	455KC (400~ Mod.)	High frequency end stop	Across voice coil	A1, A2, A3, A4	Adjust for maximum output.
2.	Fig. 1	Thru dummy to Antenna receptacle	1610KC	High frequency end stop	"	A5, A6, A7	"
	NOTE: It is not necessary to perform steps 3, 4, & 5 unless tuner has been tampered with or associated components have been replaced. Before proceeding with step 3 back tuning cores (A8, A9, A10) out of coils but not out of coil forms. Alignment tool, Part #66A76278 may be used.						
3.	Fig. 1	Thru dummy to Antenna receptacle	1610KC	High frequency end stop	Across voice coil	A5, A6, A7	Adjust for maximum output.
4.	"	"	1400KC	13/64" from high frequency end stop.	"	A8, A9, A10	Adjust for maximum output.
5.	"	"	1610KC	High frequency end stop	"	A5, A6, A7	Adjust for maximum output. Repeat steps 4 & 5.
6.	With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A7 for maximum output.						

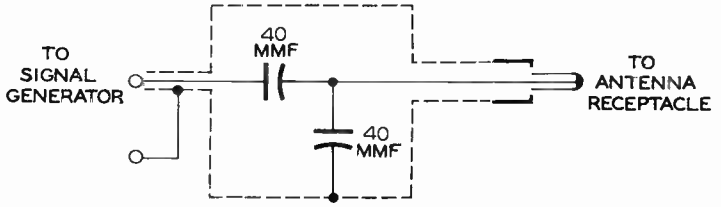


FIG. 1

TRANSISTOR BIAS ADJUSTMENT (R2)

After the transistor is replaced, the bias adjustment (R2) should be checked. To do this, connect the negative lead of a low range voltmeter to the junction of R17 and T2, and the positive lead to the junction of C1B and T2. Connect a power source of 12 Volts DC to the receiver and allow a 15 minute warm-up period. Adjust R2 for a reading of .51 volts on the voltmeter.

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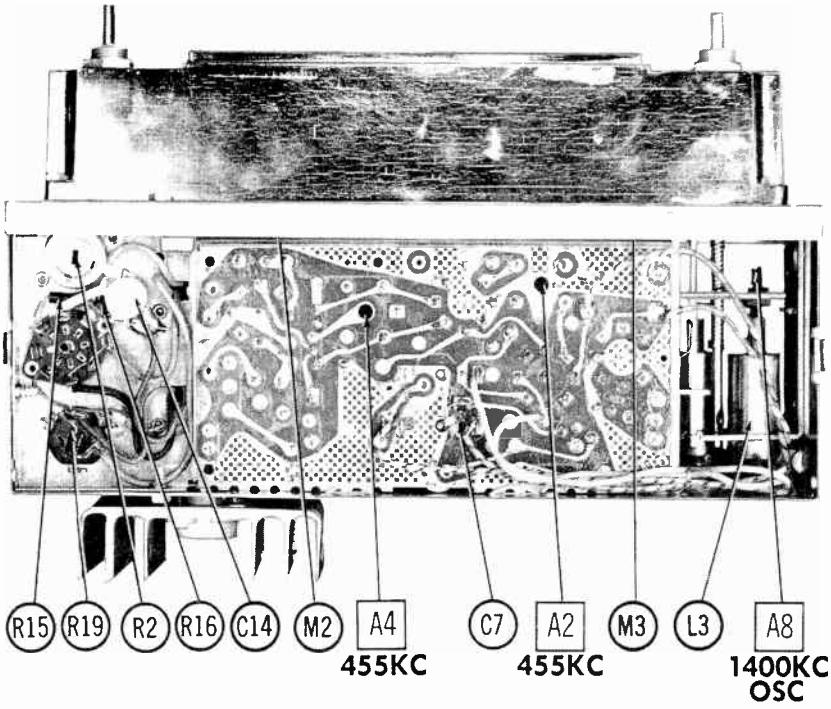
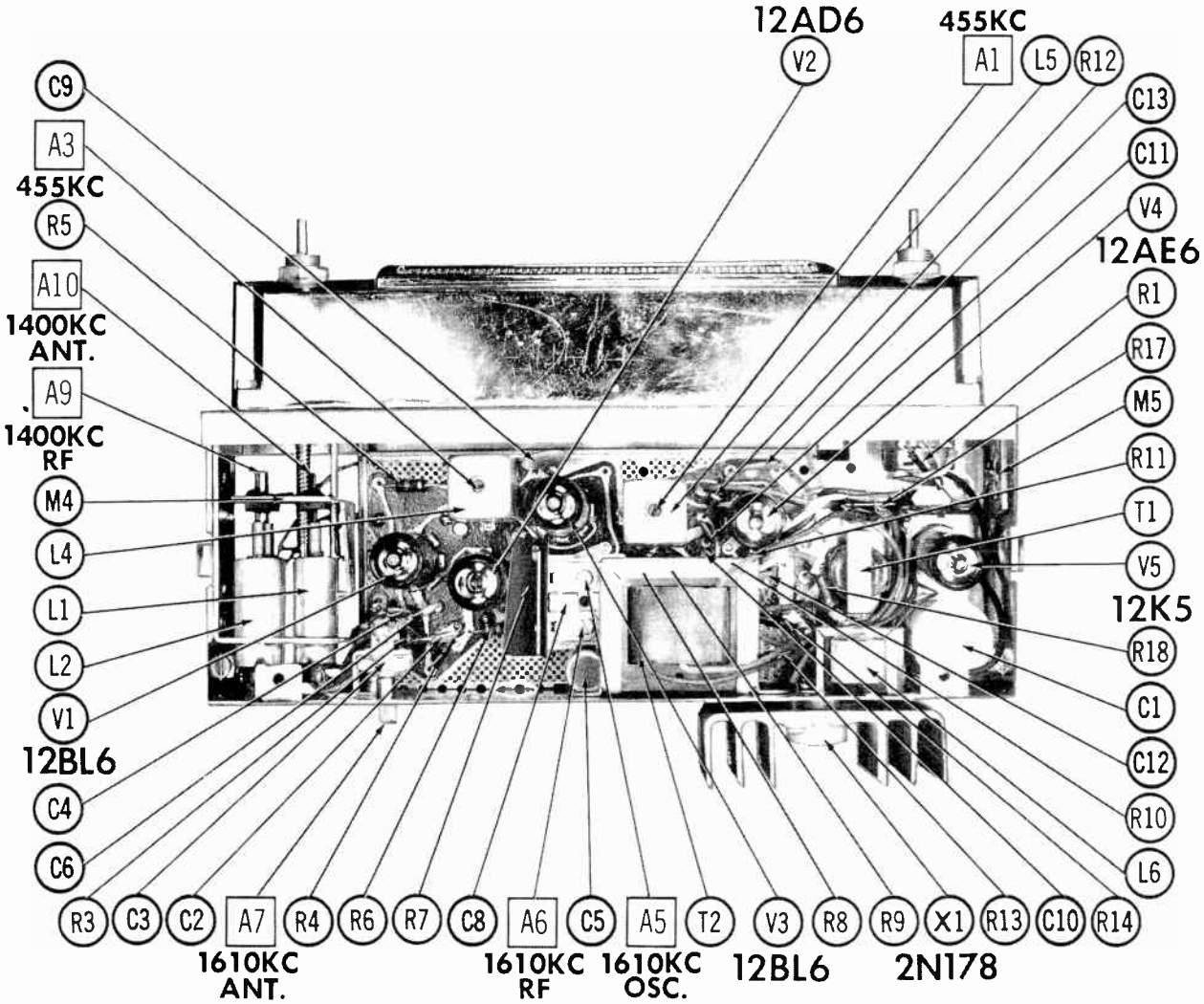


CHASSIS-BOTTOM VIEW



CHASSIS-TOP VIEW

PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier	12BL6	
V2	Converter	12AD6	
V3	IF Amplifier	12BL6	
V4	Det. - AVC - AF Amp.	12AE6	
V5	Driver	12K5	

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			CBS PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	2N178	Output				Note 1.

Note 1. Manufacturer recommends that type 2N176 be used when replacing.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	MOTOROLA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	▲100	16	23B539261	AFH2-02-10	B0045	WP200.5			R2452 *
B	■500	16							

* Non Catalog Item

FIXED CAPACITORS

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

ITEM No.	RATING		REPLACEMENT DATA							NOTES
	CAP.	VOLT	MOTOROLA PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	
C2	22		21R120539							10% N150
C3	50-240		20B532806							
C4	120		21K533470							N470
C5	.02	200	8K122896			BC2S22J		ACE612	2SE-S22	
C6	27		21K533469		TCZ-27	C10Q27C	TCO-27			10% NPO
C7	8.2			NPO-8.2		C10V82C	TCO-8.2			① ②
C8A	10									②
B	7.5-75		20B540632							
C	47									
D	420-490									
C9	10000		21B533471	BPD-01	DD-103	BYA6S1	ED-01	DC511	5HK-S1	
C10	27		21K533469		TCZ-27	C10Q27C	TCO-27			10% NPO
C11	100		21K538726	BPD-0001	DD-101	L10T1	ED-100	UC-531	5GA-T1	
C12	10000		21B533471	BPD-01	DD-103	BYA6S1	ED-01	DC511	5HK-S1	
C13	10000		21B533471	BPD-01	DD-103	BYA6S1	ED-01	DC511	5HK-S1	
C14	1000		21R410127	BPD-001	DD-102	BYA6D1	ED-1000	DC521	5HK-D1	

① Not used in some versions ② When replacing C8, mfgr. recommends omitting C7.

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESIST-ANCE	WATTS	MOTOROLA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1A	1Meg	½	18K540511	AB-70	A47-1Meg-Z	Q13-137	U53	Volume
B	Shaft			AK-8	RS-3/16	NQ	DS-37	
C	Switch			KB-4	SWE-13	76-1	US-26	
R2	220Ω	2	18K540653		39-200			Emitter Bias Adj.

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING		MOTOROLA PART No.	NOTES
	OHMS	WATT		
R3	100K		6R6075	
R4	1Meg		6R6004	
R5	27Ω		6R5683	
R6	470K		6R6032	
R7	33K		6R6012	
R8	4.7Meg		6R2122	
R9	4.7Meg		6R2122	
R10	1.5Meg		6R3966	
R11	10Meg		6R2109	
R12	470K		6R6032	
R13	68Ω		6R6007	
R14	1000Ω		6R6301	
R15	3.3Meg		6R2118	
R16	15Ω		6R410033	
R17	15Ω	1	6R118206	
R18			6K540634	Note 1
R19	100Ω		6R6018	

PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS (cont)

Note 1. Temperature compensated unit, 10Ω @ 25° C.

TRANSFORMER (DRIVER)

ITEM No.	Turns Ratio		REPLACEMENT DATA						NOTES
	PRI.	SEC.	MOTOROLA PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordorson PART No.	Triod PART No.	
T1	6.5:	1	25B540500						

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA						NOTES
	PRI.	SEC.	MOTOROLA PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordorson PART No.	Triad PART No.	
T2	28Ω	6-8Ω	25C540466						

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	MOTOROLA PART No.	QUAM PART No.	
SP1	5" X 7"	PM	6-8Ω	50K540003	57A21Z7	

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA				NOTES
		MOTOROLA PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	
L1	Antenna Coil	24B540356				Note 1
L2	RF Coil	24B540354				Note 1
L3	Osc. Coil	24B540355				Note 1
L4	Input IF	24K540633	16-6780	BC-356	13-PC1	
L5	Output IF	24K540633	16-6780	BC-357	13-PC2	

Note 1. Part of tuner M4 (MT-197) Part #77K540226.

FILTER CHOKE

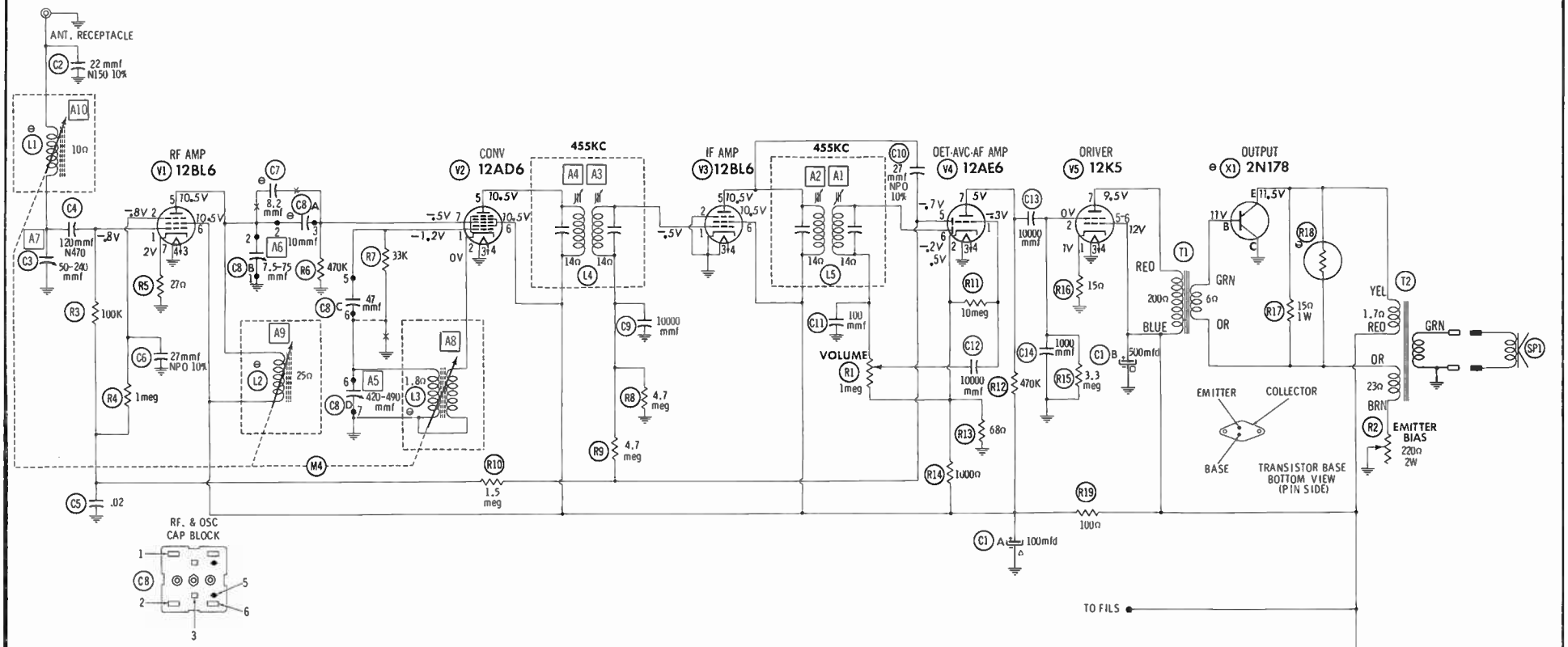
ITEM No.	RATINGS			REPLACEMENT DATA					
	TOTAL DIRECT CURRENT	D. C. RESISTANCE	INDUCTANCE (0 CURRENT 1000 ∿)	MOTOROLA PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordorson PART No.	Triod PART No.
L6	1.6A	.6Ω	3.5 Mil. Hy	25K540449					

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			MOTOROLA PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	SFE	7½A 32V	65R122346		30307.5 (7AG 7½A 32V)	155009	SFE 7½	HDH

MISCELLANEOUS

ITEM No.	PART NAME	MOTOROLA PART No.	NOTES
M2	Pilot Lamp	6R10867	#44
M3	Pilot Lamp	6R10867	#44
M4	Tuner	77K540226	MT-197, Complete
M5	Spark Plate	48K539953	Selenium



DIAL CORD STRINGING

RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7
V1	12BL6	9.5Meg	10.5Meg	1.2Ω	0Ω	†125Ω	†100Ω	27Ω
V2	12AD6	33K	1.8Ω	0Ω	1.2Ω	†114Ω	†100Ω	470K
V3	12BL6	4.7Meg	0Ω	0Ω	1.2Ω	†114Ω	†100Ω	0Ω
V4	12AE6	10Meg	68Ω	0Ω	1.2Ω	9.4Meg	1Meg	†470K
V5	12K5	15Ω	3.3Meg	0Ω	1.2Ω	† 0Ω	† 0Ω	†200Ω

RESISTANCE MEASUREMENTS OF TRANSISTOR CIRCUIT NOT TAKEN BECAUSE OF WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE

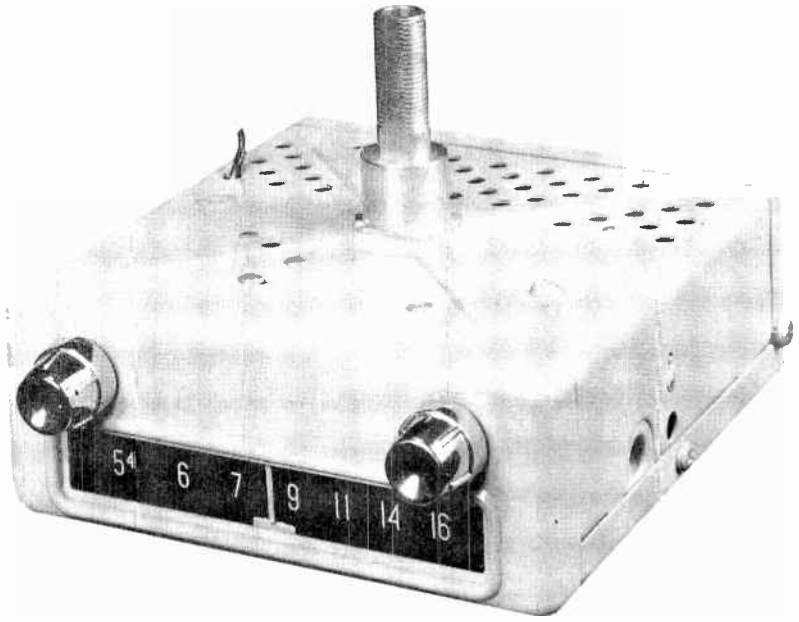
† MEASURED FROM JUNCTION OF R19 AND L6

1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured at 1000 ohms per volt.
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes posssible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM.

⊖ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

A PHOTOFACT STANDARD NOTATION SCHEMATIC
Howard W. Sams & Co., Inc. 1957



TRADE NAME	Mopar Model 700 (TAR-58) For 1958 Dodge Trucks
MANUFACTURER	Philco Corp., Tioga & "C" Sts., Philadelphia, Pa.
TYPE SET	Battery Operated Custom Built AM Truck Receiver With Transistorized Output
TUBES (Four)	Types 12BL6 RF Amplifier, 12AD6 Converter, 12BL6 IF Amplifier, 12DL8 Det.-AVC-AF Amp.
POWER SUPPLY	12 Volt Storage Battery RATING 1.5 Amp. @ 12.6 Volts DC
TUNING RANGE—BROADCAST	540-1605KC

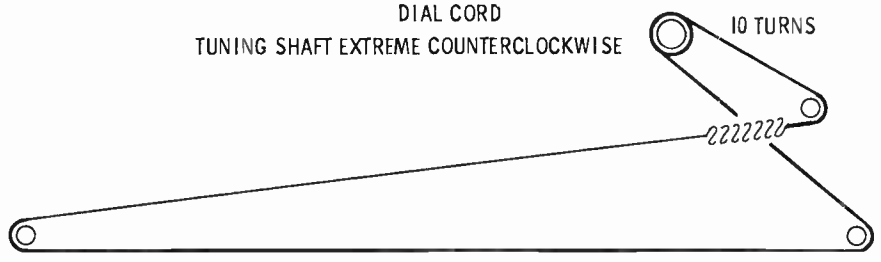
MOPAR
MODEL 700 (TAR-58)

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING 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.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.047mfd	High side to pin 7 (grid) of 12AD6 (V2). Low side to chassis.	262.5KC (400~ Mod)	Tuning gang fully open	Across voice coil	A1, A2, A3, A4	Adjust for maximum output.
2.	25mmf	High side to antenna receptacle. Low side to chassis.	1605KC	"	"	A5, A6, A7	"



HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana

H521

PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amp.	12BL6	
V2	Converter	12AD6	
V3	IF Amp.	12BL6	
V4	Det. -AVC-AF Amp.	12DL8	

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA				NOTES
			CBS PART No.	RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	AR11	Output				AR11	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	PHILCO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	■500	16	61-0086-10	AFH3-54-50	B0045	WP200.7			R2665 *
B	▲200	16			BBR5-50	TC30			
C	5	25							

* Non-catalog item.

FIXED CAPACITORS

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

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT	PHILCO PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
C2	100		30-1251-24	NPO-DI 100	DD-101	L10T1	ZT-531	5TCC-T1	10%
C3			31-6502-8						
C4	10		30-1251-8	BPD-00001	DD-100	L10Q1	UC-541	5GA-Q1	①
C5A									
B	100		31-6522-8						
C									
C6	33			BPD-000033	DD-330	L10Q33	UC-5433	5GA-Q33	②
C7	100		30-1251-22	N750-DI 100	DTN-100	C10T1U	NT-531	5TCU-T1	N750
C8	10000		30-1238-2	BPD-01	DD-103	BYA10S1	DC511	5HK-S1	
C9	220		30-1238-4	BPD-00022	DD-221	L10T22	UC-5322	5GA-T22	
C10	100		30-1251-24	BPD-0001	DD-101	L10T1	UC-531	5GA-T1	
C11	.047	200	30-4671-45	P288N-047	DF-503	CUB2S47	GEM-4147	2TM-S47	
C12	4000		30-1238-18	BPD-004	DD-402	BYA10D4	UC-5240	5HK-D4	
C13	10000		30-1238-6	BPD-01	DD-103	BYA10S1	DC511	5HK-S1	
C14	300		30-1254-1						

① Some versions may use 5mmf (Part #31-6502-8).
② Some versions may use 3mmf (Part #30-1251-9).

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	PHILCO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1A	1meg	½	33-5580-20					Volume, Tap @ 300K
B	Switch							
R2	15Ω	2(WW)	33-5591-2					Transistor Bias

RESISTORS

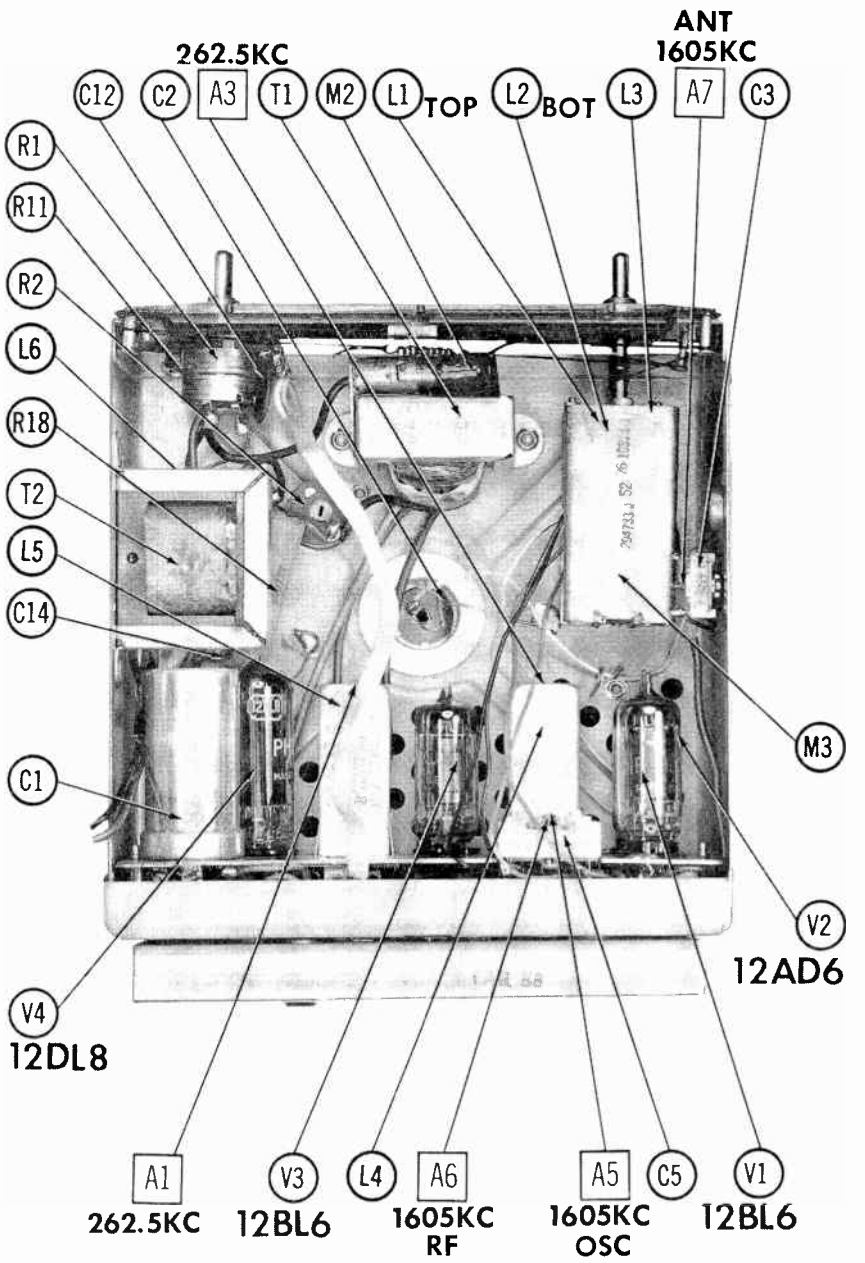
All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING		PHILCO PART No.	NOTES
	OHMS	WATT		
R3	150K		66-4158340	
R4	1200Ω		66-2128340	
R5	1meg		66-5108340	
R6	4.7meg		66-5478340	
R7	47K		66-3478340	
R8	10meg		66-6108340	
R9	22meg		66-6228340	
R10	100K		66-4108340	
R11	150K		66-4158340	
R12	2.2meg		66-5228340	

ITEM No.	RATING		PHILCO PART No.	NOTES
	OHMS	WATT		
R13	1meg		66-5108340	
R14	1000Ω		66-2108340	
R15	100Ω		66-1108340	
R16	10meg		66-6108340	
R17	12Ω		66-0128340	
R18	150Ω	10	33-1367-3	①
R19	4700Ω			②
R20	.27Ω		66-8274360	
R21	100Ω		66-1108340	

① Temperature compensating unit.
② Not used in some versions.

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA						NOTES
	PRI.	SEC.	PHILCO PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T1	9.5 :	1	32-8787-1						

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA							NOTES
	PRI.	SEC.	PHILCO PART No.	Halldorson PART No.	Merit PART No.	Rom PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	40.5Ω	3-4Ω	32-8833					TR59		

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	PHILCO PART No.	QUAM PART No.	
SP1	5"	PM	3-4Ω	36-1625-20	5A1	

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		PHILCO PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Rom PART No.	
L1	Ant. Coil						Note 1
L2	RF Coil						Note 1
L3	Osc. Coil						Note 1
L4	Input IF	32-4676-6	16-6752	BC-350	12-H1	RF-3	
L5	Output IF	32-4677-6					
L6	"A" Lead Choke	32-4720-3					

Note 1. Part of M3.

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			PHILCO PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1		4A 32V	45-2656	41-4244-8				

MISCELLANEOUS

ITEM No.	PART NAME	PHILCO PART No.	NOTES
M2	Lamp	34-2031-10	#1892
M3	Tuner	76-10315-1	

CABINETS & CABINET PARTS

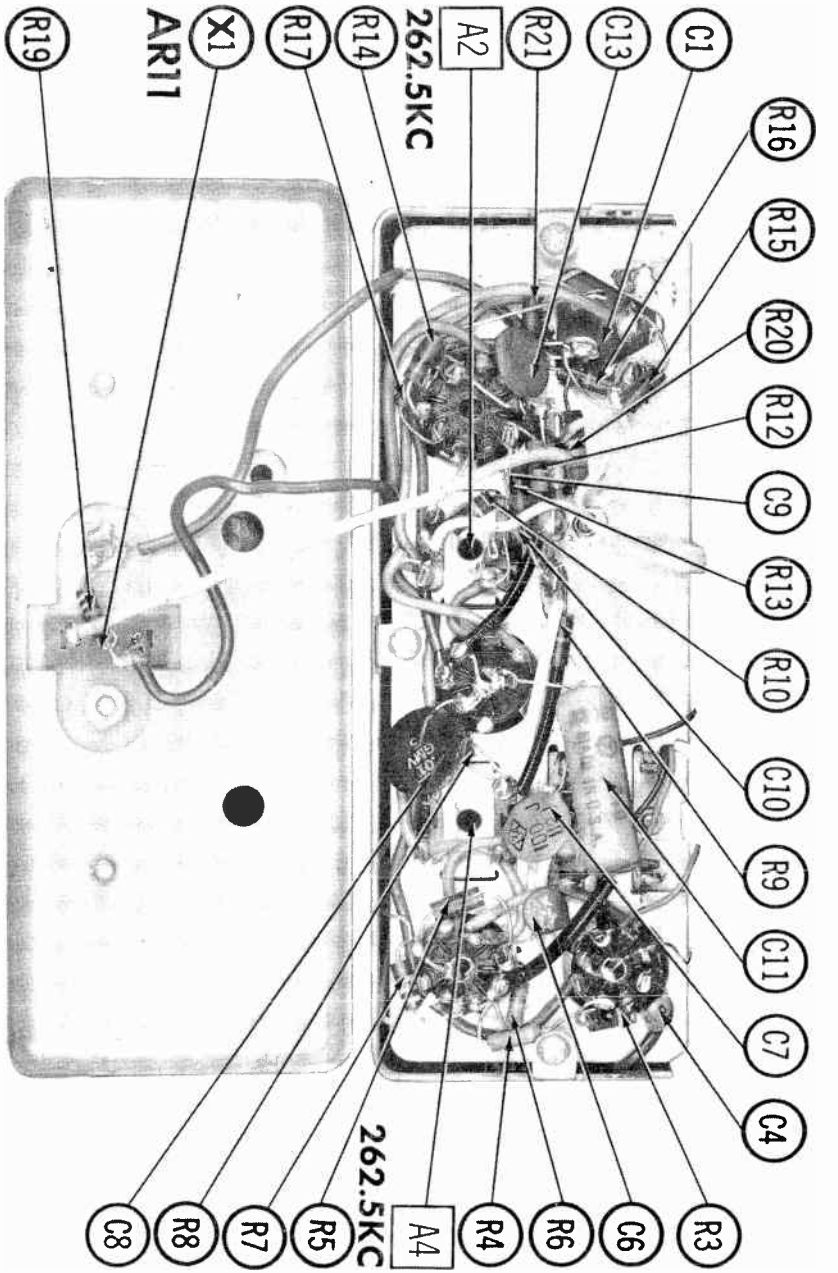
(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

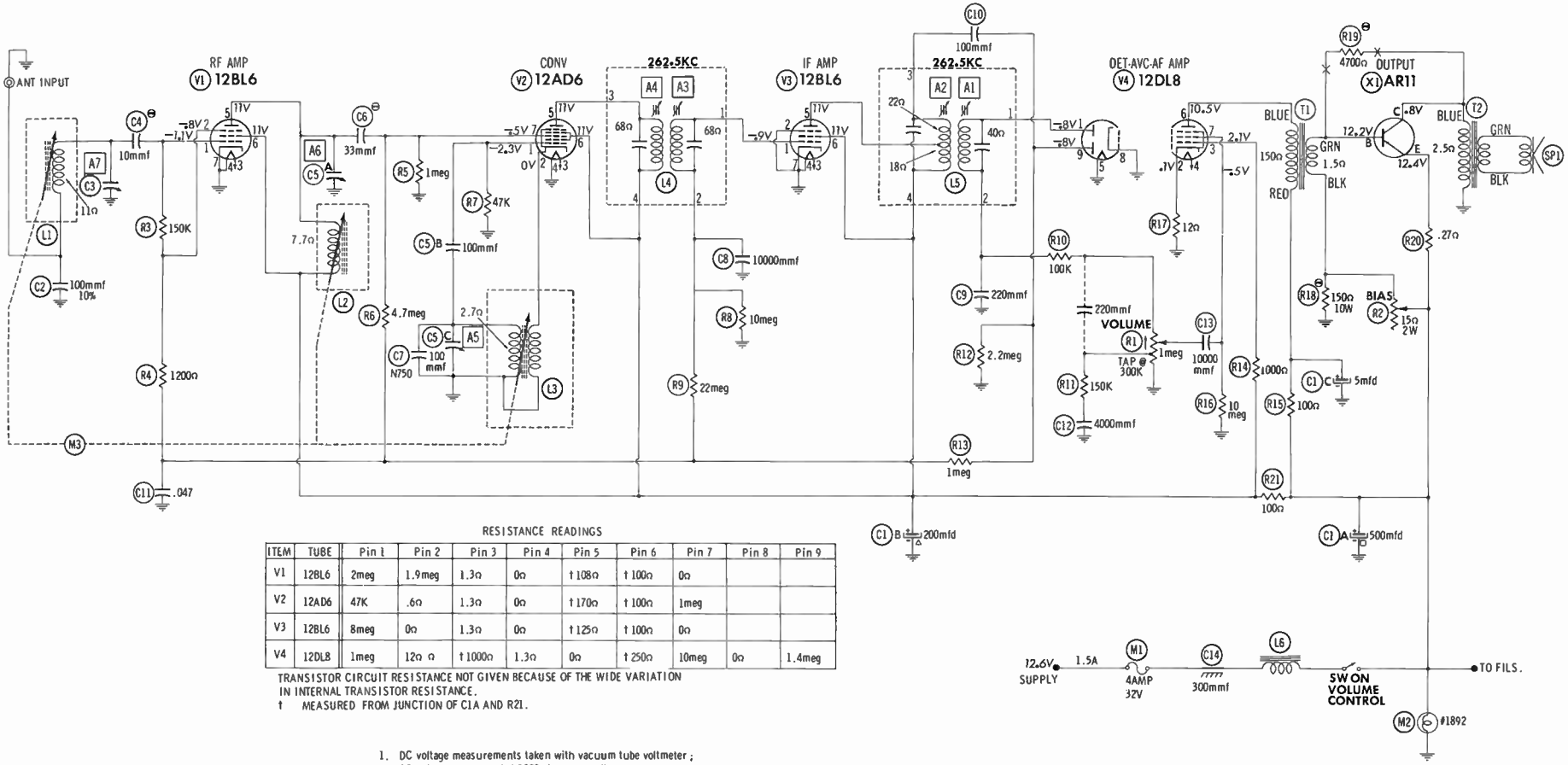
NAME	PART NO.	DESCRIPTION
Knob	27-4687-23	Tuning & Volume
Pointer	56-4362-11	
Dial Scale	54-5329	

WIRING DATA

General-use Unshielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors
Shielded Hook-up Wire ..... Use BELDEN No. 8885
Bonding Strap ..... Use BELDEN No. 8661

CHASSIS—BOTTOM VIEW





RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12BL6	2meg	1.9meg	1.3Ω	0Ω	†108Ω	†100Ω	0Ω		
V2	12AD6	47K	.6Ω	1.3Ω	0Ω	†170Ω	†100Ω	1meg		
V3	12BL6	8meg	0Ω	1.3Ω	0Ω	†125Ω	†100Ω	0Ω		
V4	12DL8	1meg	12Ω Ω	†1000Ω	1.3Ω	0Ω	†250Ω	10meg	0Ω	1.4meg

TRANSISTOR CIRCUIT RESISTANCE NOT GIVEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.
† MEASURED FROM JUNCTION OF C1A AND R21.

1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured at 1000 ohms per volt.
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes posssible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

Θ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

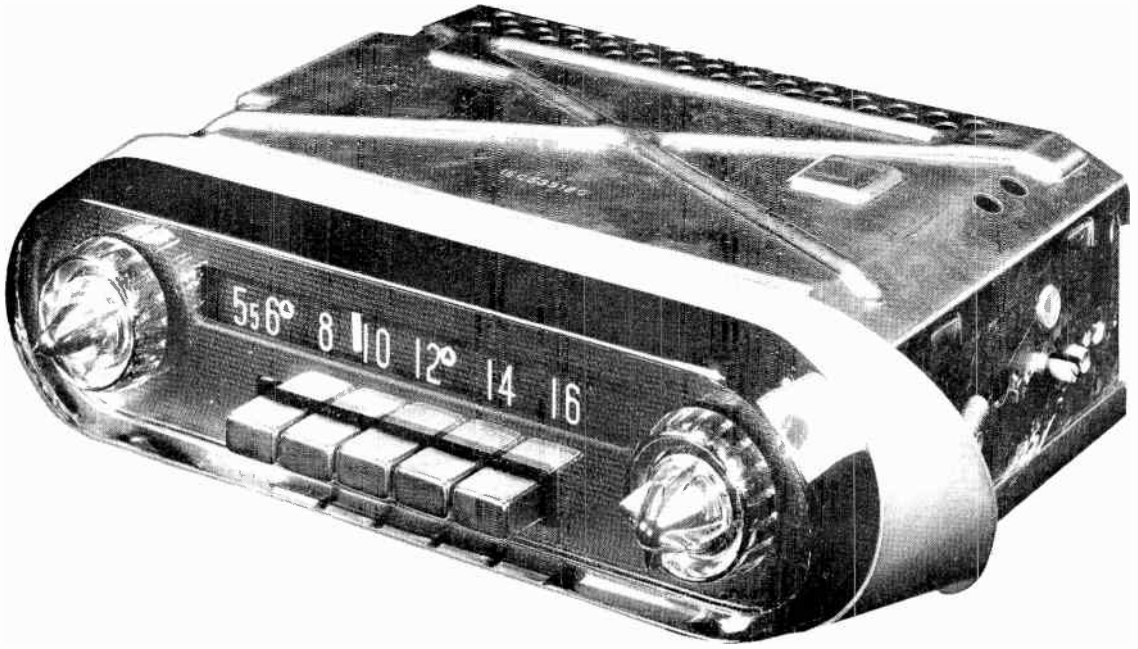
DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)

TRANSISTOR BIAS ADJUSTMENT (R2)

The bias control should be adjusted if the transistor is replaced.
1. Set R2 to mid-range.
2. Connect a low range DC voltmeter (not on VTVM) across the output transformer (T2).
3. Apply 13.2 volts DC to the receiver and allow a 15 minute warm-up period.
4. Adjust R2 for a meter reading of .85 volts. This is equivalent to a collector current of 300MA.

A PHOTOFACT STANDARD NOTATION SCHEMATIC
Howard W. Sams & Co., Inc 1958



TRADE NAME	Mopar Models 845 (For 1957 D66, D67, D70, D71, D72 Dodge Automobiles), 846 (For 1957 S25, S26, S27 DeSoto Automobiles)
MANUFACTURER	Motorola Inc. 4545 W. Augusta Blvd., Chicago 51, Illinois
TYPE SET	Battery Operated Custom Built AM Automobile Receiver With Transistorized Output
TUBES (Five)	Types 12BL6 RF Amplifier, 12AD6 Converter, 12AF6 IF Amplifier, 12AJ6 Det. - AVC - AF Amp., 12K5 AF Amplifier
POWER SUPPLY	12 Volt Storage Battery
RATING	1.6 Amp. @ 12.6 Volts DC
TUNING RANGE—BROADCAST	540 - 1600KC

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING 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. Set tone control to High.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.1mfd.	High side to pin 7 (grid) of 12AD6 (V2). Low side to chassis.	262.5KC (400∿ Mod.)	High frequency end stop	Across voice coil	A1, A2, A3, A4	Adjust for maximum output.
2.	Fig. 1.	Through dummy to antenna receptacle.	1610KC	"	"	A5, A6, A7	"
	It is not necessary to perform steps 3 and 4 unless tuner has been tampered with or associated components have been replaced. Before proceeding with step 3, back tuning cores 1 3/8" out of coils. Alignment tool #66A76278 may be used.						
3.	Fig. 1.	Through dummy to antenna receptacle.	1610KC	High frequency end stop	Across voice coil	A5, A6, A7	Adjust for maximum output.
4.	"	"	1020KC	49/64" from high frequency end stop	"	A8, A9, A10	Adjust for maximum output. Repeat steps 3 and 4 until no further improvement is noted. Step 3 should be the last step.
	With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A7 for maximum output.						

POINTER CALIBRATION

With radio tuned to a 1000KC signal, adjust pointer adjusting cam until pointer coincides with the 1000KC mark on the dial scale.

PUSHBUTTON ADJUSTMENT

1. Antenna should be fully extended and receiver allowed to warm up for 15 minutes.
2. Pull pushbutton out.
3. Tune manually to desired station.
4. Press pushbutton in firmly.
5. Repeat for remaining pushbuttons.

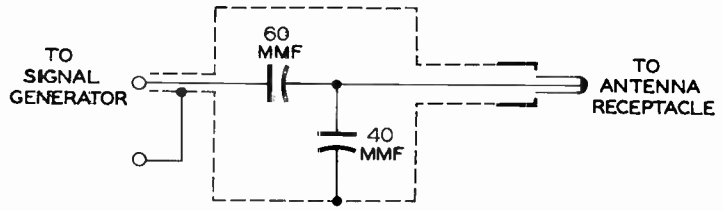


FIG. 1

H249

PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier	12BL6	
V2	Converter	12AD6	
V3	IF Amplifier	12AF6	
V4	Det. - AVC- AF Amp.	12AJ6	
V5	AF Amplifier	12K5	

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			CBS PART No.	RAYTHEON PART No.	SYLVANIA PART No	
X1	2N176	Output	2N155		2N176	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	MOTOROLA PART No	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	■500	16	23B539261	AFH2-02-10	B0045	WP200.5			R2299 *
B	▲100	16							
C2	500	3	23B539260	PRS6V500	BR500-6	TC605	TD-500-6	MTH-0650	TVA-1103

* Non Catalog Item

FIXED CAPACITORS

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

ITEM No.	RATING		REPLACEMENT DATA							NOTES
	CAP.	VOLT	MOTOROLA PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	
C3	20-150		20B532899							①
C4	.02	200	8R121003	P288N-02	DD-203	CUB4S2	ED-02	GEM-412	2TM-S2	
C5	18		21R120578							N150 10%
C6	8.2		21R120159	NPO-SI 8.2		C10V82C	TCO-8.2			
C7A	50-260		20B539699							
B	47									
C	120-220									
C8	100		21R124032							N220
C9	10000		21R482726	BPD-01	DD-103	BYA6S1	ED-01	DC511	5HK-S1	
C10	27		21R410089		TCZ-27	C10Q27C	TCO-27			NPO 10%
C11	47		21R115593	N750-SI 47	TCN-47	C10Q47U	TC7-47	NT-5447	5TCU-Q47	N750
C12	10000		21R482726	BPD-01	DD-103	BYA6S1	ED-01	DC511	5HK-S1	
C13	5000		21R115312	BPD-005	DD-502	BYA10D5	ED-005	DC525	5HK-D5	
C14	220		21R410115	BPD-00022	DD-221	L10T22	ED-220	UC-5322	5GA-T22	
C15	100		21R400537	N750-SI 100	TCN-100	C10T1U	TC7-100	NT-531	5TCU-T1	N750
C16	10000		21R482726	BPD-01	DD-103	BYA6S1	ED-01	DC511	5HK-S1	

① Part #20B534809 (20-180mmf) used in Model 845

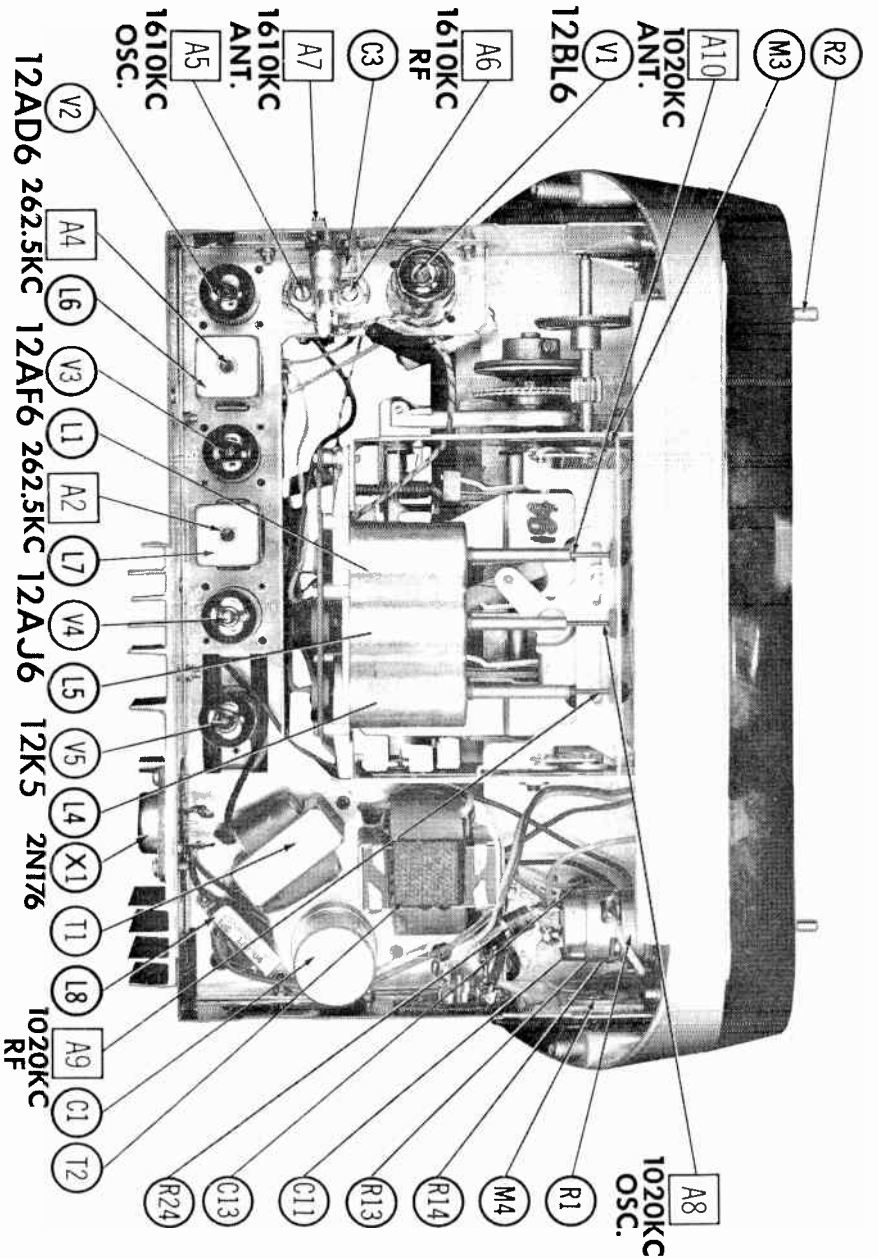
CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	MOTOROLA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1A	4meg	½	18B539819				■ UE3746-S	Tone Note 1
B	1.5meg	½						Volume, Tap ② 330K
C	Switch							
R2	25Ω	2	18K540132					Fader (Wirewound) Note 2
R3	150Ω	1	18A536645					Bias (Wirewound)

Note 1. Part #18K539820 used in Model 845 Note 2. Not used in Model 845

■ STA-LOC Equivalent FB46L, OSI625, RU16T334, IS2062, US-42

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING OHMS	RATING WATT	MOTOROLA PART No.	NOTES
R4	470K		6R6032	
R5	1800Ω		6R2089	
R6	470Ω		6R3949	Note 1
R7	2.7meg		6R488136	
R8	4.7meg		6R2122	
R9	33K		6R6012	
R10	10meg		6R2109	
R11	1meg		6R6004	
R12	47K		6R6056	
R13	68K		6R6001	
R14	1200Ω		6R119925	
R15	2.7meg		6R488136	
R16	3.3meg		6R2118	
R17	1000Ω		6R6301	
R18	68Ω		6R6007	
R19	3.3meg		6R2118	
R20	15Ω		6R410033	
R21	39Ω	1	6R3961	
R22	10Ω		6R5621	
R23	100Ω		6R6018	
R24	22Ω	2		Note 2

Note 1. Some versions may use 680Ω in this application (Part #6R393l).
Note 2. Not used in Model 845. Model 846 may use 27Ω & 270Ω connected in parallel.

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO PRI.	TURNS RATIO SEC.	REPLACEMENT DATA MOTOROLA PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordorson PART No.	Triad PART No.	NOTES
T1	9.5:	1	25B541758						Alternate Part #25K540013

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE PRI.	IMPEDANCE SEC.1	REPLACEMENT DATA MOTOROLA PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordorson PART No.	Triad PART No.	NOTES
T2	62.5Ω	3-4Ω	25C539881						
	Turns Ratio PRI.	Turns Ratio SEC.2							
	1.5:	1							

SPEAKER

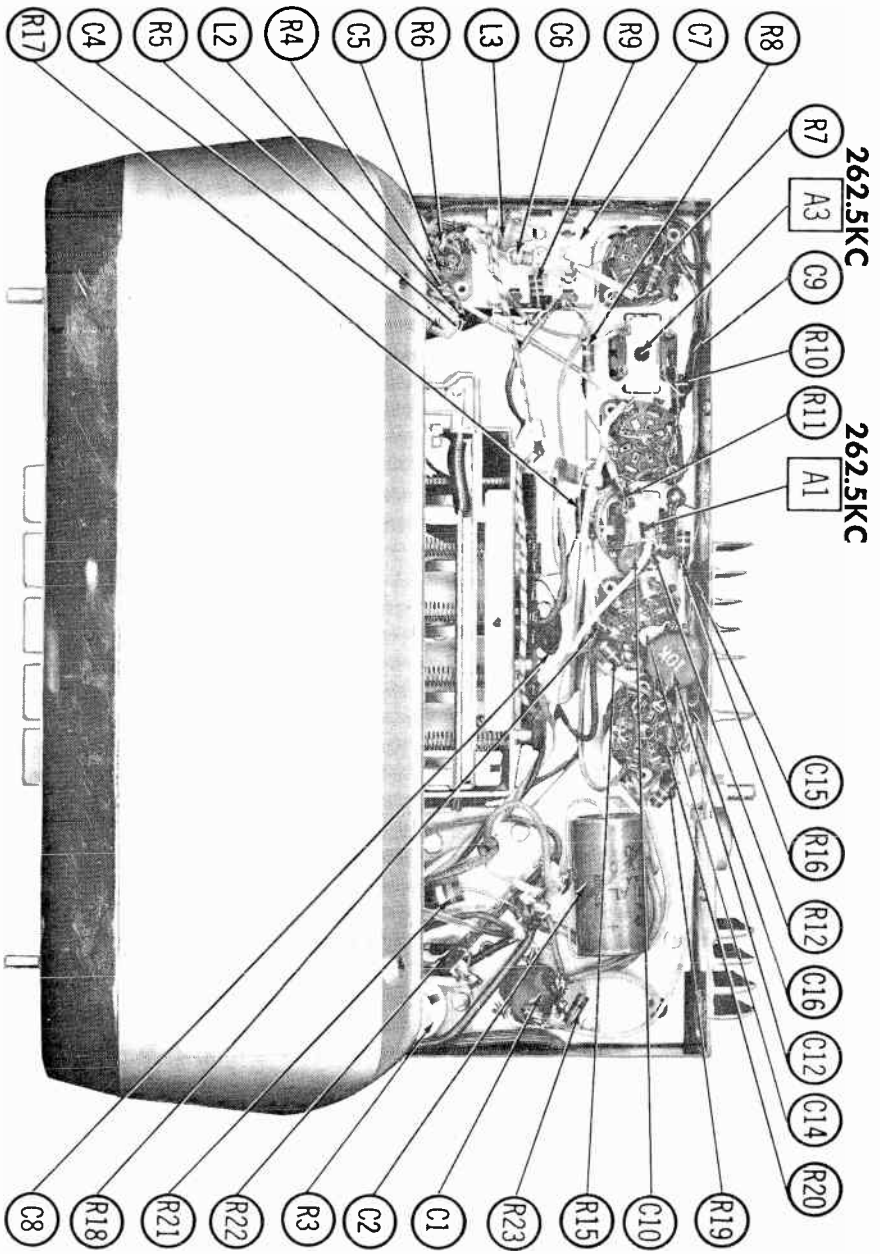
ITEM No.	TYPE SIZE	TYPE FIELD	TYPE V. C. IMP.	REPLACEMENT DATA MOTOROLA PART No.	QUAM PART No.	NOTES
SP1	5" X 7"	PM	3-4Ω	50D540194 ①	57A21	① Used in Model 846
	5" X 7"	PM	6-8Ω	50K540003 ②	57A21Z7	② Used in Model 845

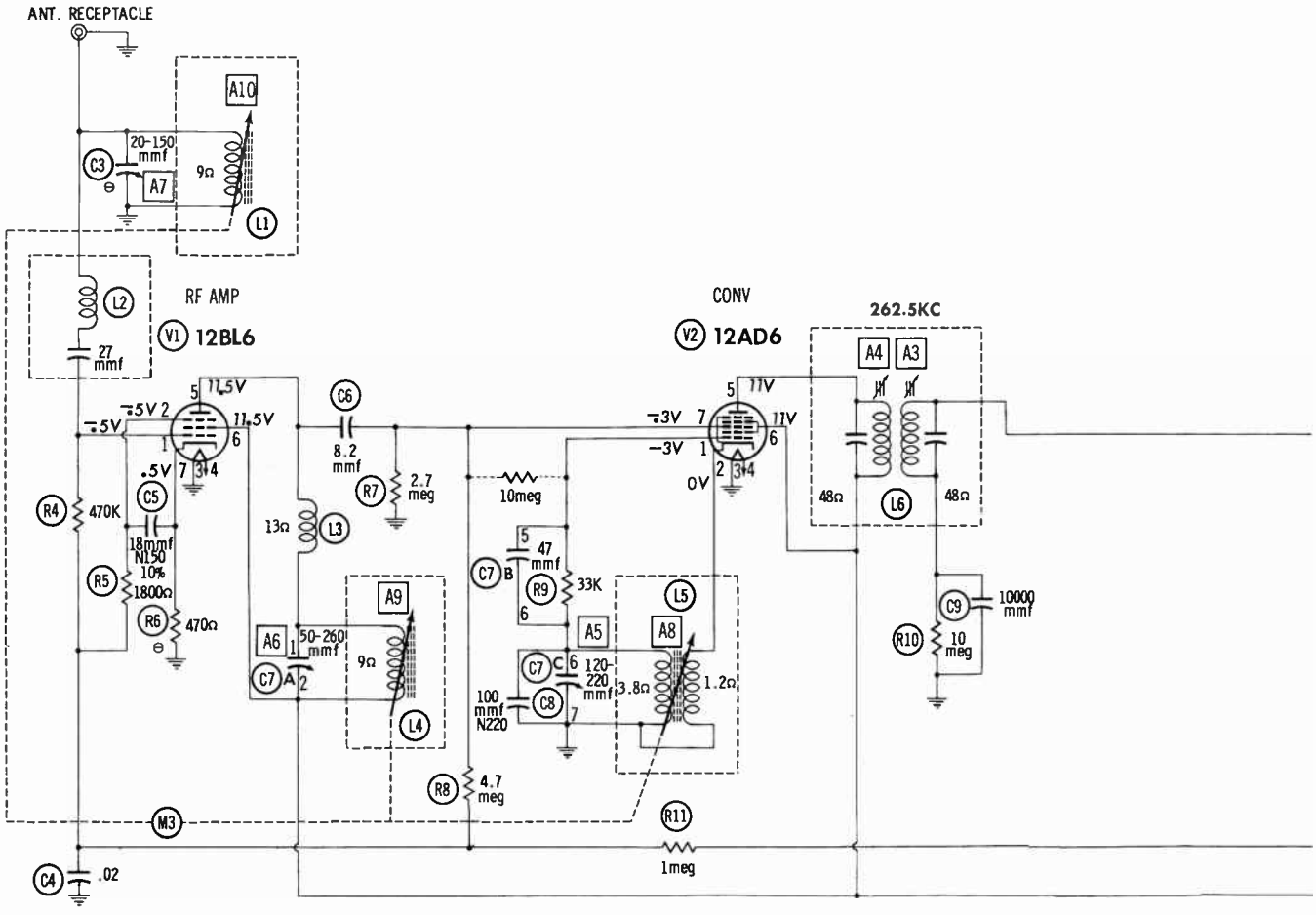
COILS (RF-IF)

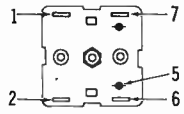
ITEM No.	USE	REPLACEMENT DATA MOTOROLA PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	NOTES
L1	Ant. Coil	* 24C536308				
L2	RF Choke	24K539955				Includes 27mmf cap. 133 Microhenries
L3	IF Trap Coil	24K539616	19-3125	TV-195	6153	
L4	RF Coil	* 24C536308				
L5	Osc. Coil	* 24B536300				
L6	Input IF	24B536693	16-6752	BC-350	12-H1	
L7	Output IF	24K532153	16-6754	BC-354	12-H6	

* Part of Tuner M3

CHASSIS—BOTTOM VIEW







TERMINAL VIEW OF RF-OSC CAPACITOR BLOCK

RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7
V1	12BL6	8meg	7.5meg	0Ω	1.5Ω	† 122Ω	† 100Ω	470Ω
V2	12AD6	33K	1.2Ω	0Ω	1.5Ω	† 148Ω	† 100Ω	2.7meg
V3	12AF6	10meg	0Ω	0Ω	1.5Ω	† 138Ω	† 100Ω	0Ω
V4	12AJ6	2.7meg	68Ω	0Ω	1.5Ω	8.4meg	1.7meg	† 3.3meg
V5	12K5	15Ω	3.3meg	0Ω	1.5Ω	† 0Ω	† 0Ω	† 92Ω

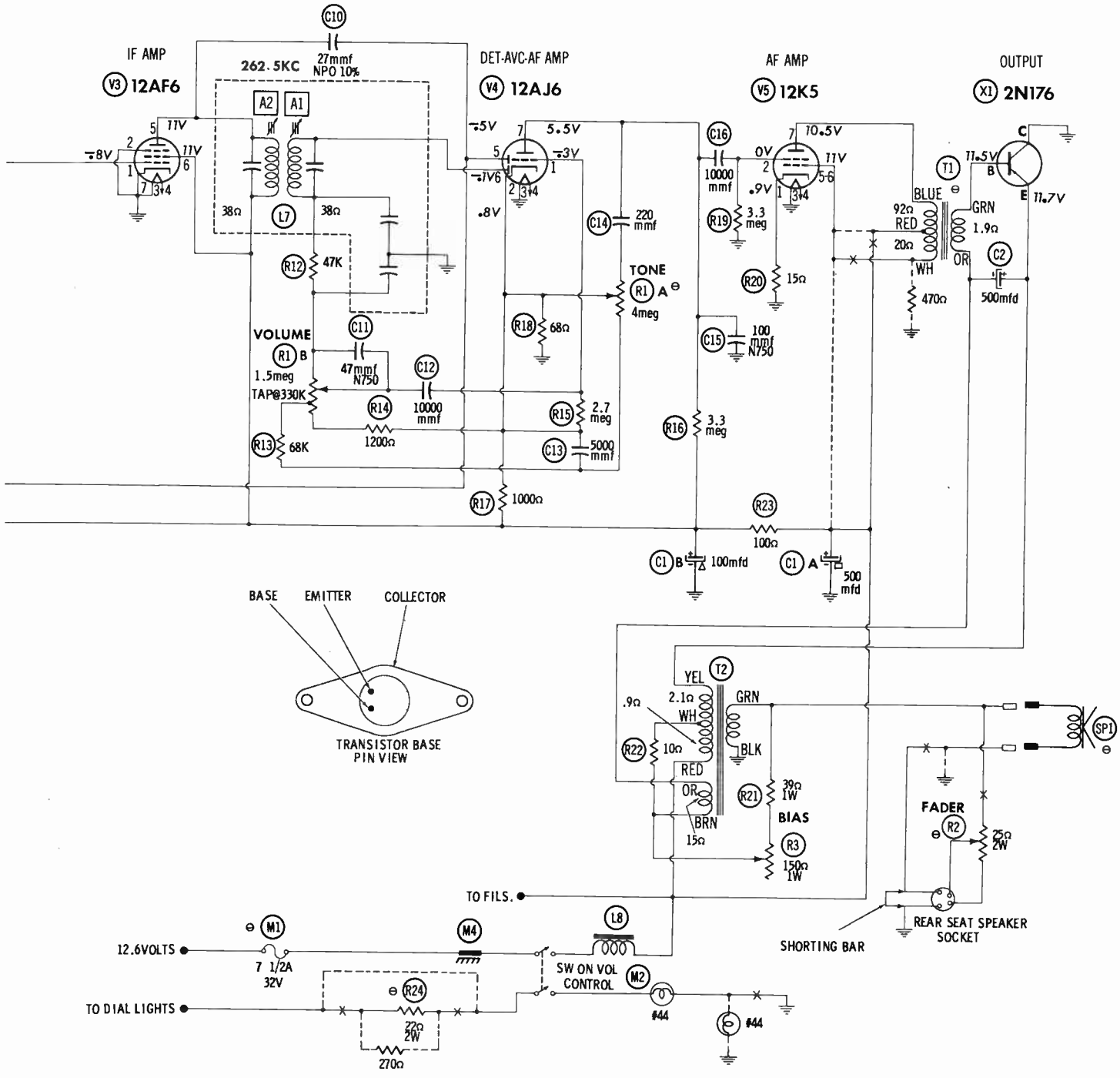
TRANSISTOR CIRCUIT RESISTANCE NOT TAKEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE
† MEASURED FROM JUNCTION OF L8 AND C1A

ϴ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC

1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured at 1000 ohms per volt.
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes posssible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

A PHOTOFACT STANDARD NOTATION SCHEMATIC



PARTS LIST AND DESCRIPTIONS (Continued)

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					
	TOTAL DIRECT CURRENT	D. C. RESISTANCE	INDUCTANCE (0 CURRENT 1000 ∿)	MOTOROLA PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordorson PART No.	Triod PART No.
L8	1. 6A	. 7Ω	3. 8 Mlhy.	25K540136					

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			MOTOROLA PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	SFE	7½A 32V	65R122346	9K540495 ①	30307. 5 (7AG 7½A 32V)	155009	SFE 7½	HDH

① Part #95K540494 used in Model 845

MISCELLANEOUS

ITEM No.	PART NAME	MOTOROLA PART No.	NOTES
M2	Dial Light	65R10867	#44 (Two used in Model 845)
M3	Tuner	77E539570	AT-200 (Complete) Model 846
	Tuner	77E539642	AT-196 (Complete) Model 845
M4	Spark Plate	48K539953	Selenium Type

CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

NAME	PART NO.	DESCRIPTION
Escutcheon	13C539098	Model 846
Escutcheon	13D539086	Model 845
Knob	1V540099	On-Off-Volume & Tuning, Model 846
Knob	1V540260	On-Off-Volume & Tuning, Model 845
Knob	36C539088	Tone & Speaker, Model 846
Knob	36B539078	Tone & Dummy, Model 845
Dial Scale	34K539545	Model 846
Dial Scale	61B539949	Crystal, Model 845
Dial Scale	34C539581	Model 845

PARTS LIST AND DESCRIPTIONS (Continued)

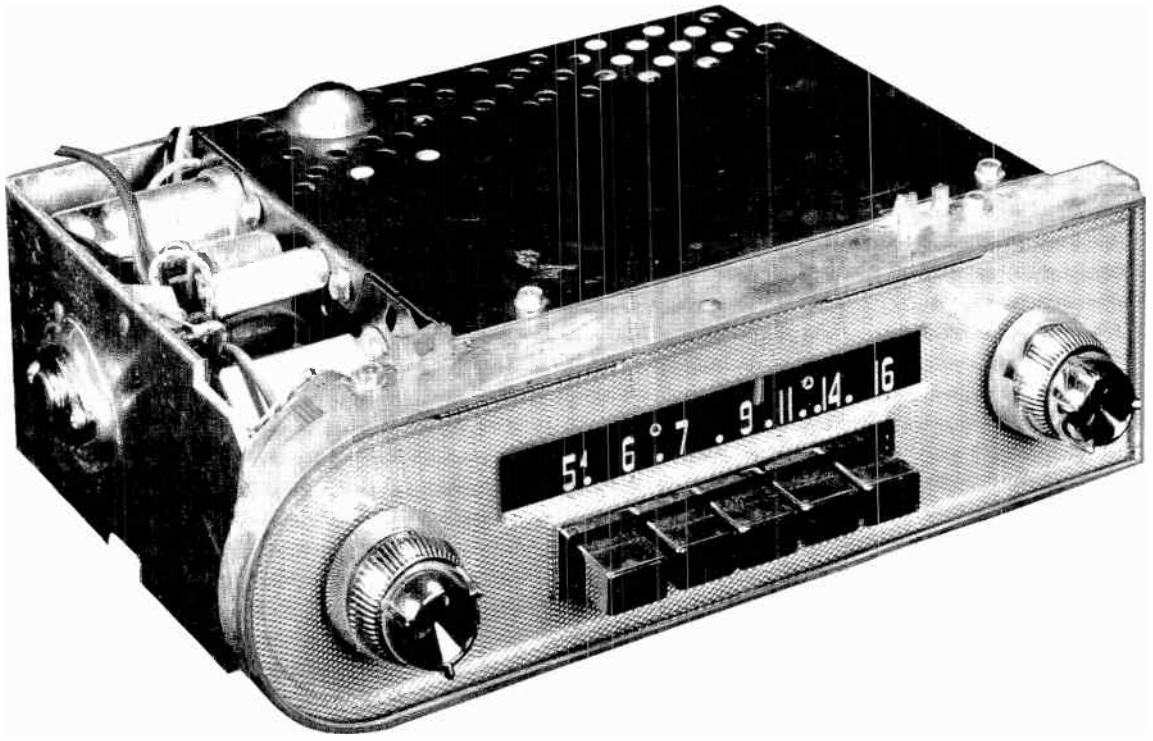
WIRING DATA

General-use Unshielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors
Shielded Hook-up Wire ..... Use BELDEN No. 8885
Bonding Strap ..... Use BELDEN No. 8661

TRANSISTOR BIAS ADJUSTMENT (R3)

The bias adjustment should be checked if the transistor is replaced.

1. Set control (R3) to its maximum resistance position.
2. Connect the negative lead of a low range VTVM to the junction of T2 and C2 and the positive lead to the junction of T2 and R22.
3. With a power source of 12 volts DC connected to the receiver, adjust R3 for a reading of . 85 volts on the meter. This is equivalent to an emitter current flow of 450MA.



TRADE NAME	Mopar Model 847 (C5705) For 1957 Chrysler Automobiles), 848 (P5701) For 1957 Plymouth Automobiles)
MANUFACTURER	Philco Corp., Tioga & "C" Sts., Philadelphia, Pa.
TYPE SET	Battery Operated Custom Built AM Automobile Receiver With Transistorized Output
TUBES (Five)	Types 12BL6 RF Amplifier, 12AD6 Converter, 12BL6 IF Amplifier, 12AE6 Det.-AVC-AF Amp., 12AE7 AF Amplifier
POWER SUPPLY	12 Volt Storage Battery — RATING 1.6 Amp. @ 12.6 Volts DC
TUNING RANGE—BROADCAST	540-1605KC

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING 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.
Set tone control at center of range (Model 847 only).

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.05MFD	High side to pin 7 (grid) of 12AD6 (V2). Low side to chassis.	262.5KC (400∿ Mod)	1605KC	Across voice coil	A1, A2, A3, A4	Adjust for maximum output.
2.	Fig. 1	Thru dummy to ant. receptacle.	1605KC	1605KC	"	A5, A6, A7	"

With radio installed in car, and antenna fully extended, tune in a weak station near 1200KC. Adjust A7 for maximum output.

PUSHBUTTON ADJUSTMENT

1. Extend antenna. Allow receiver to warm up for 15 minutes.
2. Pull pushbutton out.
3. Tune manually to desired station.
4. Press pushbutton in firmly.
5. Repeat for remaining pushbuttons.

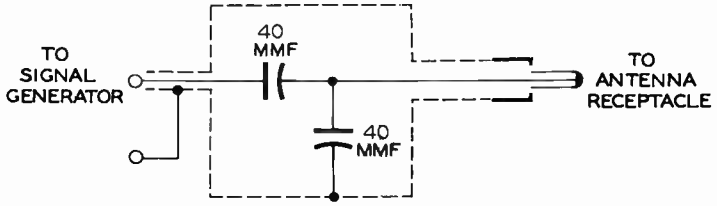
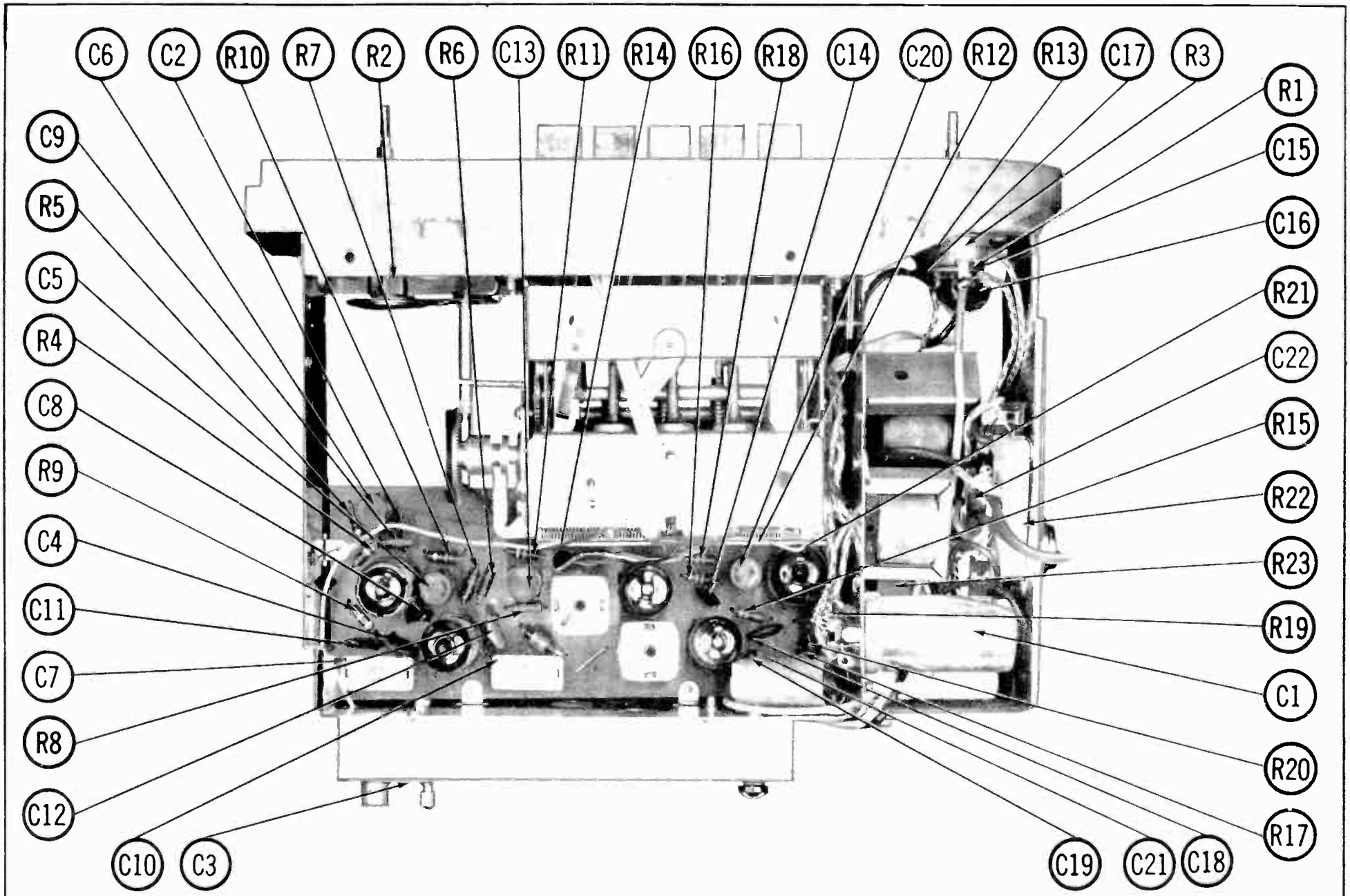


FIG. 1

MOPAR MODELS
847 (C5705), 848 (P5701)



CHASSIS-TOP VIEW

PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier	12BL6	
V2	Converter	12AD6	
V3	IF Amplifier	12BL6	

ITEM No.	USE	TYPE	NOTES
V4	Det.-AVC-AF Amp.	12AE6	
V5	AF Amplifier	12AE7	

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			CBS PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	AR-5	Output	2N155		AR-5	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	PHILCO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	■500	18	61-0086-9	AFH2-02-75	B0045				R2480 *
B	▲200	18							

* Non-catalog item.

FIXED CAPACITORS

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

ITEM No.	RATING		REPLACEMENT DATA							NOTES
	CAP.	VOLT	PHILCO PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	
C2	7.5		30-1263-10							NP0
C3	4-120		31-6533-1							
C4	100		30-1251-22	NPO-SI 100	TCZ-100	C10T1C	ED-100	ZT-531	5TCC-T1	10%
C5	.047	200	30-4684-28			BC2S47J		ACE6147	2SE-S47	
C6	.047	200	30-4684-28			BC2S47J		ACE6147	2SE-S47	
C7			31-6532-3							
C8	33		30-1263-8	NPO-SI 33	DD-330	L10Q33	ED-33	ZT-5433	5TCC-Q33	10%
C9	100		30-1263-14	NPO-SI 100	DD-101	L10T1	ED-100	ZT-531	5TCC-T1	10%
C10			31-6532-4							
C11	100		30-1263-14	N750-SI 100	TCN-100	C10T1U	TC7-100	NT-531	5TCU-T1	N750 10%
C12	8000		30-1262-1							
C13	.1	200	30-4684-30			BC2P1J		ACE401	2SE-P10	
C14	220		30-1262-23	BPD-00022	DD-221	L10T22	ED-220	UC-5322	5GA-T22	
C15	1000		30-1238-3	BPD-001	DD-102	BYA6D1	ED-1000	DC521	5HK-D1	①
C16	4000		30-1238-18	BPD-004	DD-402	BYA10D4	ED-004	UC-524	5GA-D4	
C17	39		30-1251-21	SI 39	DD-390	L10Q39	ED-39	UC-5439	5GA-Q39	①
C18	8000		30-1262-1							
C19	1500		30-1262-10	BPD-0015	DD-152	BYA10D15	ED-1500	DC5215	5HK-D15	
C20	.047	200	30-4684-28			BC2S47J		ACE6147	2SE-S47	
C21	.047	200	30-4684-28			BC2S47J		ACE6147	2SE-S47	
C22	.5	100	61-0183	P288N-5		CUB2P5		GEM-205	2TM-P5	

① Used in Model 847 only.

PARTS LIST AND DESCRIPTIONS (Continued)

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	PHILCO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1A	4Meg		33-5580-16					Tone - Note 1
B	2Meg							Volume, tap @ 500K-Note 1
C	Switch							
R2	25Ω	1	33-5576-4					Fade - Note 2
R3	15Ω	2	33-5591-2					Transistor Bias

Note 1. Tone control open at center, 2Meg each side of center. R1A not used in Model 848.
R1B and R1C (Part #33-5580-12) used in Model 848 only.
Note 2. Not used in Model 848.

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING		PHILCO PART No.	NOTES
	OHMS	WATT		
R4	150K		66-4158340	
R5	1200Ω		66-2128340	
R6	1Meg		66-5108340	Note 1
R7	6.8Meg		66-5688340	
R8	680Ω		66-1688340	
R9	47K		66-3478340	
R10	1.8Meg		66-5188340	Note 2
R11	4.7Meg		66-5478340	
R12	120K		66-4128340	
R13	150K		66-4158340	

ITEM No.	RATING		PHILCO PART No.	NOTES
	OHMS	WATT		
R14	1.8Meg		66-5188340	
R15	3.3Meg		66-5338340	
R16	27K		66-3278340	
R17	1.8Meg		66-5188340	
R18	18K		66-3188340	
R19	680Ω		66-1688340	
R20	4700Ω		66-2478340	
R21	680K		66-4688340	
R22	150Ω	10	33-1367-3	Note 3
R23	.27Ω	1	66-8273360	

Note 1. Some versions may use 820K in this application (Part #66-4828340).
Note 2. Some versions may use 1Meg in this application (Part #66-5108340).
Note 3. Temperature compensating type.

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA						NOTES
	PRI.	SEC.	PHILCO PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T1	9.5:	1	32-8787						

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA						NOTES
	PRI.	SEC.	PHILCO PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	24Ω	3-4Ω	32-8786						

PARTS LIST AND DESCRIPTIONS (Continued)

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	PHILCO PART No.	QUAM PART No.	
SP1	5"x7"	PM	3-4Ω	36-1670-2	57A15	① Used as rear seat speaker (Model 847 only)
	5"x 7"	PM	3-4Ω	36-1670-2 ①	57A15	

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA				NOTES
		PHILCO PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	
L1	Ant. Coil	32-4730-1				Model 847 ①
	Ant. Coil	32-4730-10				Model 847 ②
	Ant. Coil	32-4730-7				Model 848 ③
	Ant. Coil	32-4730-16				Model 848 ④
L2	RF Choke	32-4480-24	19-3160	TV-196	6120	150 Microhenries
L3	RF Coil	32-4730-2				Model 847 ①
	RF Coil	32-4730-11				Model 847 ②
	RF Coil	32-4730-8				Model 848 ③
	RF Coil	32-4730-17				Model 848 ④
L4	Osc. Coil	32-4730-3				Model 847 ①
	Osc. Coil	32-4730-12				Model 847 ②
	Osc. Coil	32-4730-9				Model 848 ③
	Osc. Coil	32-4730-18				Model 848 ④
L5	Input IF	32-4676-1	16-6756	BC-344	13-PH1	
L6	Output IF	32-4677-2				
L7	Hash Choke	32-4720-3				

① Part of tuner assembly #76-11437-1.
② Part of tuner assembly #76-11437-2.
③ Part of tuner assembly #76-11434-1.
④ Part of tuner assembly #76-11434-2.

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					
	TOTAL DIRECT CURRENT	D. C. RESISTANCE	INDUCTANCE (0 CURRENT 1000 ∿)	PHILCO PART No.	Holldorson PART No.	Merit PART No.	Stancor PART No.	Thordorson PART No.	Triad PART No.
L8	.011A	19Ω	.5 HY	32-8788					

PARTS LIST AND DESCRIPTIONS (Continued)

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			PHILCO PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	7AG	7½A 32V	45-2656-53	45-4244-2	30307.5 (7AG 7½A 32V)	155 009	AGW 7½	HDH

MISCELLANEOUS

ITEM No.	PART NAME	PHILCO PART No.	NOTES
M2	Dial Lamp	34-2064	#44
M3	Dial Lamp	34-2064	#44, Not used in Model 848
M4	Tuner	76-11437-1	Complete assembly, Model 847
	Tuner	76-11437-2	Complete assembly, Model 847 (Alternate)
	Tuner	76-11434-1	Complete assembly, Model 848
	Tuner	76-11434-2	Complete assembly, Model 848 (Alternate)
M5	Spark Plate	30-1254-1	300MMF

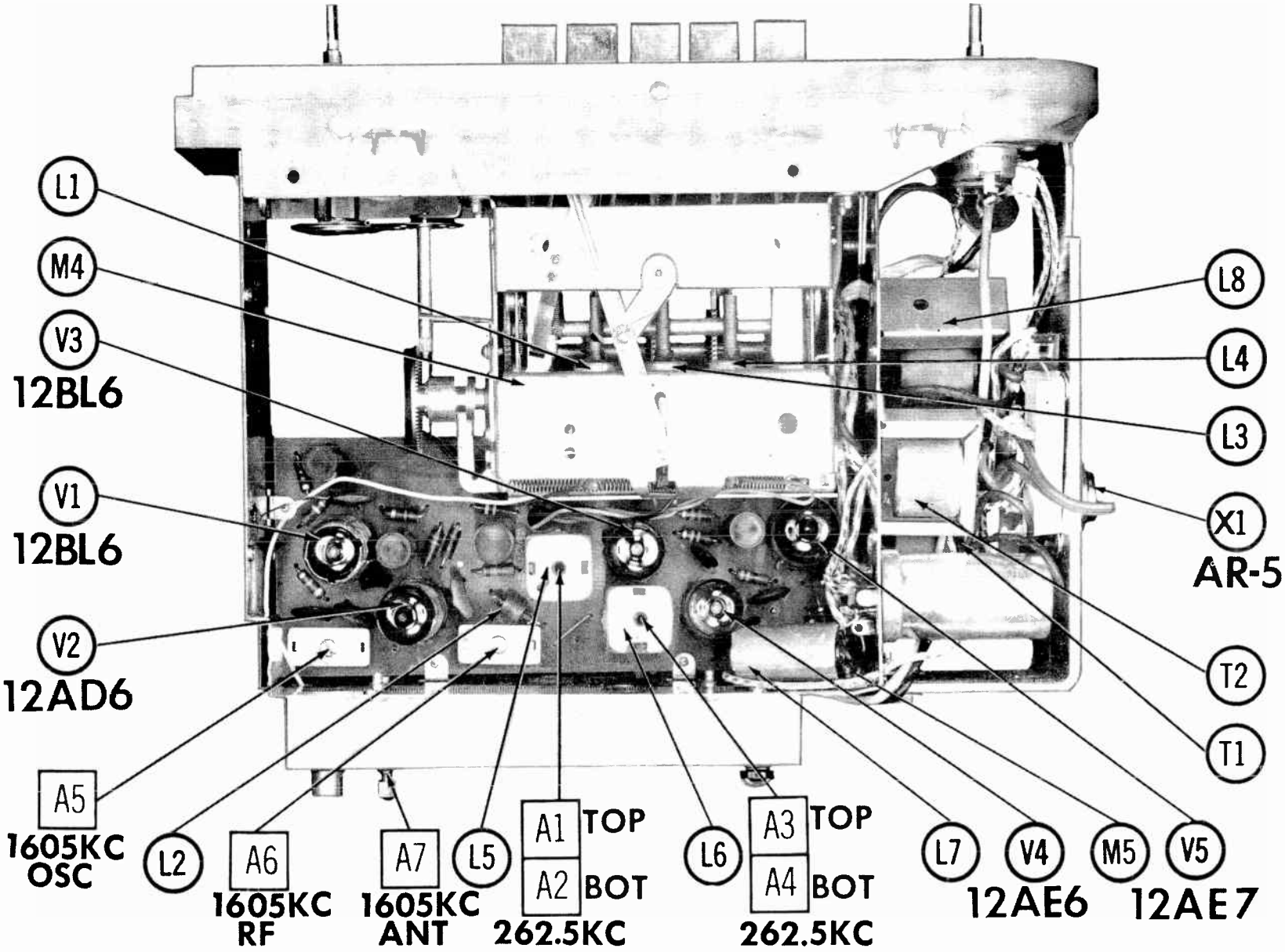
CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

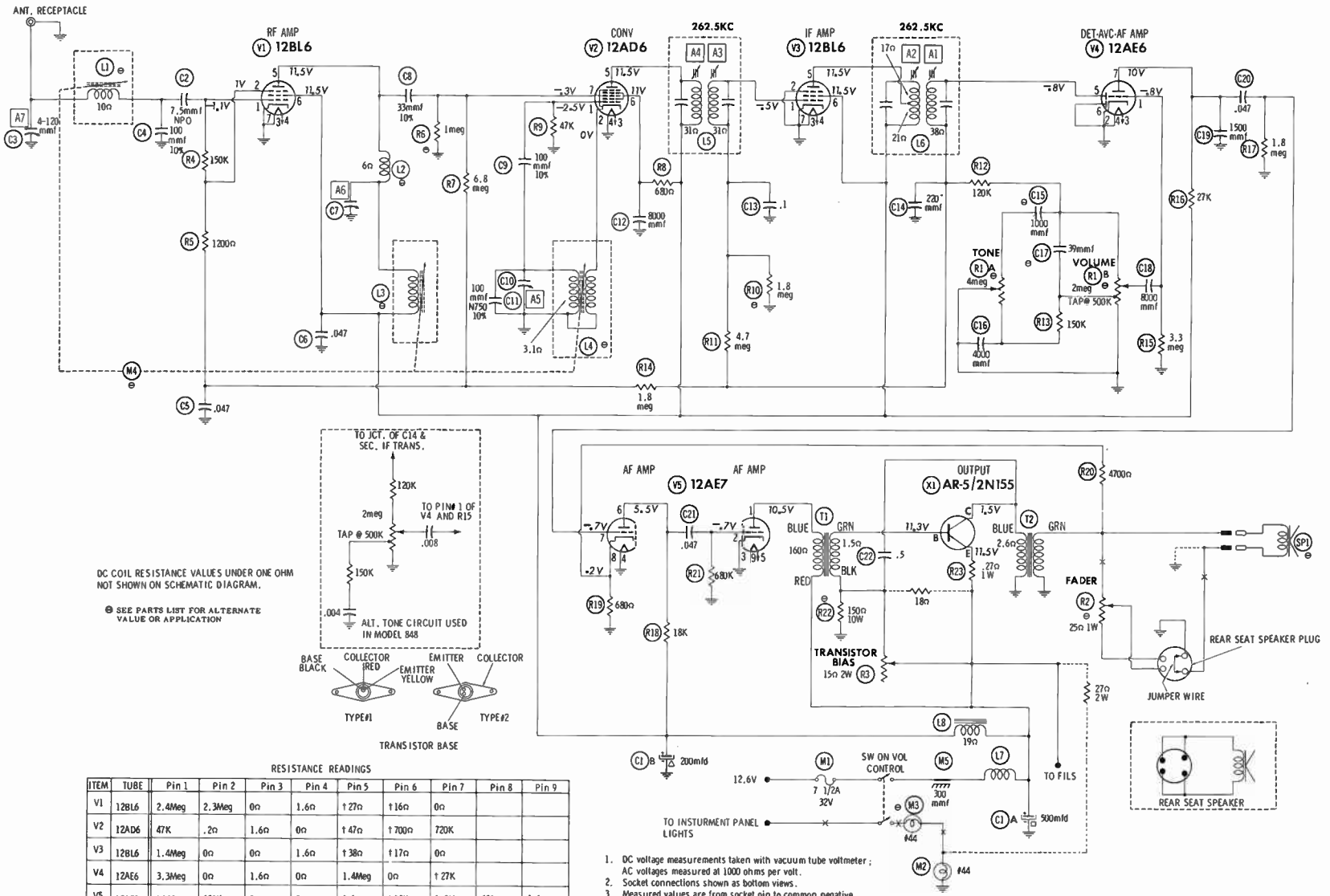
NAME	PART NO.	DESCRIPTION
Bezel	28-11689	Model 847
Bezel	28-11669-1	Model 848
Knob	28-11691	Tone & Fader, Model 847
Knob	27-4687-25	On-off-volume & tuning, Model 847
Knob	27-4687-24	On-off-volume & tuning, Model 848
Dial Scale	54-9991	Model 847
Dial Scale	28-11758	Model 848

TRANSISTOR BIAS ADJUSTMENT (R3)

The bias adjustment should be checked if the transistor is replaced. To do this, connect a low range voltmeter (not a VTVM) across the primary winding of the output transformer (T2). Set the control at the center of its range. Connect a power source of 14 volts DC to the receiver and allow a warm-up period of 15 minutes. With no signal input, adjust R3 for a reading of 1.25 volts on the voltmeter. Use insulated tool, control is "hot" to chassis. (This is equivalent to a collector current of 500MA).



CHASSIS-TOP VIEW



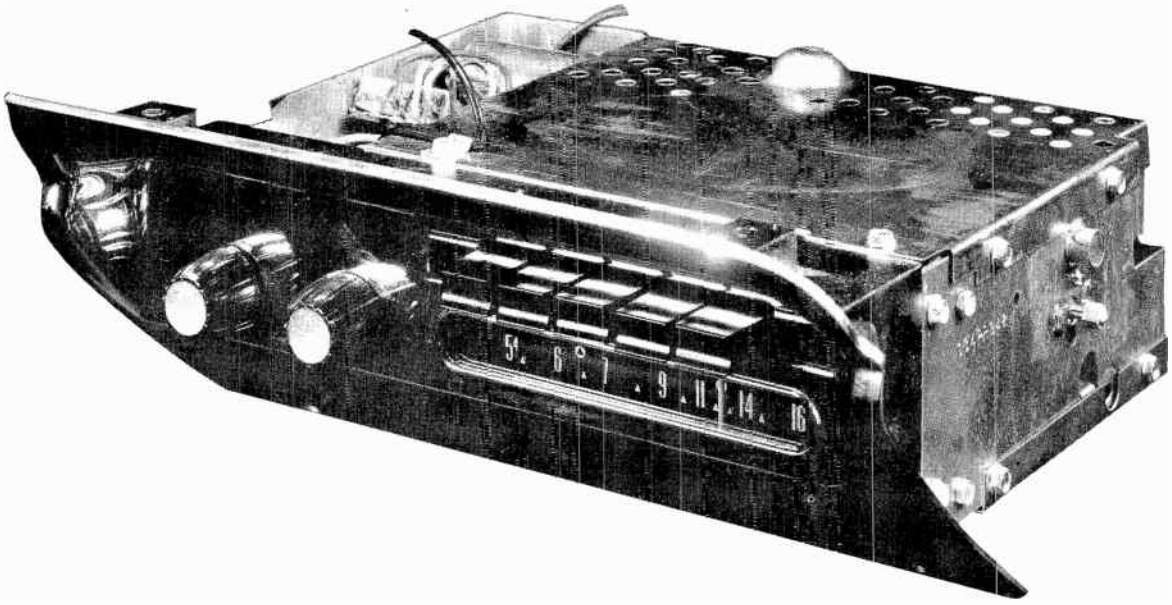
RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12BL6	2.4Meg	2.3Meg	0Ω	1.6Ω	†27Ω	†16Ω	0Ω		
V2	12AD6	47K	.2Ω	1.6Ω	0Ω	†47Ω	†700Ω	720K		
V3	12BL6	1.4Meg	0Ω	0Ω	1.6Ω	†38Ω	†17Ω	0Ω		
V4	12AE6	3.3Meg	0Ω	1.6Ω	0Ω	1.4Meg	0Ω	†27K		
V5	12AE7	†160Ω	680K	0Ω	0Ω	1.6Ω	†18K	1.8Meg	680Ω	1.6Ω

TRANSISTOR CIRCUIT RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.
† MEASURED FROM JUNCTION OF M5 and L7.

1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured at 1000 ohms per volt.
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes posssible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

A PHOTOFACT STANDARD NOTATION SCHEMATIC



TRADE NAME	Mopar Model 848 (P-5801) For 1958 LP-1 & LP-2 Plymouth Automobiles
MANUFACTURER	Philco Corp., Tioga & "C" Sts., Philadelphia, Pa.
TYPE SET	Battery Operated Custom Built AM Automobile Receiver With Transistorized Output
TUBES (Four)	Types 12BL6 RF Amplifier, 12AD6 Converter, 12BL6 IF Amplifier, 12DW8 Det. - AVC - AF Amp.
POWER SUPPLY	12 Volt Storage Battery
RATING	1.6 Amp. @ 12.6 Volts DC
TUNING RANGE—BROADCAST	540 - 1605KC

MOPAR MODEL
848 (P-5801)

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING 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. Speaker must be connected to the radio.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.047mfd	High side to pin 7 (grid) of 12AD6 (V2). Low side to chassis.	262.5KC (400~ Mod)	1605KC	Across voice coil	A1, A2, A3, A4	Adjust for maximum output.
2.	Fig. 1	Thru dummy to antenna receptacle	1605KC	"	"	A5, A6, A7	"
3.	With radio installed in car and antenna fully extended, tune in a weak station near 1200KC and adjust A7 for maximum output.						

PUSHBUTTON ADJUSTMENT

1. Pull pushbutton out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.

HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana

PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier	12BL6	
V2	Converter	12AD6	
V3	IF Amplifier	12BL6	
V4	Det. - AVC - 1st AF Amp.- 2nd AF Amplifier	12DW8	

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA				NOTES
			CBS PART No.	RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	AR10	Output	CBS LT-5002	2N301		AR10	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	PHILCO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	■500	16	61-0086-9	AFH2-02-75	B0045	WP200. 5			R2480 *
B	▲200	16							

* Non Catalog Item

FIXED CAPACITORS

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

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT	PHILCO PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
C2	6-97		31-6533-1						
C3	100		30-1251-22	BPD-0001	DD-101	L10T1	UC-531	5GA-T1	
C4	7. 5		30-1263-10						
C5			31-6532-3						
C6	33		30-1263-8	BPD-000033	DD-330	L10Q33	UC-5433	5GA-Q33	
C7	100		30-1263-14	N750-DI 100	DTN-100	C10T1U	NT-531	5TCU-T1	N750
C8			31-6532-4						
C9	100		30-1263-14	BPD-0001	DD-101	L10T1	UC-531	5GA-T1	
C10	10000		30-1262	BPD-01	DD-103	BYA6S1	DC511	5HK-S1	
C11	. 047	200	30-4650-45	P288N-047	DF-503	CUB2S47	GEM-4147	2TM-S47	
C12	220		30-1262-23	BPD-00022	DD-221	L10T22	UC-5322	5GA-T22	
C13	10000		30-1238-6	BPD-01	DD-103	BYA6S1	DC511	5HK-S1	
C14	10000		30-1238-6	BPD-01	DD-103	BYA6S1	DC511	5HK-S1	Note 1
C15	. 047	200	30-4650-45	P288N-047	DF-503	CUB2S47	GEM-4147	2TM-S47	
C16	300		30-1254-1						

Note 1. Some versions use . 0022mfd in this application (Part #30-1262-7).

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	PHILCO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1A	1meg	½	33-5580-21	ABT-73 ① KB-4 or KR-4*				Volume, Tap @ 300K Transistor Bias
B	Switch							
R2	15Ω	2(WW)	33-5591-2					

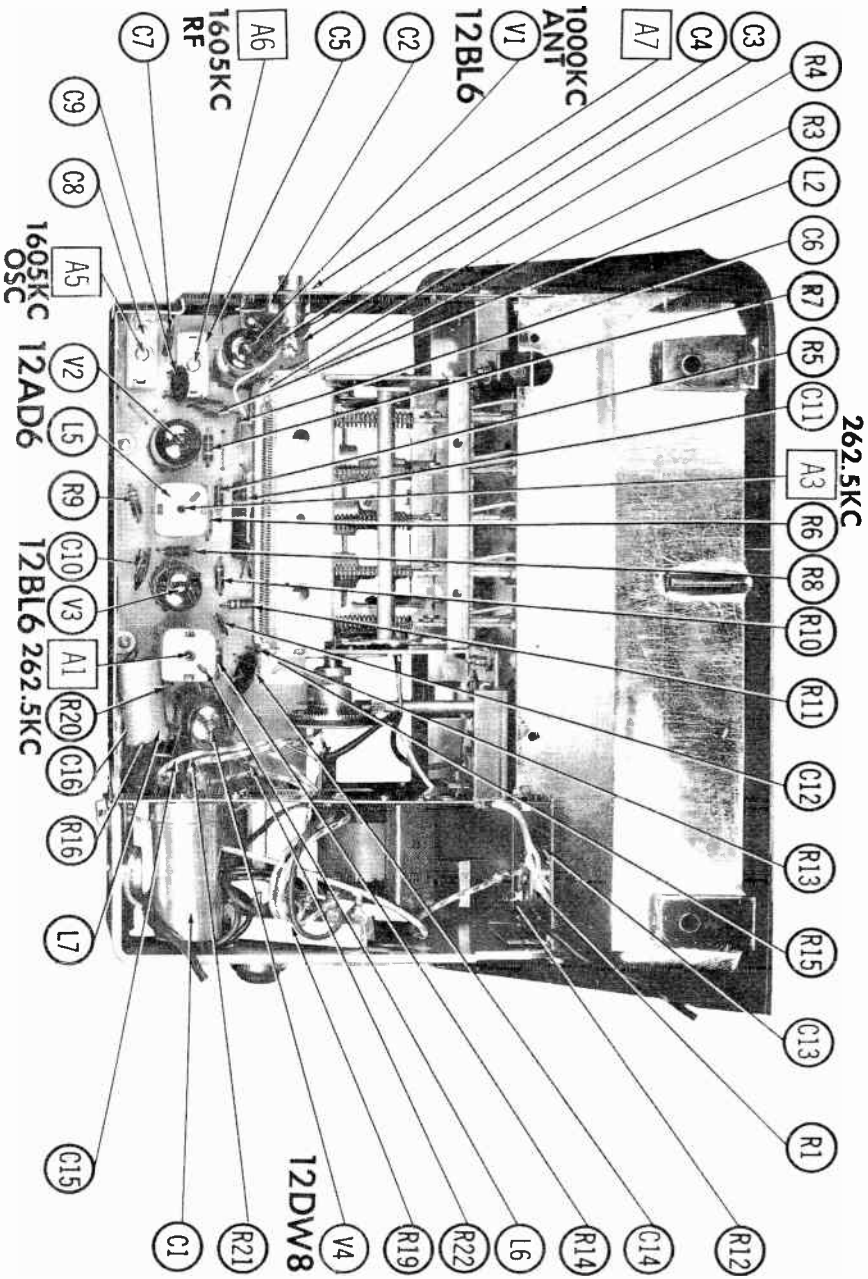
① Use AK-28 Adaptor Bushing and AK-8 Shaft.
* Use KR with CRL "red label" controls and KB with "blue label" controls.

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING		PHILCO PART No.	NOTES
	OHMS	WATT		
R3	150K 5%		66-4158340	
R4	1000Ω		66-2108340	
R5	1meg		66-5108340	
R6	6. 8meg		66-5688340	
R7	47K		66-3478340	
R8	22meg		66-6228340	
R9	4. 7meg		66-5478340	Note 1
R10	1. 2meg		66-5128340	
R11	22K		66-3228340	Note 2
R12	150K		66-4158340	

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS (cont)

ITEM No.	RATING OHMS	RATING WATT	PHILCO PART No.	NOTES
R13	10meg		66-6108340	Note 3
R14	10Ω		66-0108340	
R15	10K		66-3108340	
R16	1meg		66-5108340	
R17	.27Ω		66-8273360	
R18	18Ω			Note 4
R19	100Ω	10		Note 5
R20	220Ω		66-1228340	
R21	100Ω		66-1108340	
R22	27Ω	2	66-0276340	

Note 1. Some versions may use 10meg in this application (Part #66-6108340).
Note 2. Some versions may use 100K in this application (Part #66-4108340).
Note 3. Some versions may use 15meg in this application (Part #66-6158340).
Note 4. Not used in some versions.
Note 5. Some versions may use 150Ω 10W in this application (Part #33-1367-2).

TRANSFORMER (INTERSTAGE)

ITEM No.	Turns Ratio PRI.	Turns Ratio SEC.	REPLACEMENT DATA PHILCO PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
T1	10	: 1	32-8737							

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE PRI.	IMPEDANCE SEC.	REPLACEMENT DATA PHILCO PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
T2	312Ω	3-4Ω	32-8636-2 ①							① Alternate Part #32-8636-1

SPEAKER

ITEM No.	TYPE SIZE	TYPE FIELD	TYPE V. C. IMP.	REPLACEMENT DATA PHILCO PART No.	REPLACEMENT DATA QUAM PART No.	NOTES
SP1	5" X 7"	PM	3-4Ω	36-1670-2	57A15	

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA PHILCO PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Ram PART No.	NOTES
L1	Antenna Coil	32-4730-7					Note 1
	Antenna Coil	32-4730-16					Note 2
L2	RF Choke	32-4480-24	19-3160	TV-196	6120		150 Microhenries
L3	RF Coil	32-4730-8					Note 1
	RF Coil	32-4730-17					Note 2
L4	Osc. Coil	32-4730-9					Note 1
	Osc. Coil	32-4730-18					Note 2
L5	Input IF	32-4676-7		BC-344	13-PH1		
L6	Output IF	32-4677-2					
L7	Hash Choke	32-4720-3					

Note 1. Part of Tuner #76-11349-1.

Note 2. Part of Tuner #76-11349-2.

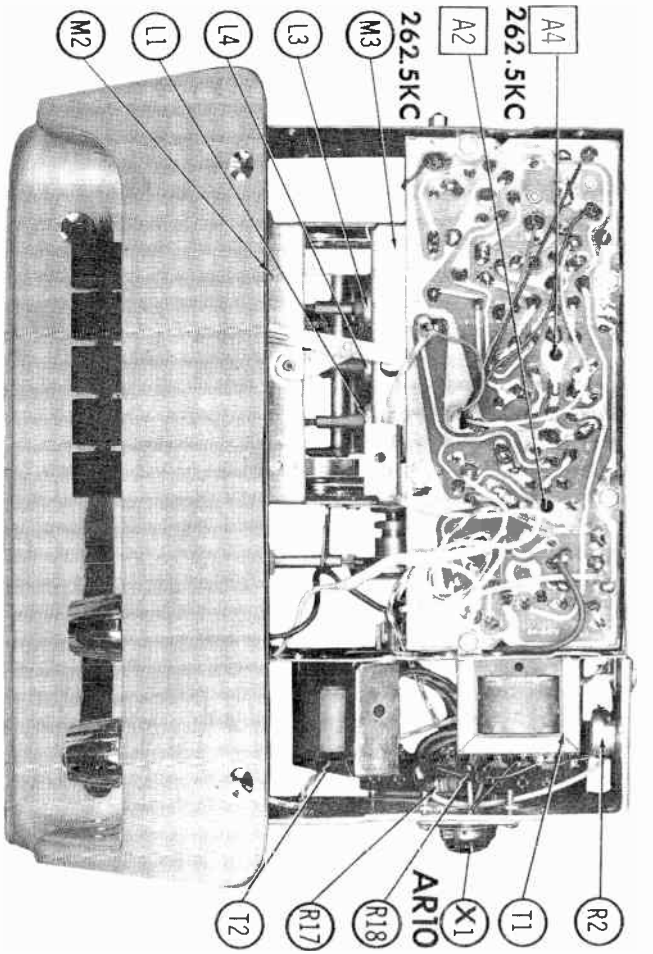
FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA PHILCO PART No. FUSE	PHILCO PART No. HOLDER	LITTELFUSE PART No. FUSE	LITTELFUSE PART No. HOLDER	BUSS PART No. FUSE	BUSS PART No. HOLDER
M1	SFE	7½A 32V	45-2656-53		30707.5 (7½A 32V)	155009	SFE7½	HDH

MISCELLANEOUS

ITEM No.	PART NAME	PHILCO PART No.	NOTES
M2	Lamp	34-2064	#44
M3	Tuner Ass'y	76-11349-1	Complete
	Tuner Ass'y	76-11349-2	Complete
	Printed Board	54-6472	

CHASSIS—BOTTOM VIEW



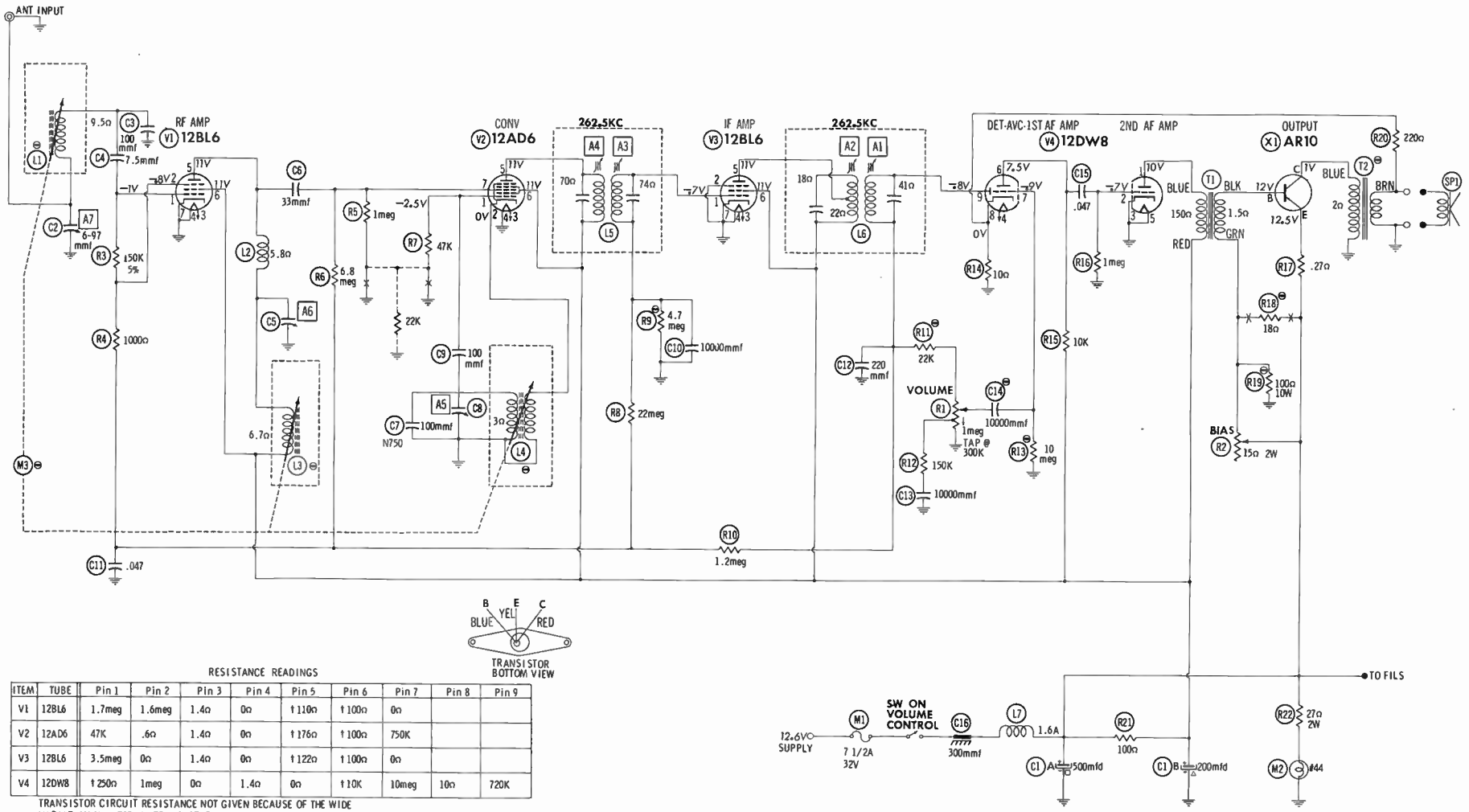
CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

NAME	PART NO.	DESCRIPTION
Bezel	28-11669-1	
Knob	27-4687-24	Tuning & Volume
Dial Scale	28-11758	
Dial Glass	54-6343	

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in Ten Colors 8524 (Stranded) Available in Ten Colors
Shielded Hook-up Wire	Use BELDEN No. 8885
Bonding Strap	Use BELDEN No. 8661



RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12BL6	1.7meg	1.6meg	1.4Ω	0Ω	†110Ω	†100Ω	0Ω		
V2	12AD6	47K	.6Ω	1.4Ω	0Ω	†176Ω	†100Ω	750K		
V3	12BL6	3.5meg	0Ω	1.4Ω	0Ω	†122Ω	†100Ω	0Ω		
V4	12DW8	†250Ω	1meg	0Ω	1.4Ω	0Ω	†10K	10meg	10Ω	720K

TRANSISTOR CIRCUIT RESISTANCE NOT GIVEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE

† MEASURED FROM JUNCTION OF C1A AND L7

Θ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)

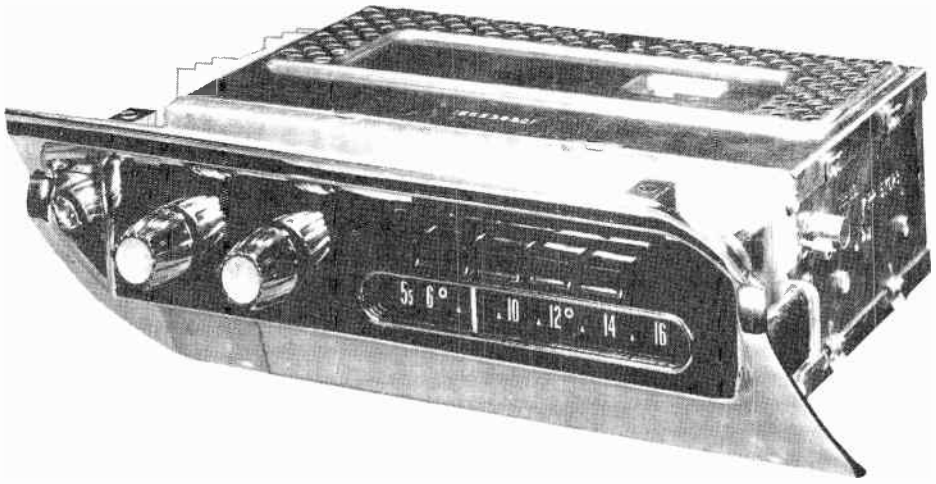
TRANSISTOR BIAS ADJUSTMENT (R2)

The bias should be adjusted if the transistor is replaced.

1. Set R2 at mid-range.
2. Connect a low range DC voltmeter (not a VTVM) across the primary of the output transformer (T2).
3. Apply 13.2 volts DC to the receiver and allow a 15 minute warm-up period.
4. Adjust R2 for a meter reading of .95 volts. This is equivalent to a collector current of 550MA.

1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured at 1000 ohms per volt.
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes posssible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

A PHOTOFACT STANDARD NOTATION SCHEMATIC



TRADE NAME	Mopar Model 849 (For 1957 P30 & P31 Plymouth Automobiles)
MANUFACTURER	Motorola Inc., 4545 W. Augusta Blvd., Chicago 51, Illinois
TYPE SET	Battery Operated Custom Built AM Automobile Receiver With Transistorized Output
TUBES (Five)	Types 12BL6 RF Amplifier, 12AD6 Converter, 12AF6 IF Amplifier, 12AE6 Det.-AVC-AF Amp., 12K5 Driver
POWER SUPPLY	12 Volt Storage Battery — RATING 2 Amp. @ 12.6 Volts DC
TUNING RANGE—BROADCAST	540KC - 1600KC

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Volume control should be at maximum position. Use an insulated alignment screwdriver for adjusting. Maintain 1.79 Volts on output meter.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.1MFD	High side to pin 7 (grid) of 12AD6 (V2). Low side to chassis.	262.5KC (400~ Mod)	High frequency end stop	Across voice coil	A1, A2 A3, A4	Adjust for maximum output.
2.	Fig. 1	Thru dummy to Antenna Receptacle	1610KC	"	"	A5, A6, A7	"
	Steps 3, 4 & 5 are unnecessary unless tuner has been tampered with or associated components have been replaced. If necessary, back tuning cores (A8, A9, A10) out of coils but not out of coil forms.						
3.	Fig. 1	Thru dummy to Antenna Receptacle	1610KC (400~ Mod)	High frequency end stop	Across voice coil	A5, A6, A7	Adjust for maximum output.
4.	"	"	1020KC	49/64" from high frequency end stop.	"	A8, A9, A10	Adjust for maximum output. (Alignment tool #66A76278 may be used).
5.	"	"	1610KC	High frequency end stop	"	A5, A6, A7	Adjust for maximum output.
6.	With radio installed in car and antenna fully extended, tune in a weak station near 1400KC. Adjust A7 for maximum output.						

POINTER CALIBRATION

Tune receiver to a 1000KC signal. If necessary adjust pointer adjusting screw until pointer coincides with 1000KC mark on dial scale.

PUSHBUTTON ADJUSTMENT

1. Extend antenna. Allow receiver to warm up for 15 minutes.
2. Pull pushbutton out.
3. Tune manually to desired station. Press pushbutton in firmly.
4. Repeat for remaining pushbuttons.

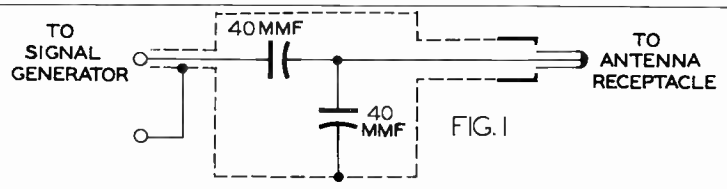


FIG. 1

HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana

H279

PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier	12BL6	
V2	Converter	12AD6	
V3	IF Amplifier	12AF6	
V4	Det. -AVC - AF Amp.	12AE6	
V5	Driver	12K5	

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			CBS PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	2N176	Output	2N155		2N242	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	MOTOROLA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	■500	16	23B539261	AFH2-02-10	B0045	WP200.5			R2452 *
B	▲100	16							
C2	500	3	23B539260	PRS6V500	BBR500-6	TC605	TD-500-6	MTH-0650	TVA-1103

* Non Catalog Item

FIXED CAPACITORS

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

ITEM No.	RATING		REPLACEMENT DATA							NOTES
	CAP.	VOLT	MOTOROLA PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	
C3	20-180		20B534809							
C4	.02	200	8R121003	P288N-02	DD-203	CUB2S2	ED-02	GEM-412	2TM-S2	
C5	18		21R120578							N150
C6	8.2		21R120159	NPO-SI 8.2		C1010V82	TCO-8.2			
C7A	50-260									
B	47		20B539612							
C	120-220									
C8	100		21R124032							N220 10%
C9	10000		21R482726	BPD-01	DD-103	BYA6S1	ED-01	DC511	5HK-S1	
C10	27		21R410089	SI 27	DD-270	L10Q27	ED-27	UC-5427	5GA-Q27	
C11	47		21R115593	N750-D1 47	TCN-47	C10Q47U	TC7-47	NT-5447	5TCU-Q47	N750
C12	10000		21R482726	BPD-01	DD-103	BYA6S1	ED-01	DC511	5HK-S1	
C13	220		21R410115	BPD-00022	DD-221	L10T22	ED-220	UC-5322	5GA-T22	
C14	10000		21R482726	BPD-01	DD-103	BYA6S1	ED-01	DC511	5HK-S1	

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	MOTOROLA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1A	1meg	½	18B540376	AB-70	A47-1Meg-Z	Q13-137	U53	Volume
B	Shaft			AK-8	RS-3/16	NQ	DS-37	
C	Switch			KB-4	SWE-13	76-1	US-26	
R2	150Ω	2	18A536646					Emitter Bias (Wire Wound)

RESISTORS

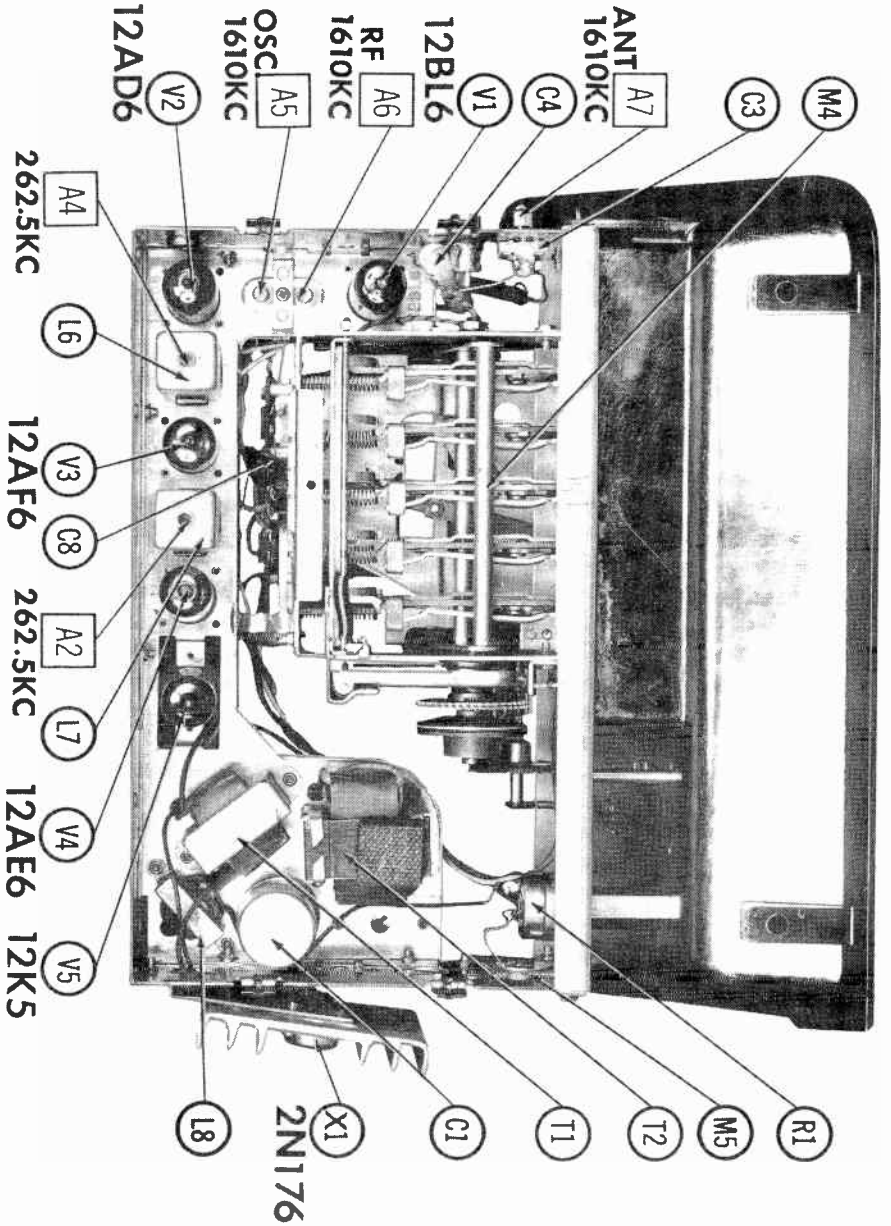
All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING		MOTOROLA PART No.	NOTES
	OHMS	WATT		
R3	470K		6R6032	
R4	1800Ω		6R2089	
R5	470Ω			Note 1
R6	2.7Meg		6R488136	
R7	4.7Meg		6R2122	
R8	33K		6R6012	
R9	10Meg		6R2109	
R10	1Meg		6R6004	
R11	47K		6R6056	

ITEM No.	RATING		MOTOROLA PART No.	NOTES
	OHMS	WATT		
R12	10Meg		6R2109	
R13	1000Ω		6R6301	
R14	470K		6R6032	
R15	68Ω		6R6007	
R16	3.3Meg		6R2118	
R17	15Ω		6R410033	
R18	100Ω		6R6018	
R19	10Ω		6R5621	
R20	39Ω	1	6R3961	
R21	100Ω		6R6018	

Note 1. Some versions may use 330Ω in this application (Part #6R6010).

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA						NOTES
	PRI.	SEC.	MOTOROLA PART No.	Halldorson PART No.	Merit PART No.	Stoncor PART No.	Thordorson PART No.	Triod PART No.	
T1	10:	1	25K541759						Alternate Part #25K540682

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA						NOTES
	PRI.	SEC.	MOTOROLA PART No.	Halldorson PART No.	Merit PART No.	Stoncor PART No.	Thordorson PART No.	Triod PART No.	
T2	62.5Ω	3-4Ω	25C539881						

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	MOTOROLA PART No.	QUAM PART No.	
SP1	5" X 7"	PM	3-4Ω	50D540194	57A21	

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		MOTOROLA PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Rom PART No.	
L1	Ant. Coil	24C536308					Part of Tuner M4
L2	RF Choke	24K539955					Includes 27MMF Cap
L3	IF Trap Coil	24K539616	19-3125	TV-196			133 Microhenries
L4	RF Coil	24C536308					Part of Tuner M4
L5	Osc. Coil	24B536300					Part of Tuner M4
L6	Input IF	24B536693	16-6752	BC-350	12-H1	RF-3	
L7	Output IF	24K532153	16-6754	BC-354	12-H6		

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					
	TOTAL DIRECT CURRENT	D. C. RESISTANCE	INDUCTANCE (0 CURRENT 1000 ~)	MOTOROLA PART No.	Halldorson PART No.	Merit PART No.	Stoncor PART No.	Thordorson PART No.	Triod PART No.
L8	2A	1. 3Ω	3. 8 Mlhy.	25K540136					

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			MOTOROLA PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	SFE	7½A 32V	65R122346		30307. 5 (7AG 7½A 32V)	155009	SFE 7½	HDH

MISCELLANEOUS

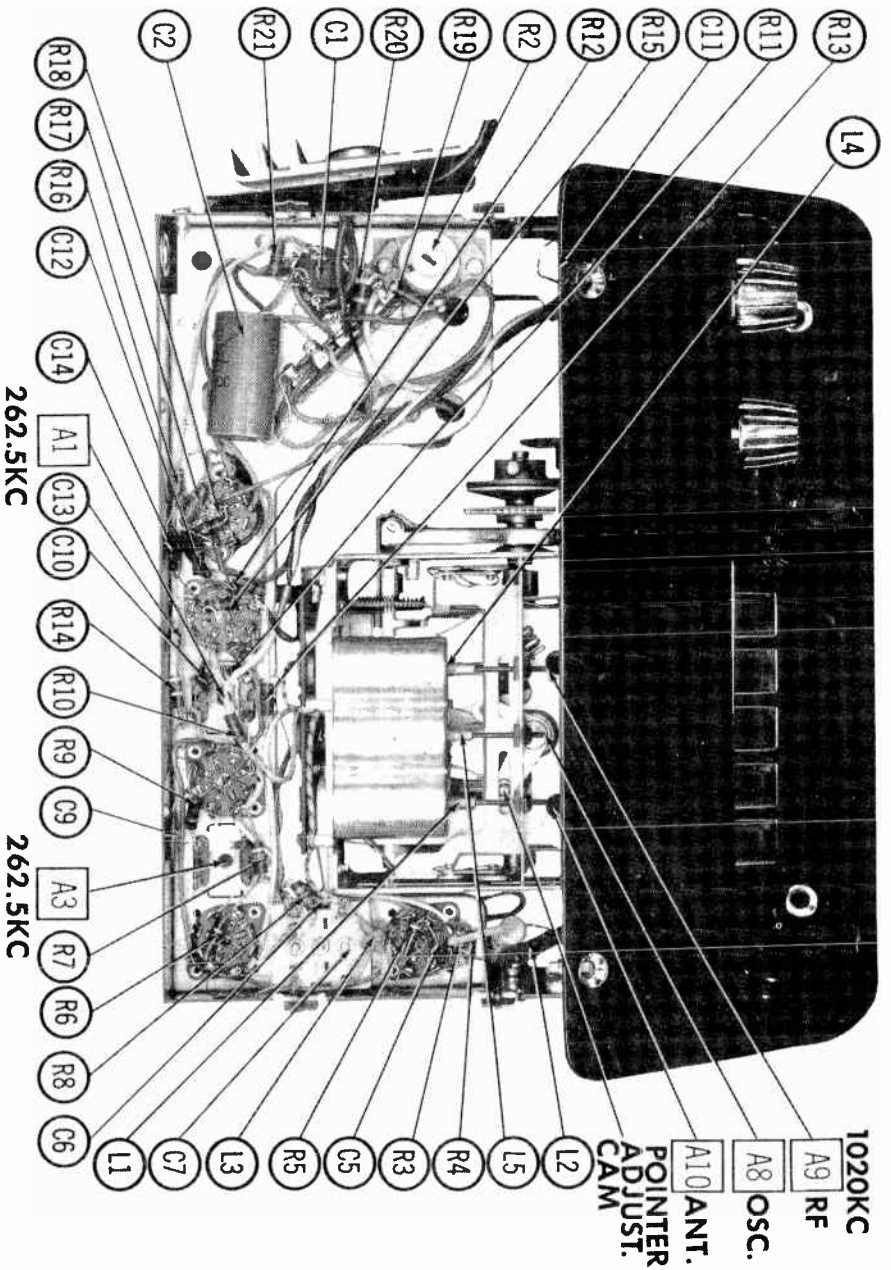
ITEM No.	PART NAME	MOTOROLA PART No.	NOTES
M2	Dial Light	65R10867	#44
M3	Dial Light	65R10867	#44
M4	Tuner	77E539483	AT-196, Complete
M5	Spark Plate	48K539953	Selenium

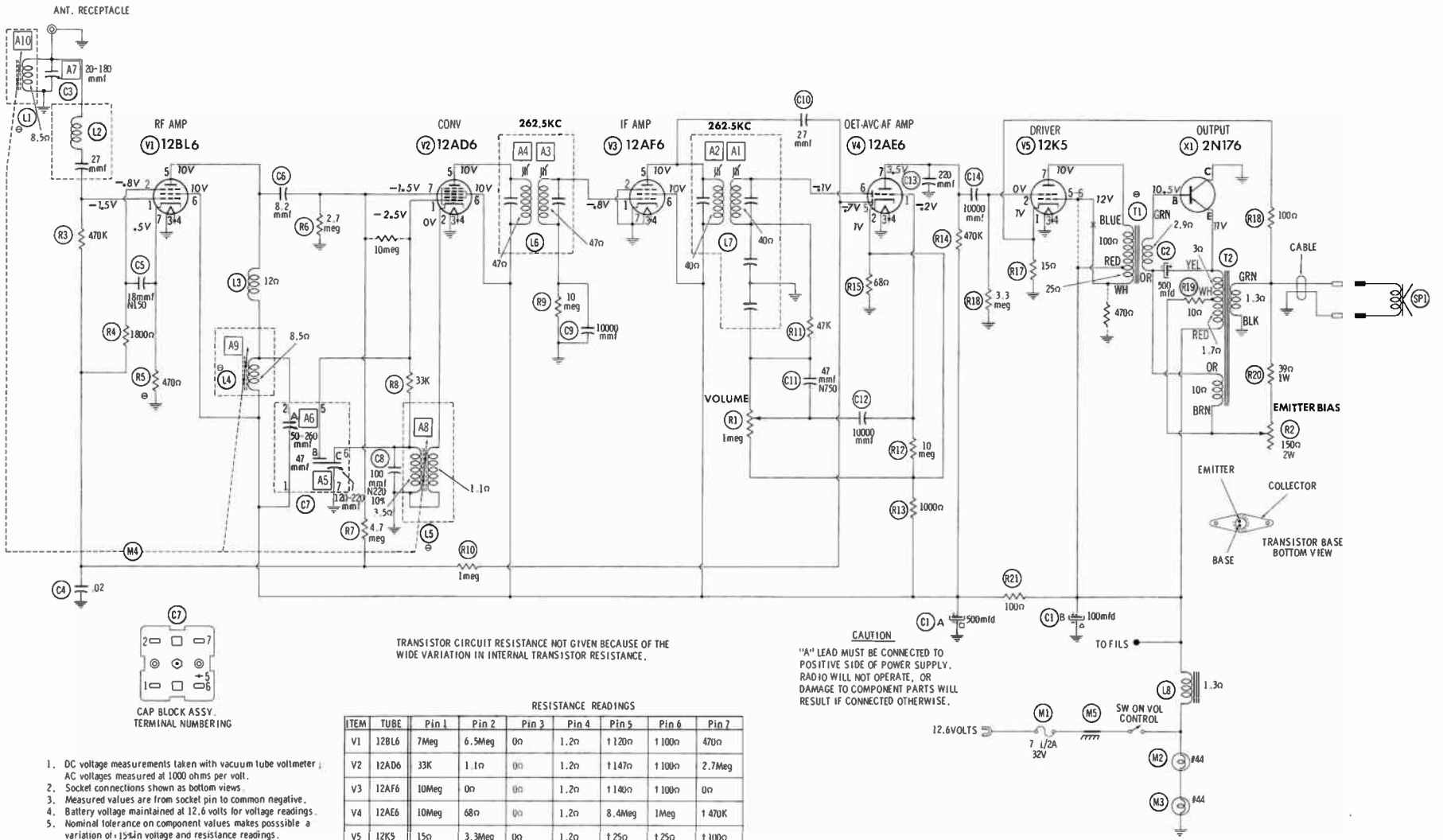
CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

NAME	PART NO.	DESCRIPTION
Knob	1V540469	On-Off-Volume & Tuning
Dial Scale	34B538870	
Crystal	61B538855	Dial Scale

CHASSIS—BOTTOM VIEW





TRANSISTOR CIRCUIT RESISTANCE NOT GIVEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.

RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7
V1	12BL6	7Meg	6.5Meg	0Ω	1.2Ω	†120Ω	†100Ω	470Ω
V2	12AD6	33K	1.1Ω	0Ω	1.2Ω	†147Ω	†100Ω	2.7Meg
V3	12AF6	10Meg	0Ω	0Ω	1.2Ω	†140Ω	†100Ω	0Ω
V4	12AE6	10Meg	68Ω	0Ω	1.2Ω	8.4Meg	1Meg	†470K
V5	12K5	15Ω	3.3Meg	0Ω	1.2Ω	†25Ω	†25Ω	†100Ω

† MEASURED FROM JUNCTION OF R21 AND L8

1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured at 1000 ohms per volt.
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ±5% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

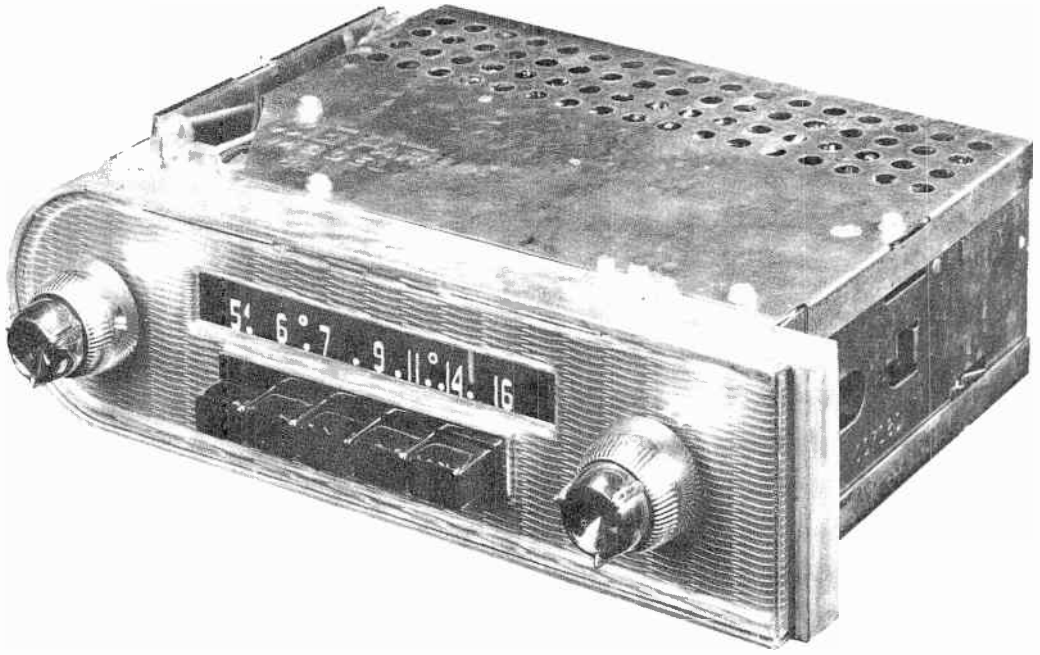
DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM.

⊖ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

TRANSISTOR BIAS ADJUSTMENT (R2)

After the transistor (X1) is replaced, the emitter bias should be checked. To do this, connect the negative lead of a low range VTVM to the junction of T2 and C2. Connect the positive lead to the junction of T2 and R19. Set the bias control (R2) to its maximum resistance position. With a power source of 12 volts DC connected to the receiver, allow a 10 minute warm-up period. Adjust the bias control (R2) for a reading of .85 volts on the VTVM. (This is equivalent to an emitter current of 450MA).

A PHOTOFACT STANDARD NOTATION SCHEMATIC
Howard W. Sams & Co., Inc. 1958



TRADE NAME	Mopar Model 851 (84BC) for 1958 Chrysler Automobiles
MANUFACTURER	Bendix Radio, Div. of Bendix Aviation Corp., Baltimore 4, Maryland
TYPE SET	Battery Operated Custom Built AM Automobile Receiver with Transistorized Output
TUBES (Four)	Types 12CX6 RF Amplifier, 12AD6 Converter, 12CX6 IF Amplifier, 12J8 Det.-AVC-AF Amp.
POWER SUPPLY	12 Volt Storage Battery — RATING 1.2 Amp. @ 12.6 Volts DC
TUNING RANGE—BROADCAST	530-1605KC

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Set tone control to treble.
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.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.1mfd	High side to pin 7 (grid) of 12AD6 (V2) Low side to chassis.	262.5KC (400∿ Mod.)	High freq. end stop.	DC probe to point (A). Common to chassis.	A1, A2 A3, A4	Adjust for maximum deflection.
2.	Fig. 1	Thru dummy to Ant. receptacle	1605 KC	"	"	A5, A6, A7.	"
	Steps 3 &4 are not necessary unless tuner has been tampered with or associated components have been replaced. Back tuning cores (A8, A9, A10) out of coils but not out of coil forms.						
3.	Fig. 1	Thru dummy to Ant. receptacle.	1605KC	High freq. end stop.	DC probe to point (A). Common to chassis.	A5, A6 A7,	Adjust for maximum deflection.
4.	"	"	1200KC	Tuner carriage .285" from Hi end stop.	"	A8, A9. A10	Adjust for maximum deflection . Repeat Steps 4 & 5.
5.	With radio installed in car and antenna fully extended, tune in a weak station near 1600KC and adjust A7 for maximum.						

PUSHBUTTON ADJUSTMENT

1. Tune manually to desired station .
2. Pull button out, then press in firmly.
3. Repeat for remaining buttons.

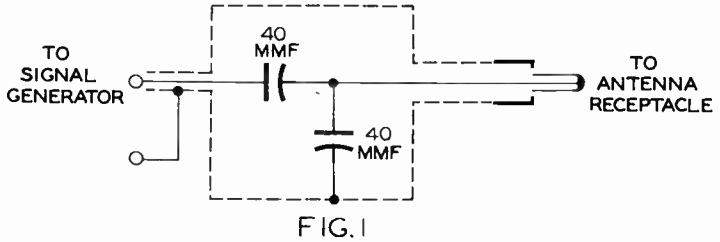


FIG. 1

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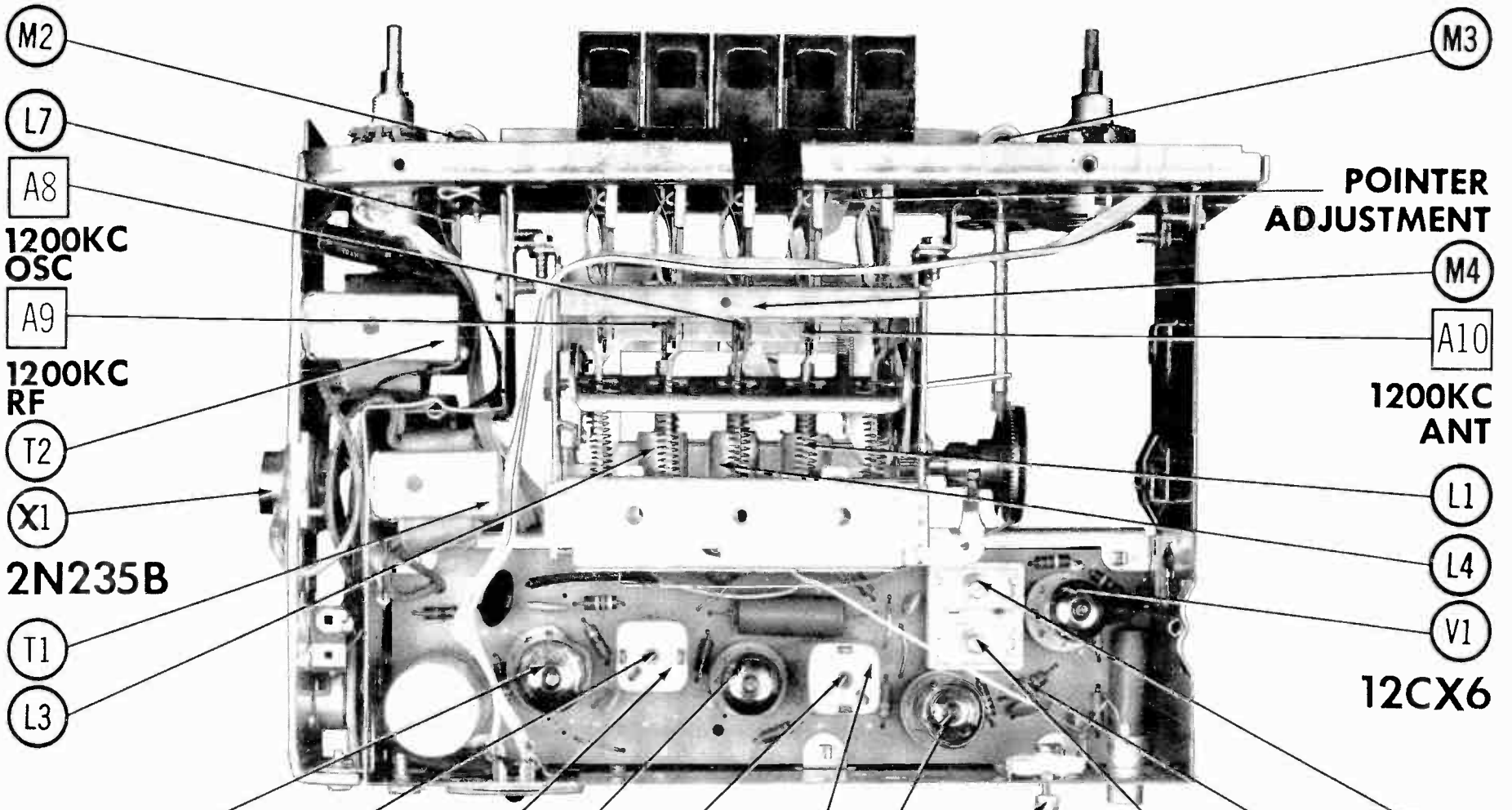


CHASSIS TOP VIEW

PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier	12CX6	
V2	Converter	12AD6	
V3	IF Amplifier	12CX6	
V4	Det. -AVC-AF Amp.	12J8	

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA				NOTES
			CBS PART No.	RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	2N235B	Output				2N235A	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	BENDIX PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	■ 800	16	220353-6	AFH2-02-60					R2666 *
B	▲ 250	16							

* Non-Catalog Item

FIXED CAPACITORS

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

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT	BENDIX PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
C2	4-75		219083-1						
C3	110		220348-406	1469-00011	TCZ-110	22R5T11		MS-311	5%
C4	22		220332-30	NP0-D122	DTZ-22	C10Q22C		5TCC-Q22	NP0
C5	.05	100	2090059A-503Y	P288N-05	DF-503	CUB2S5	GEM-415	2TM-S5	
C6	.1	100	2090059A-104Y	P288N-1	DF-104	CUB2P1	GEM-201	2TM-P1	
C7	2200		220332-31	BPD-0022	DD-222	BYA10D22	UC-5222		
C8A	120-450								
B	370-445		219092-2						
C	100								
C9	100		220332-14	BPD-0001	DD-101	L10T1	UC-531	5GA-T1	
C10	68		220332-32		TCL-100				N1500 10%
C11	68		220332-12						N150
C12	22		220332-30	NP0-D122	DTZ-22	C10Q22C		5TCC-Q22	NP0
C13	2200		220095-47						10%
C14	0027	100			D6-272				Note 1.
C15	10000		220332-21	BPD-01	DD-103	BYA10S1	DC511	5HK-S1	
C16	300		220267-12						
C17	300		220267-12						

Note 1. Some versions may use 2200mmf (Part # 220095-47)

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	BENDIX PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1A	2meg	*	L2090616-1	F1-67 ①				Tone
B	1.5meg	*		R2-66				Volume, Tap@500K
C	Switch			KB-7 or KR-7*				Power On-Off
R2	30Ω	2(WW)	L2090627-1					Speaker Fader
R3	150-600	2(WW)	0C-219555-14					Transistor Bias

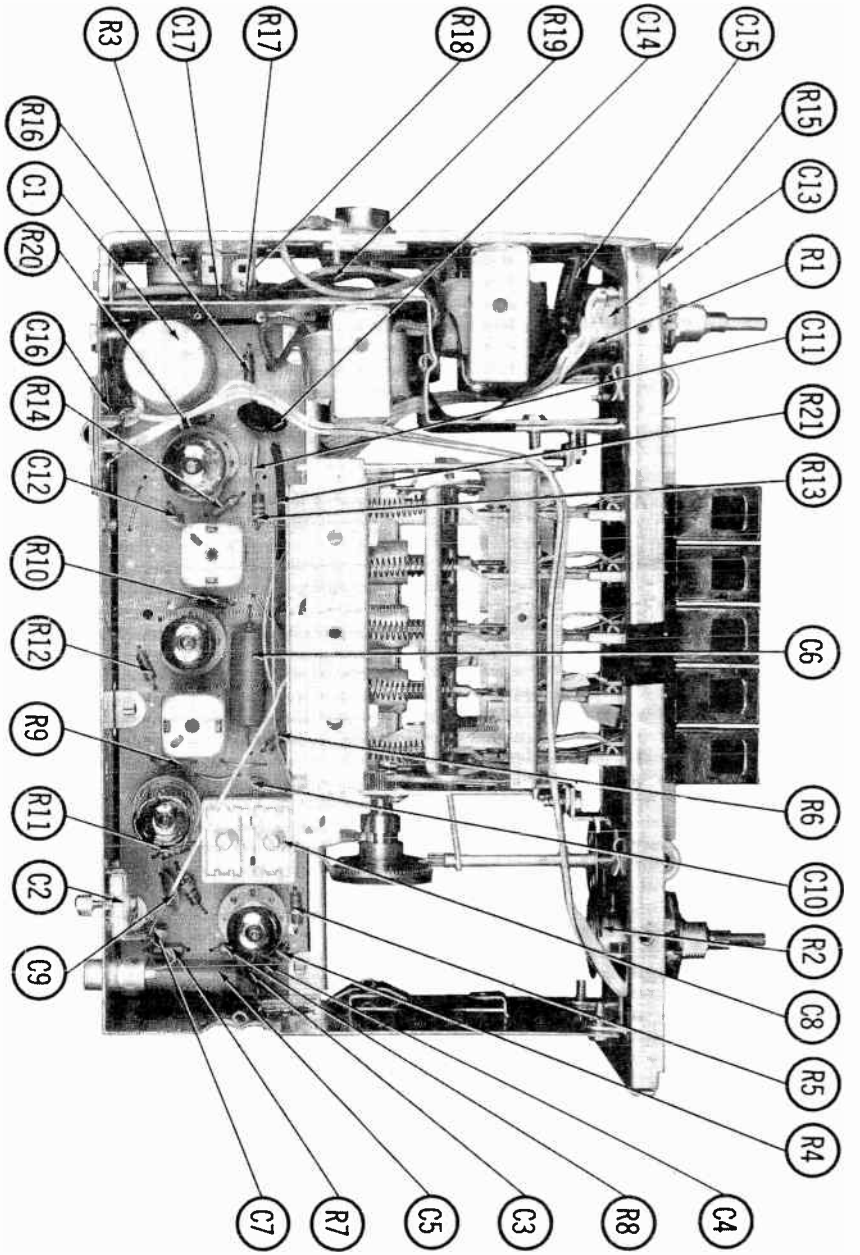
* Use KR with CRL "red label" controls & KB with "blue label" controls.
① Use AK-28 Adaptor Bushing

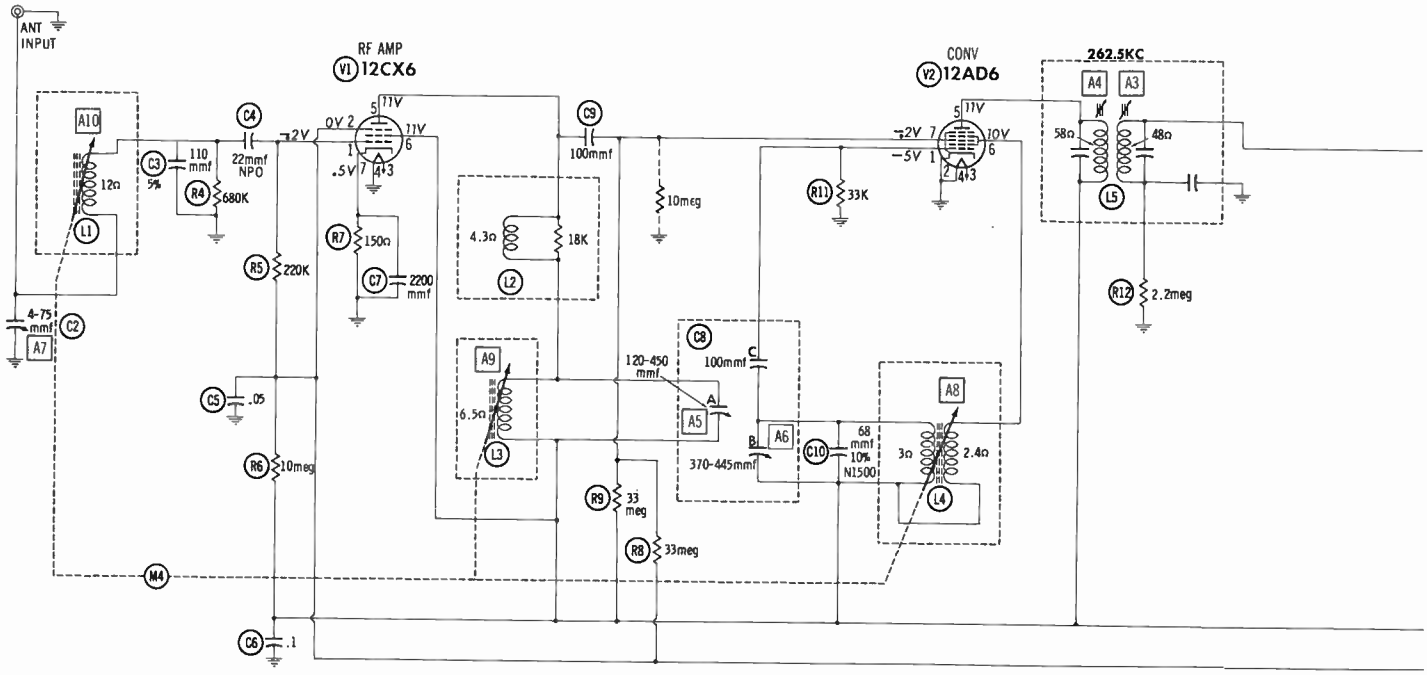
RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING		BENDIX PART No.	NOTES
	OHMS	WATT		
R4	680K		220604B-684	
R5	220K		220604B-224	
R6	10meg		220604B-106	
R7	150Ω		220604B-151	
R8	33meg		220604B-336	
R9	33meg		220604B-336	
R10	100Ω		220604B-101	
R11	33K		220604B-333	
R12	2.2meg		220604B-225	
R13	47K		220604B-473	
R14	2.2meg		220604B-225	
R15	100K		220603B-104	

CHASSIS—TOP VIEW





RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12CX6	†8meg	†7.8meg	2.1Ω	0Ω	†160Ω	†150Ω	150Ω		
V2	12AD6	33K	0Ω	2.1Ω	0Ω	†160Ω	†100Ω	25meg		
V3	12CX6	2.2meg	0Ω	2.1Ω	0Ω	†57Ω	†47Ω	0Ω		
V4	12J8	10meg	.1Ω	†74Ω	0Ω	2.1Ω	†215Ω	0Ω	8meg	1.2meg

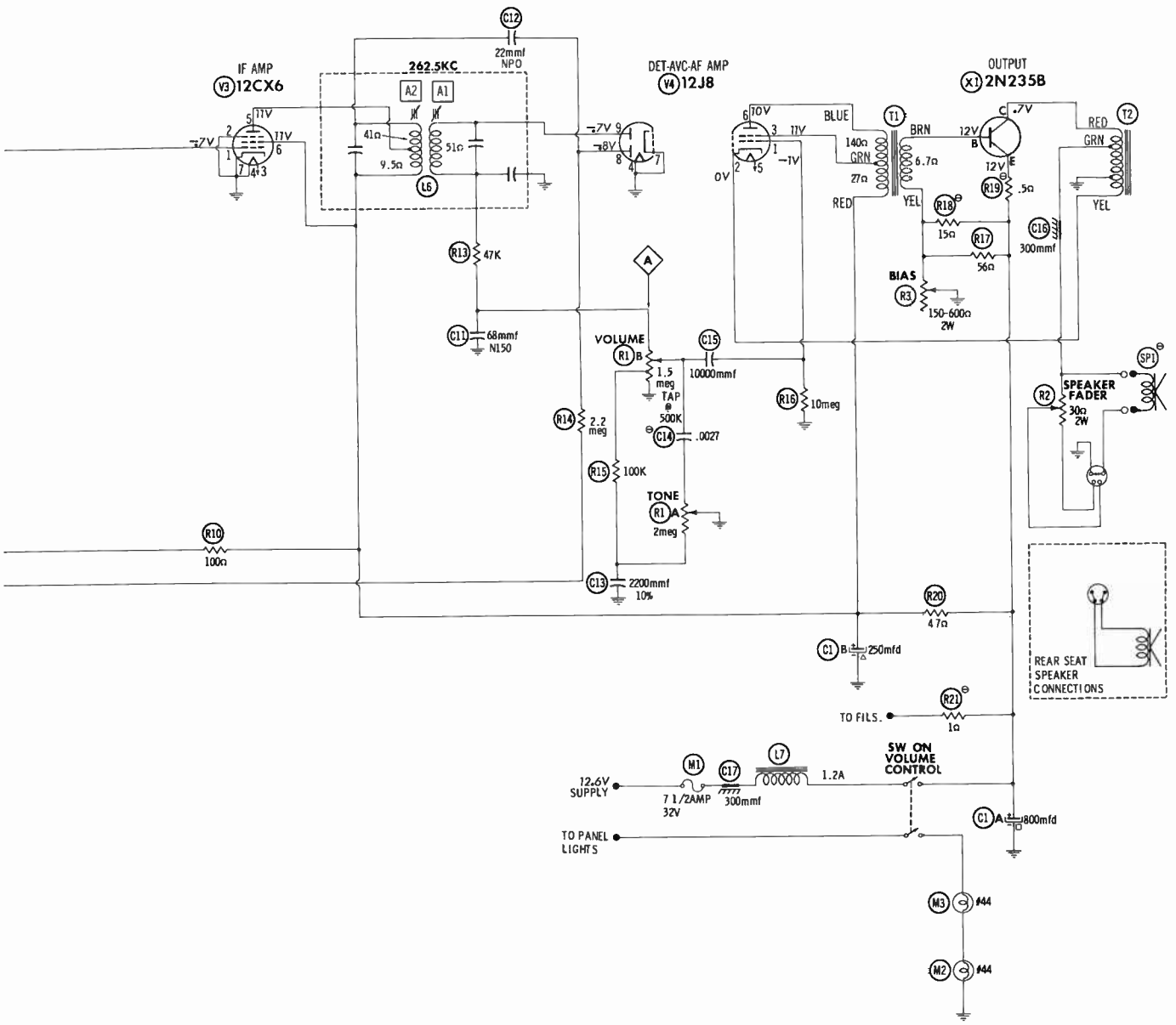
TRANSISTOR CIRCUIT RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE

† MEASURED FROM JUNCTION OF C1A AND R20

Θ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured at 1000 ohms per volt.
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes posssible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.



PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS (cont)

ITEM No.	RATING OHMS	RATING WATT	BENDIX PART No.	NOTES
R16	10meg		220604B-106	
R17	56Ω		220603B-560	
R18			220629-5	Note 1
R19	.5Ω		2090438-10	Note 2
R20	47Ω		220604B-470	
R21	1Ω		2090438-11	Note 3

Note 1. Temperature compensating type.
Note 2. 5.5" cupron wire.
Note 3. 10.5" cupron wire.

TRANSFORMER (INTERSTAGE)

ITEM No.	TURNS RATIO PRI.	TURNS RATIO SEC.	REPLACEMENT DATA BENDIX PART No.	Holldorson PART No.	Merit PART No.	Rom PART No.	Stoncor PART No.	Thordorson PART No.	Triod PART No.	NOTES
T1	5.8	:1	2090700-1							

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE PRI.	REPLACEMENT DATA BENDIX PART No.	Holldorson PART No.	Merit PART No.	Rom PART No.	Stoncor PART No.	Thordorson PART No.	Triod PART No.	NOTES
T2	22.5Ω Speaker tap @ 3-4Ω	2090648-2							

SPEAKER

ITEM No.	TYPE SIZE	TYPE FIELD	TYPE V. C. IMP.	REPLACEMENT DATA BENDIX PART No.	REPLACEMENT DATA QUAM PART No.	NOTES
SP1	5" x 7"	PM	3-4Ω	2090642-1 ①	57A21	① Alternate Part #2090744-2

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA BENDIX PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Rom PART No.	NOTES
L1	Ant. Coil						Note 1
L2	IF Trap Coil	2090088-1					50 Microhenries; wound on a 18K Resistor.
L3	RF Coil						Note 1
L4	Osc. Coil						Note 1
L5	Input IF	2090513-1	16-6754	BC-320	12-H6		
L6	Output IF	2090549-1					

Note 1. Part of tuner M4.

FILTER CHOKE

ITEM No.	RATINGS CURRENT (Measured)	RATINGS DC RES.	RATINGS INDUCTANCE (0 CURRENT 1000 ~)	REPLACEMENT DATA BENDIX PART No.	Holldorson PART No.	Merit PART No.	Rom PART No.	Stancor PART No.	Thordorson PART No.	Triod PART No.
L7	1.2A	.5Ω	.002HY	2090520-5						

PARTS LIST AND DESCRIPTIONS (Continued)

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA BENDIX PART No. FUSE	BENDIX PART No. HOLDER	LITTELFUSE PART No. FUSE	LITTELFUSE PART No. HOLDER	BUSS PART No. FUSE	BUSS PART No. HOLDER
M1	SFE	7½A 32V	SFE 7½	221633-9	30707.5 (7AG 7½A 32V)	155009	SFE7½	HDH

MISCELLANEOUS

ITEM No.	PART NAME	BENDIX PART No.	NOTES
M2	Dial Lamp	44	#44
M3	Dial Lamp	44	#44
M4	Tuner Ass'y	2090593-3	Complete
	Printed Board	2090742-1	

CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

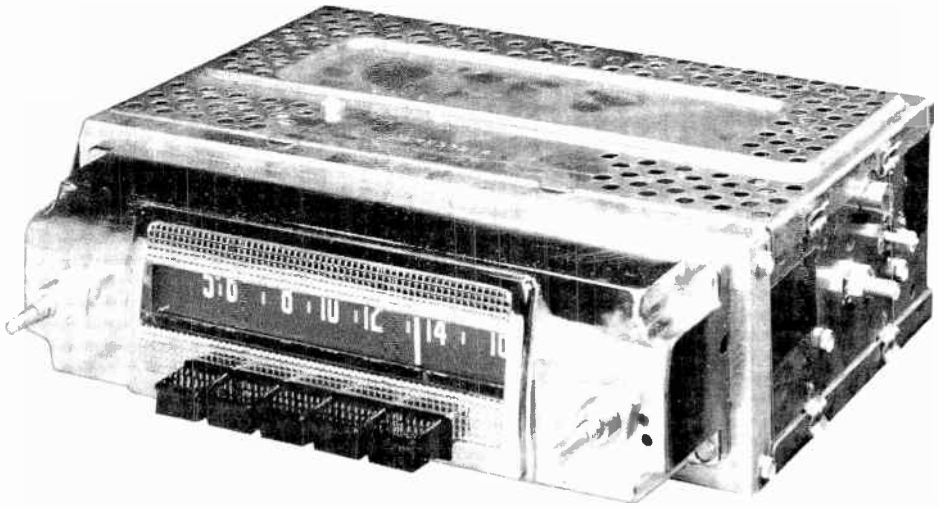
NAME	PART NO.	DESCRIPTION
Bezel	2090709-1	Escutcheon, Dial, Pushbutton
Disc	2090611-1	Tone & Fader
Knob Ass'y	2090610-2	
Pointer Ass'y	2090129-10	

WIRING DATA

General-use Unshielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors
Shielded Hook-up Wire ..... Use BELDEN No. 8885
Bonding Strap ..... Use BELDEN No. 8661

TRANSISTOR BIAS ADJUSTMENT (R3)

1. Set R3 to its maximum resistance.
2. Connect an accurate low range DC voltmeter from the transistor collector to chassis.
3. Turn on receiver and allow a 15 minute warm up period.
4. Adjust R3 for a meter reading of .60 volts DC. This is equivalent to a collector current of 475MA, the maximum safe value.



TRADE NAME	Mopar Models 852 (For 1958LD1, LD2, LD3 Dodge Automobiles); 853(For LS1, LS2, LS3 DeSoto Automobiles)
MANUFACTURER	Motorola Inc., 4545 W. Augusta Blvd, Chicago 51, Illinois
TYPE SET	Battery Operated Custom Built AM Automobile Receiver with Transistorized Output.
TUBES (Four)	Types 12BL6 RF Amplifier, 12AD6 Converter, 12BL6 IF Amplifier, 12DL8 Det.-AVC-AF Amp.
POWER SUPPLY	12 Volt Storage Battery RATING 1.4 Amp. @12.6 Volts DC
TUNING RANGE—BROADCAST	535-1605KC

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING 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. Tone control to maximum treble.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.1mfd	High side to pin 7 (grid) of 12AD6(V2) Low side to chassis.	262.5KC (400~ Mod.)	High frequency end stop.	Across Voice Coil.	A1, A2, A3, A4.	Adjust for maximum output.
2.	Fig. 1	Thru dummy to Ant. receptacle.	1610KC	"	"	A5, A6	"
3.	"	"	1400KC	Tune to 1400KC signal.	"	A7	"

Steps 4 & 5 are not necessary unless tuner has been tampered with or associated components have been replaced. If necessary remove escutcheon to expose tuning cores (A8, A9, A10). Back tuning cores 1 3/8" out of coils. Alignment tool Part #66A76278 may be used.

4.	Fig. 1	Thru dummy to Ant. receptacle.	1610KC	High frequency end stop.	Across Voice Coil.	A5, A6, A7	Adjust for maximum output.
5.	"	"	1020KC	Tuner carriage 49/64" from high frequency end stop.	"	A8, A9, A10	Adjust for maximum output. Repeat steps 4 & 5. Step 4 should be the last step. Cement cores.

With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A7 for maximum output.

POINTER ADJUSTMENT

With radio tuned to 1000KC, adjust pointer adjustment so that pointer coincides with 1000KC mark on dial.

PUSHBUTTON ADJUSTMENT

1. Pull pushbutton out.
2. Tune manually to desired station.
3. Press pushbutton in firmly.
4. Repeat for remaining buttons.

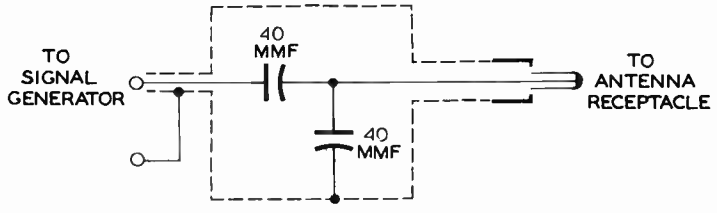


FIG. 1

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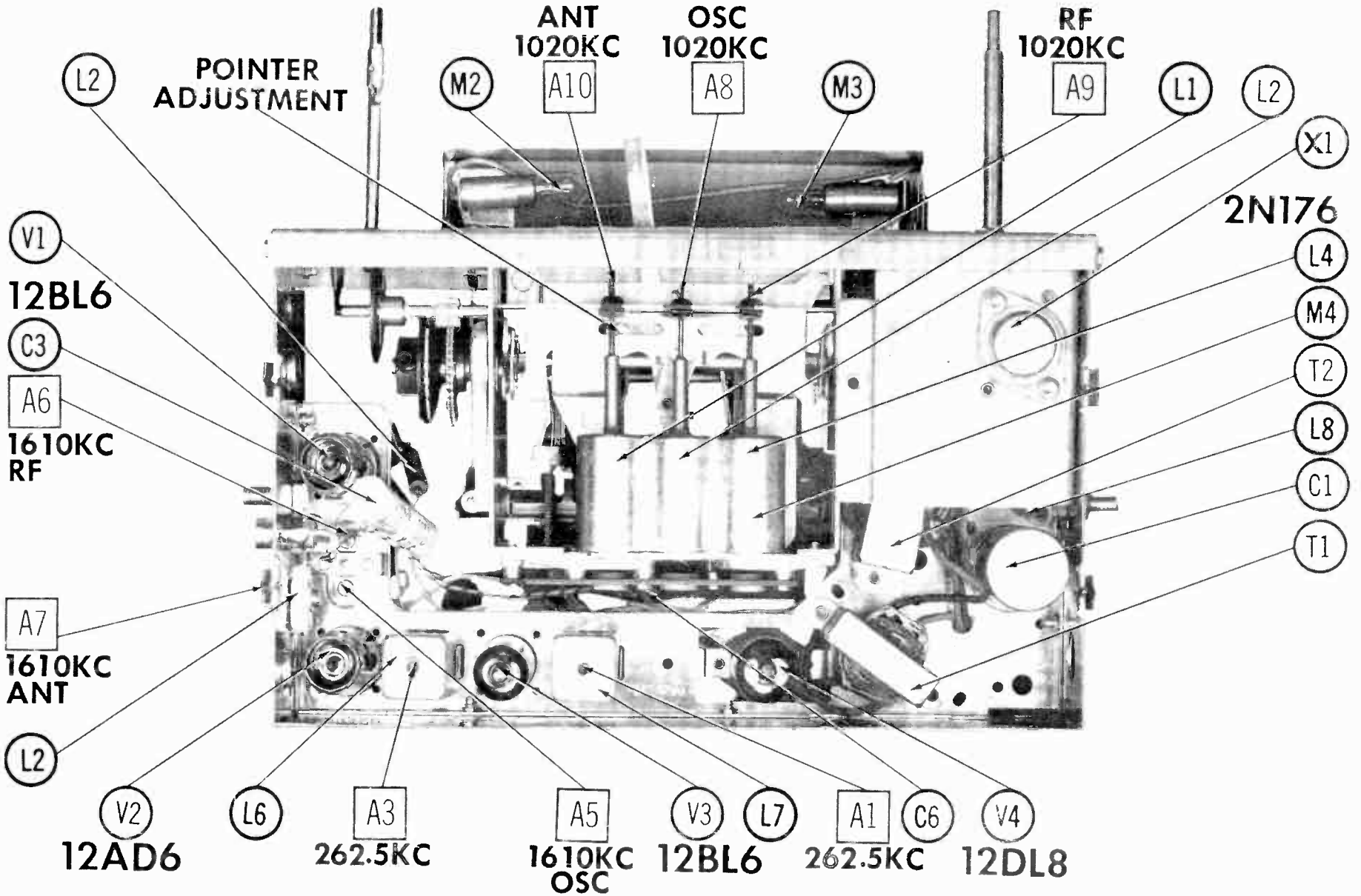


CHASSIS-TOP VIEW

PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier	12BL6	
V2	Converter	12AD6	
V3	IF Amplifier	12BL6	
V4	Det.-AVC-AF Amp.	12DL8	

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA				NOTES
			CBS PART No.	RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	2N176	Output	CBS-2N155	2N176		2N176	PNP

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	MOTOROLA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	■400	16	23B542329①	AFH3-00-90		WP300.5			R2634*
B	▲100	16							
C	100	16							

①In some versions of Model 853, C1A is 500mfd (C1 Part #23B560487)
* Non-Catalog Item.

FIXED CAPACITORS

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

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT	MOTOROLA PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
C2	18-115		20K542026						Note 1.
C3	.1	200	8R121573	P288N-1	DF-104	CUB2P1	GEM-201	2TM-P1	
C4A	50-260								
B	47		20K560255						
C	120-210								
C5	12		21R121462						N150 10%
C6	100		21R124032						N220
C7	10000		21R121946	BPD-01	DD-103	BYA6S1	DC511	5HK-S1	
C8	100		21R400537	N750-DI 100	DTN-100	C10T1U	NT-531	5TCU-T1	N750
C9	100		21R400537	N750-DI 100	DTN-100	C10T1U	NT-531	5TCU-T1	N750
C10	3300		21R120422	BPD-0033	DD-332	BYA10D33	UC-5233	5GA-D33	
C11	1000		21R410127	BPD-001	DD-102	BYA6D1	DC521	5HK-D1	
C12	10000		21R121946	BPD-01	DD-103	BYA6S1	DC511	5HK-S1	

Note 1. Model 853 has 20-150mmf in this application (Part #20B532899)

PARTS LIST AND DESCRIPTIONS (Continued)

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESIST-ANCE	WATTS	MOTOROLA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1A	1meg	½	18K560417		RTV-661C	♦ QJ-1093A	■ UE383IS	Tone Note 1.
B	1.3meg	½						Volume, Tap ⓐ 650K
C	Switch							
R2	210Ω	1.5 (WW)	18K540718		39-200			Transistor Bias Adj.

Note 1. Part #18B560416 used in Model 853
■ "STA-LOC" equivalent: FB46L, OS2375, RU16T654, IS2875, US42
♦ CONCENTRIKIT equivalent; K-6 kit, B11-141, P13-214 (Panel)
B19-137X, R1-226 (Rear)
76-2 switch

RESISTORS

All wattages 1/2 watt, or less. unless otherwise listed.

ITEM No.	RATING		MOTOROLA PART No.	NOTES
	OHMS	WATT		
R3	3.3meg		6K119407	
R4	1000Ω		6R6301	
R5	22meg		6R118247	
R6	1.5meg		6R3966	
R7	1.5meg		6R3966	
R8	3.3meg		6K119407	
R9	33K		6K121704	
R10	12meg		6R400334	

ITEM No.	RATING		MOTOROLA PART No.	NOTES
	OHMS	WATT		
R11	47K		6K121687	
R12	47K		6K121687	
R13	10meg		6K119408	
R14	33Ω		6K121304	
R15	5.6Ω	(WW)	17K739323	
R16	.47Ω	(WW)	17K488266	
R17	10Ω Cold		6K540634	
R18	100Ω		6K119402	Note 1.

Note 1. In Model 853, 390Ω is used in this application (Part#6K122312)

TRANSFORMER (INTERSTAGE)

ITEM No.	TURNS RATIO		REPLACEMENT DATA							NOTES
	PRI.	SEC.	MOTOROLA PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T1	6.4	:1	25K542376							

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA							NOTES
	PRI.		MOTOROLA PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	33.5Ω Tap ③ 3-4Ω		25C542105							
	TURNS RATIO									
	2.7	:1								

PARTS LIST AND DESCRIPTIONS (Continued)

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	MOTOROLA PART No.	QUAM PART No.	
SP1	5½" x 7½"	PM	3-4Ω	50K560421		

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					
		MOTOROLA PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Ram PART No.	NOTES
L1	Ant. Coil	24C536308					Note 1.
L2	RF Choke	24K539955					Incls. 27mmf cap
L3	IF Trap Coil	24K539616	19-3125	TV-195			133 microhenries
L4	RF Coil	24C536308					Note 1.
L5	Osc. Coil	24B536300					Note 1.
L6	Input 1F	24K560418	16-6752	BC-350	12-H1	RF-3	
L7	Output IF	24B542371					

Note 1. Part of M4

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA						
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000 ~)	MOTOROLA PART No.	Halldorson PART No.	Merit PART No.	Rom PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
L8	1.4A @ 12.6 VDC	.2Ω	.004HY	25K560752①						

① Tapped choke used in some versions of Model 853 (Part#25C561000)

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			MOTOROLA PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	7AG	7½A 32V	65R122346	9K540494	30707.5 (7½A 32V)	155009	SFE7½	HDH

PARTS LIST AND DESCRIPTIONS (Continued)

MISCELLANEOUS

ITEM No.	PART NAME	MOTOROLA PART No.	NOTES
M2	Lamp	65R10867	#44
M3	Lamp	65R10867	#44 (22Ω resistor used in Model 853)
M4	Tuner	77E560181	AT-225, Complete, Model 852
	Tuner	77E560182	AT-226, Complete, Model 853
M5	Spark Plate	48K539953	Selenium Type (Use #43A539954 Bushing, #5K124848 Eyelet, #4A542137 Cup Washer for Mounting)

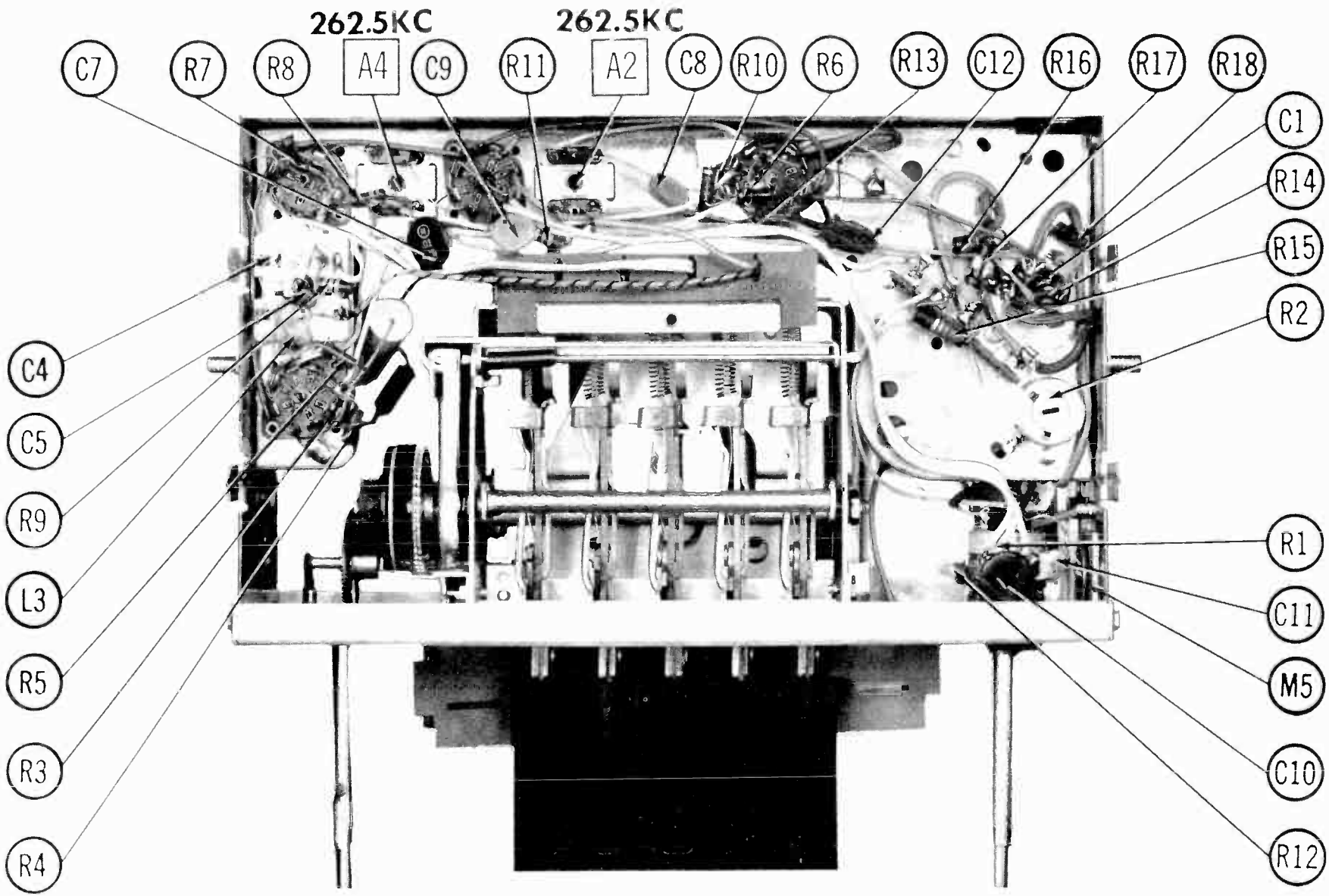
CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

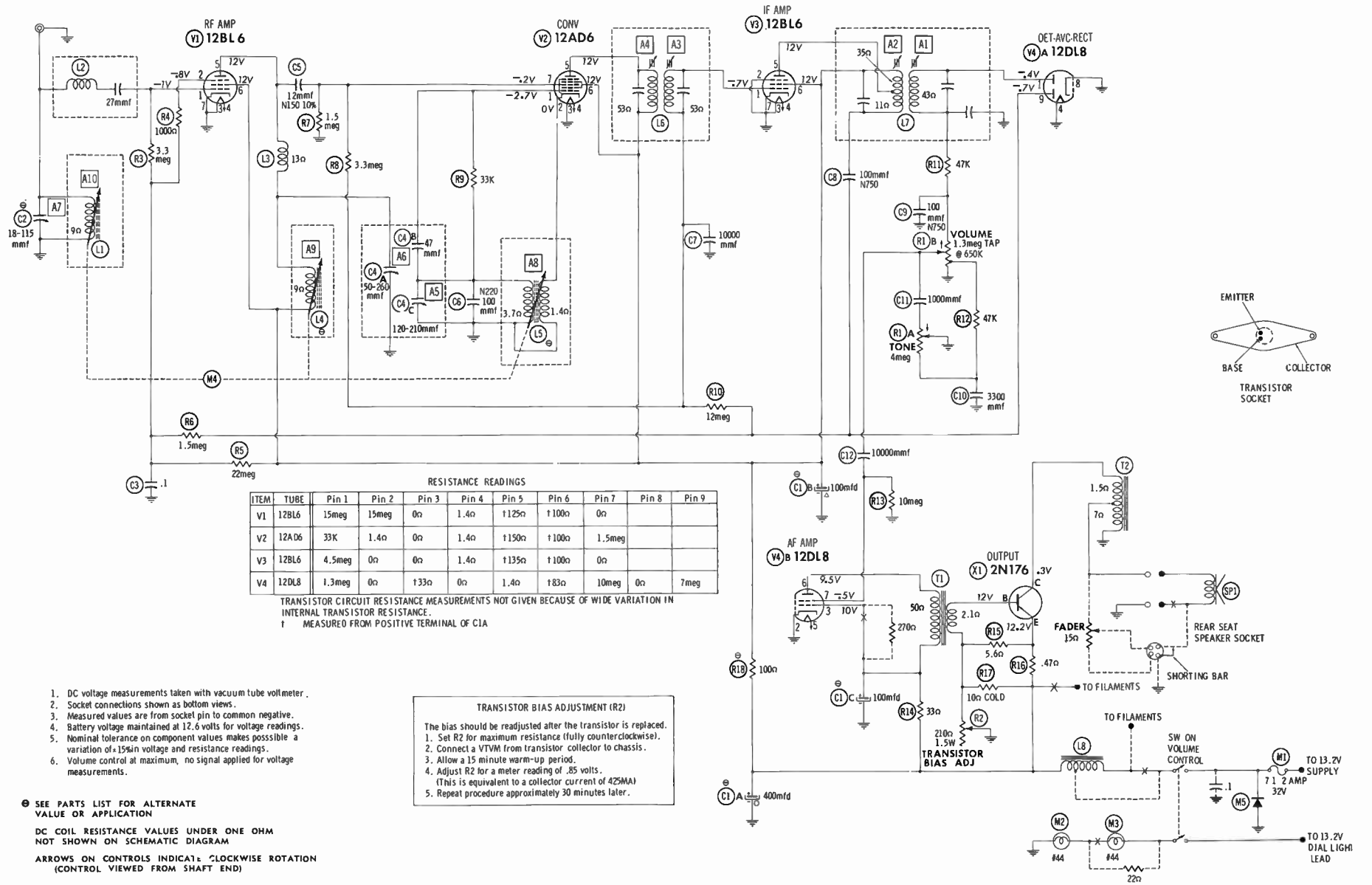
NAME	PART NO.	DESCRIPTION
Knob	1V540260	Volume and Tuning, Model 852
Knob	1V540099	Volume and Tuning, Model 853
Knob	36B539078	Two Used, Tone and Dummy, Model 852
Knob	36C539088	Two Used, Tone and Rear Seat Speaker, Model 853
Pushbutton	38B539914	Five Used, Model 852
Pushbutton	1B540078	Five Used, Model 853
Pointer	1A539631	Incl. Stud Ass'y., Model 852
Pointer	1A539632	Incl. Stud Ass'y., Model 853
Dial Scale	34C539581	Model 852
Dial Scale	34K539545	Model 853
Dial Crystal	61B539949	Model 852

WIRING DATA

General-use Unshielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors
Shielded Hook-up Wire ..... Use BELDEN No. 8885
Bonding Strap ..... Use BELDEN No. 8661



CHASSIS-BOTTOM VIEW



RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12BL6	15meg	15meg	0Ω	1.4Ω	†125Ω	†100Ω	0Ω		
V2	12AD6	33K	1.4Ω	0Ω	1.4Ω	†150Ω	†100Ω	1.5meg		
V3	12BL6	4.5meg	0Ω	0Ω	1.4Ω	†135Ω	†100Ω	0Ω		
V4	12DL8	1.3meg	0Ω	†33Ω	0Ω	1.4Ω	†83Ω	10meg	0Ω	7meg

TRANSISTOR CIRCUIT RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.
† MEASURED FROM POSITIVE TERMINAL OF C1A

1. DC voltage measurements taken with vacuum tube voltmeter.
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes posssible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

⊖ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)

TRANSISTOR BIAS ADJUSTMENT (R2)

The bias should be readjusted after the transistor is replaced.
1. Set R2 for maximum resistance (fully counterclockwise).
2. Connect a VTVM from transistor collector to chassis.
3. Allow a 15 minute warm-up period.
4. Adjust R2 for a meter reading of .85 volts. (This is equivalent to a collector current of 425MA)
5. Repeat procedure approximately 30 minutes later.

A PHOTOFACT STANDARD NOTATION SCHEMATIC
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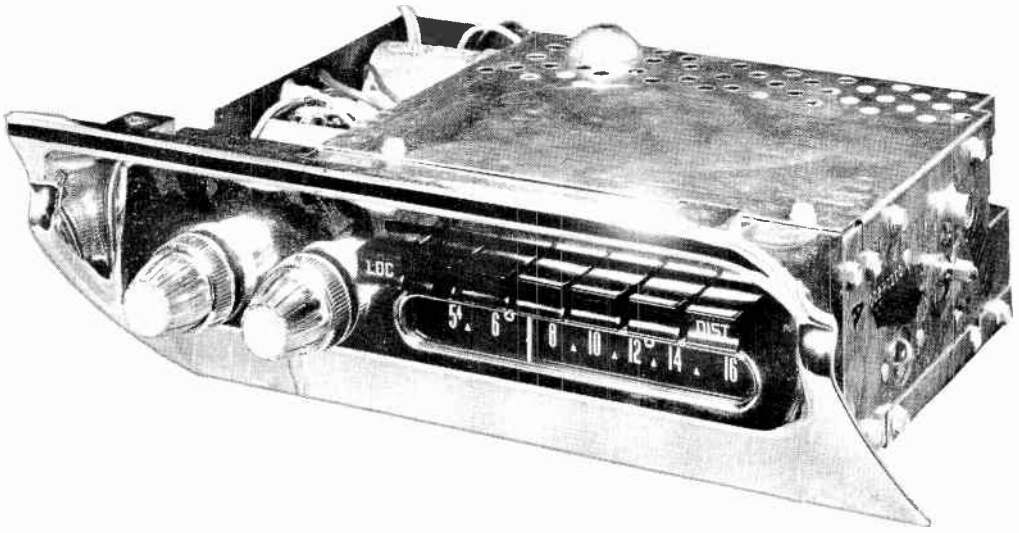
MOPAR MODELS 917HR (P5703), 920HR (C5707), 921HR (C5709)



TRADE NAME	Mopar Models 917HR (P5703) For 1957 Plymouth Automobiles, 920HR (C5707) For 1957 Chrysler Automobiles, 921HR (C5709) For 1957 Imperial Automobiles
MANUFACTURER	Philco Corp., Tioga & "C" Sts., Philadelphia, Pa.
TYPE SET	Battery Operated Custom Built AM Automobile Receiver With Transistorized Output
TUBES (Six)	Types 12BL6 RF Amplifier, 12AD6 Converter, 12BL6 IF Amplifier, 12F8 Det. -AVC-AF Amp., 12AD6 Trigger Detector, 12K5 AF Amp. - Relay Trigger
POWER SUPPLY	12 Volt Storage Battery RATING 2.2 Amp. @ 12.6 Volts DC
TUNING RANGE - BROADCAST	540KC - 1605KC

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING 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.

ALIGNMENT INSTRUCTIONS

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
1.	.047mfd	High side to pin 7 (grid) of 12AD6 (V2). Low side to chassis.	262.5KC (400% Mod)	Tuning gang fully open	DC probe thru 1.2meg to pin 1 (grid) of 12AD6 (V5). Common to chassis.	A1, A2, A3	Adjust for maximum deflection.
2.	"	"	"	"	"	A4	Adjust for MINIMUM deflection. Repeat steps 1 and 2 until no further improvement is noted.
3.	Fig. 1	Thru dummy to antenna receptacle	1610KC	1610KC	"	A5, A6, A7	Adjust for maximum deflection.

With radio installed in car and antenna fully extended tune in a weak station near 1200KC and adjust A6 for maximum output.

PUSHBUTTON ADJUSTMENT

1. Allow receiver to warm up for 15 minutes. Extend antenna.
2. Pull pushbutton out.
3. Tune manually to desired station.
4. Press pushbutton in firmly.
5. Repeat for remaining pushbuttons.

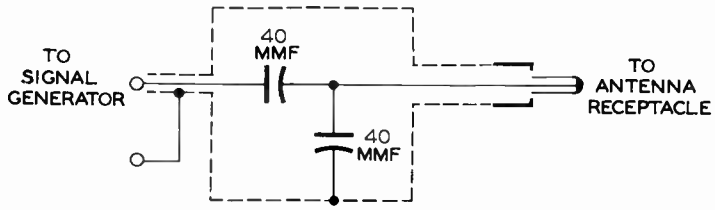


FIG. 1

HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana

MOPAR MODELS 917HR (P5703), 920HR (C5707), 921HR (C5709)

PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier	12BL6	
V2	Converter	12AD6	
V3	IF Amplifier	12BL6	

ITEM No.	USE	TYPE	NOTES
V4	Det. -AVC-AF Amp.	12F8	
V5	Trigger Detector	12AD6	
V6	AF Amp. - Relay Trigger	12K5	

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			CBS PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	AR6	Output			2N242	Note 1

Note 1. Some versions may use type AR5 or AR7 in this application. Some versions of Model 921HR use two type AR9 transistors in the output stage.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	PHILCO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	■500	18	61-0086-9	AFH2-02-75		WP200. 7			R2480 *
B	▲200	18							

* Non Catalog Item

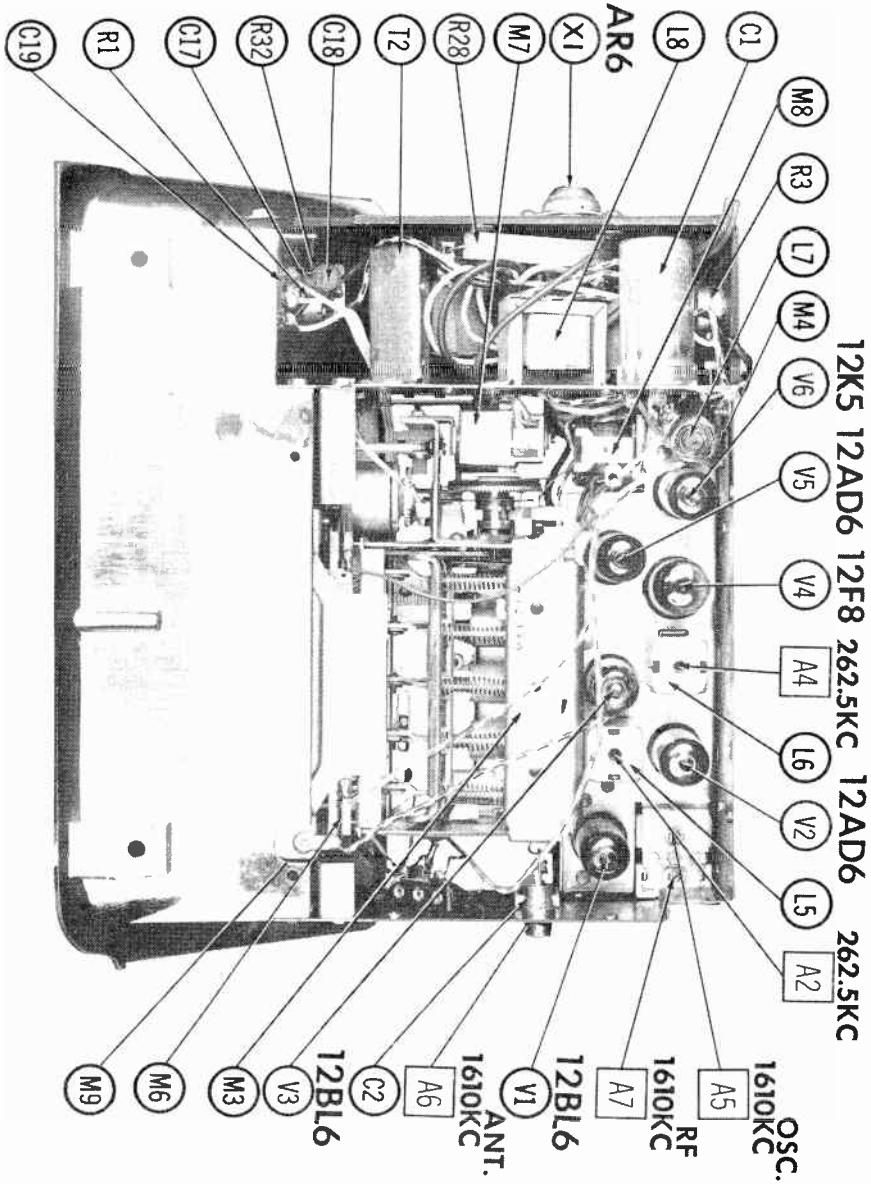
FIXED CAPACITORS

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

ITEM No.	RATING		REPLACEMENT DATA							NOTES
	CAP.	VOLT	PHILCO PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	
C2	5-65		31-6533-1							
C3	100		30-1251-22	NPO-DI 100	DD-101	L10T1	ED-100	ZT-531	5TCC-T1	10%
C4	10		30-1251-6	NPO-DI 10	DD-100	L10Q1	ED-10	ZT-541	5TCC-Q1	①
C5	. 047	200	30-4650-45	P288N-047	DF-503	CUB2S47		GEM-4147	2TM-S47	
C6	. 047	200	30-4650-45	P288N-047	DF-503	CUB2S47		GEM-4147	2TM-S47	
C7	10000		30-1238-2	BPD-01	DD-103	BYA6S1	ED-01	DC511	5HK-S1	②
C8	33		30-1251-9	BPD-000033	DD-330	L10Q33	ED-33	UC-5433	5GA-Q33	
C9A	10-95									
B	315-330		31-6522-8							
C	100									
C10	100		30-1251-22	N750-DI 100	TCN-100	C10T1U	TC7-100	NT-531	5TCU-T1	N750
C11	10000		30-1238-2	BPD-01	DD-103	BYA6S1	ED-01	DC511	5HK-S1	
C12	.1	200	30-4650-47	P288N-1	DF-104	CUB2P1		GEM-201	2TM-P1	③
C13	220		30-1238-4	BPD-00022	DD-221	L10T22	ED-220	UC-5322	5GA-T22	④
C14	100		30-1238-11	BPD-0001	DD-101	L10T1	ED-100	UC-531	5GA-T1	
C15	100		30-1238-11	BPD-0001	DD-101	L10T1	ED-100	UC-531	5GA-T1	
C16	1000		30-1238-3	BPD-001	DD-102	BYA6D1	ED-1000	DC521	5HK-D1	
C17	39		30-1251-21	SI 39	DD-390	L10Q39	ED-39	UC-5439	5GA-Q39	⑤ ⑥
C18	1000		30-1238-3	BPD-001	DD-102	BYA6D1	ED-1000	DC521	5HK-D1	④ ⑦
C19	4000		30-1238-18	BPD-004	DD-402	BYA10D4	ED-004	UC-524	5HK-D4	
C20	1000		30-1238-2	BPD-01	DD-103	BYA6S1	ED-01	DC511	5HK-S1	⑥
C21	.1	200	30-4650-47	P288N-1	DF-104	CUB2P1		GEM-201	2TM-P1	
C22	1000		30-1238-3	BPD-001	DD-102	BYA6D1	ED-1000	DC521	5HK-D1	
C23	. 047	200	30-4650-45	P288N-047	DF-503	CUB2S47		GEM-4147	2TM-S47	
C24	220		30-1262-2	BPD-00022	DD-221	L10T22	ED-220	UC-5322	5GA-T22	⑥
C25	.5	100		P288N-5		CUB2P5		GEM-205	2TM-P5	④

① Early Model 921HR uses 5mmf in this application.
② Not used in early Model 921HR.
③ Late Model 921HR uses 10000mmf in this application.
④ Not used in some versions.
⑤ Some versions use 200mmf in this application.
⑥ Not used in late Model 921HR.
⑦ Some versions may use 5000mmf in this application.

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	PHILCO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1A	4meg	½	33-5580-15					Tone ①
B	2meg	½						Volume, Tap ③ 500K
C	Switch							
R2	150Ω	2	33-5591-3		39-150		FL-150	Trigger Bias (Wirewound) ②
R3	15Ω	2	33-5591-2					Emitter Bias (Wirewound)

① Tone control (R1A) open in center, 2meg each side of center.
Some Model 917HR use Part #33-5580-17 (R1B 1meg).
Some Model 920HR use Part #33-5580-13 (R1B 3meg). Others use Part #33-5580-18 (R1B 1meg).
Some Model 921HR use Part #33-5580-14 (R1B 3meg). Others use Part #33-558019 (R1B 1meg).

② R2 may be a 100Ω control connected in series with a 47Ω fixed resistor in some versions.
Early Model 921HR was 82Ω & 47Ω connected in series.

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING		PHILCO PART No.	NOTES
	OHMS	WATT		
R4	150K		66-4158340	
R5	1200Ω		66-2128340	
R6	680Ω		66-1688340	
R7	56Ω		66-0568340	Note 1
R8	1meg	1/4	66-5108340	
R9	6.8meg		66-5688340	
R10	1.8meg		66-5188340	Note 2
R11	47K		66-3478340	
R12	1.8meg		66-5188340	Note 3
R13	4.7meg		66-5478340	Note 4
R14	1meg		66-5108340	
R15	2.2meg		66-5228340	
R16	100K		66-4108340	Note 5
R17	100Ω		66-1108340	Note 6
R18	1000Ω		66-2108340	Note 7

ITEM No.	RATING		PHILCO PART No.	NOTES
	OHMS	WATT		
R19	10meg		66-6108340	Note 8
R20	22K		66-3228340	Note 9
R21	220K		66-4228340	Note 10
R22	82K		66-382340	Note 11
R23	330Ω		66-1338340	Note 1
R24	330Ω		66-1338340	
R25	56Ω		66-0568340	
R26	680K		66-4688340	Note 12
R27	4.7Ω	1		Note 13
R28	100Ω TC	10	33-1367-2	
R29	0.27Ω	1	66-8273360	
R30	15Ω		66-0158340	Note 7
R31	4.7Ω	1		Note 7 & 14
R32	150K		66-4158340	Note 10
R33	27Ω	2	66-0278340	Note 15

Note 1. Not used in early Model 921HR.
Note 2. Not used in late Model 921HR.
Note 3. Late Model 921HR use 10meg in this application (Part #66-6108340).
Note 4. Late Model 921HR use 47meg in this application (Part #66-6478340).
Note 5. Some versions may use 120K in this application (Part #66-4128340).
Note 6. Early Model 921HR use a variable control in this application.
Note 7. Not used in some versions.
Note 8. Some versions may use 2.7meg in this application (Part #66-5278340).
Note 9. Not used in Model 921HR. Other Models may use 6800Ω in this application (Part #66-2688340).
Note 10. Some versions may use 100K in this application (Part #66-4103340).
Note 11. Some versions may use 68K in this application (Part #66-3688340).
Note 12. Some versions may use 2.2meg in this application (Part #66-5228340).
Note 13. Some versions may use 10Ω in this application (Part #66-0108340).
Note 14. Some versions may use 20Ω 7W in this application (Part #33-1335-143).
Note 15. Omitted in versions using two dial lamps.

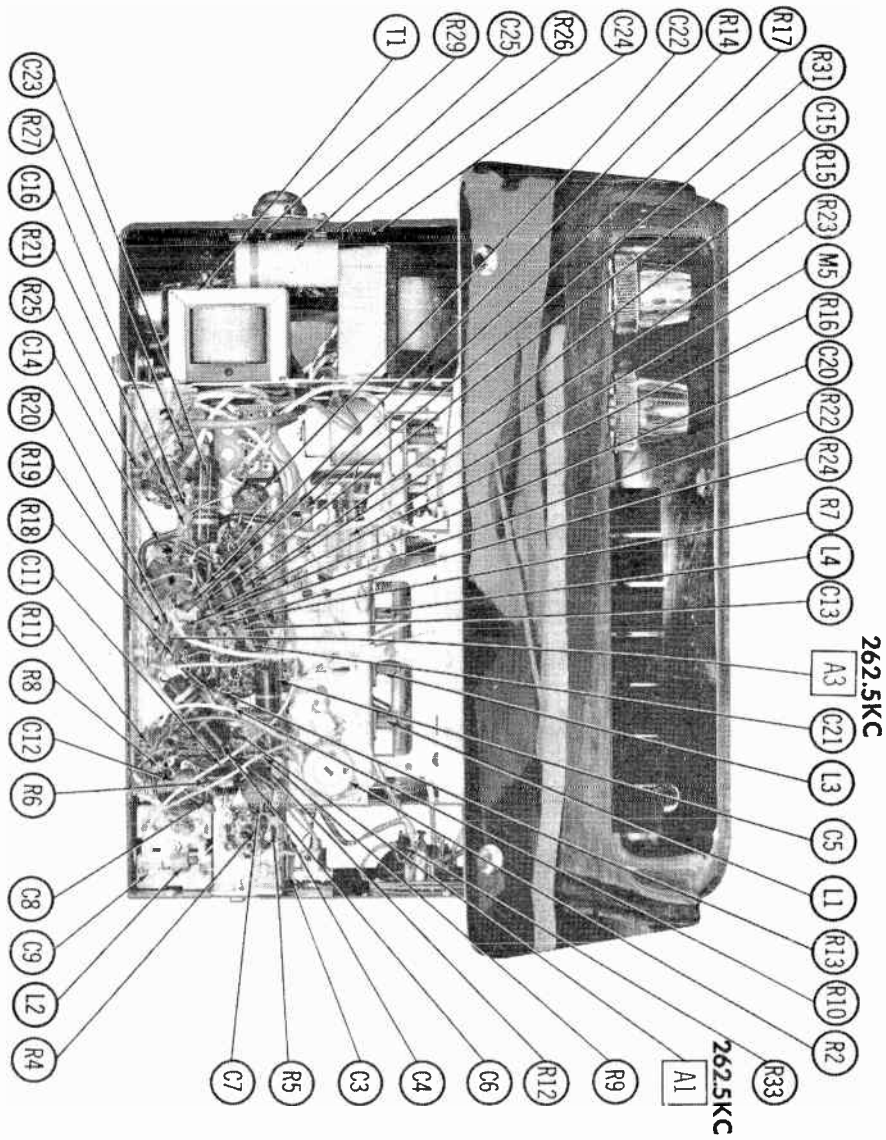
TRANSFORMER (DRIVER)

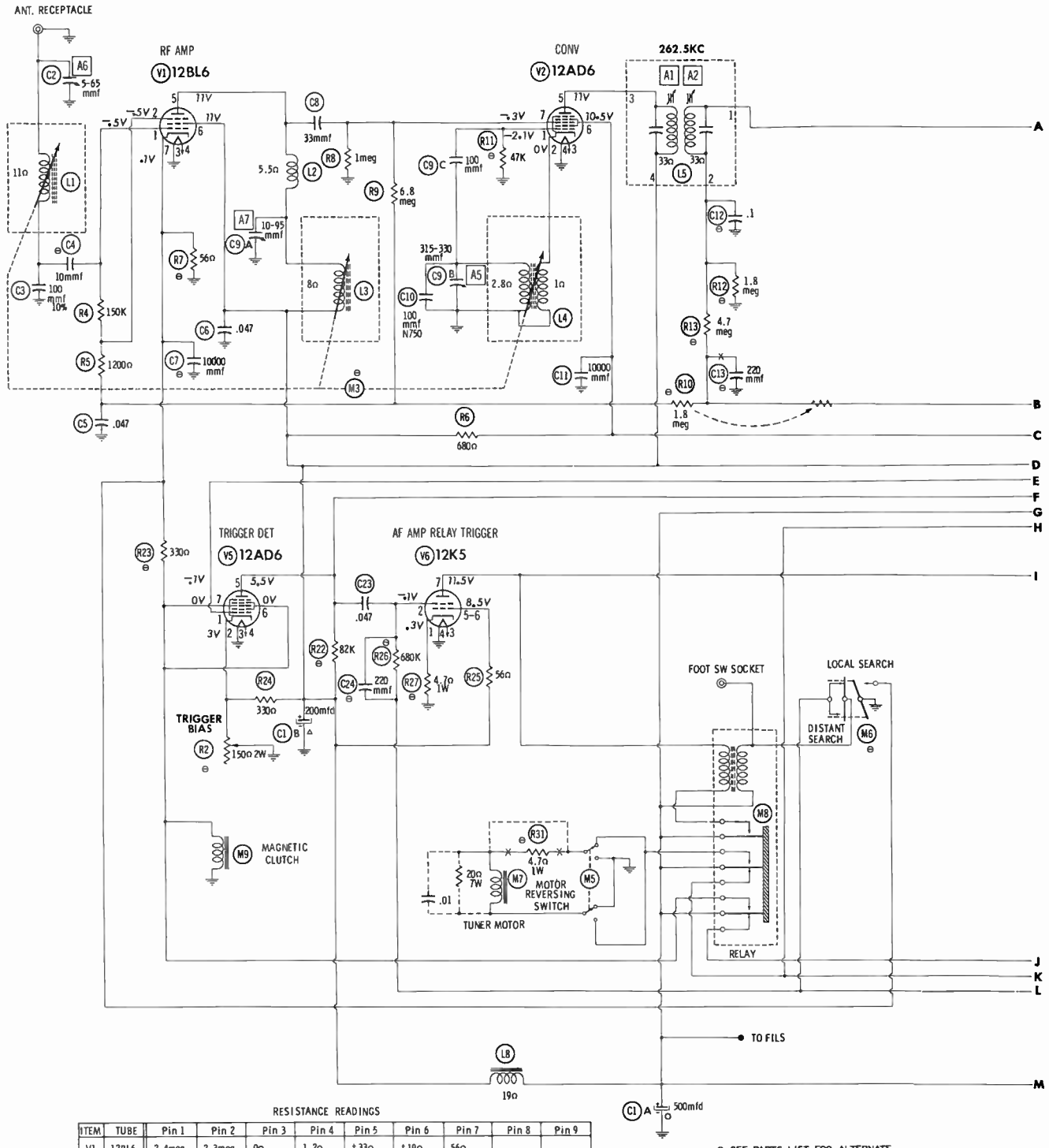
ITEM No.	TURNS RATIO		REPLACEMENT DATA						NOTES
	PRI.	SEC.	PHILCO PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T1	4:	1	32-8794 ①						① Alternate Part #32-8821. Part #32-8835 used in Model 921HR with Push-Pull output.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA						NOTES
	PRI.	SEC.	PHILCO PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	20Ω	3-4Ω	32-8793 ①				TR-58		① Part #32-8834 used in Model 921HR with Push-Pull output.

CHASSIS—BOTTOM VIEW





RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12BL6	2.4meg	2.3meg	0Ω	1.2Ω	†33Ω	†19Ω	56Ω		
V2	12AD6	47K	1Ω	1.2Ω	0Ω	†52Ω	†700Ω	1meg		
V3	12BL6	1.3meg	0Ω	0Ω	1.2Ω	†39Ω	†19Ω	0Ω		
V4	12F8	1.2meg	†220K	†82K	0Ω	1.2Ω	3.2meg	100Ω	10meg	0Ω
V5	12AD6	2.2meg	95Ω	1.2Ω	0Ω	†82K	65Ω	65Ω		
V6	12K5	4.7Ω	680K	1.2Ω	0Ω	†75Ω	†75Ω	†45Ω		

† MEASURED FROM JUNCTION OF L5 AND M4

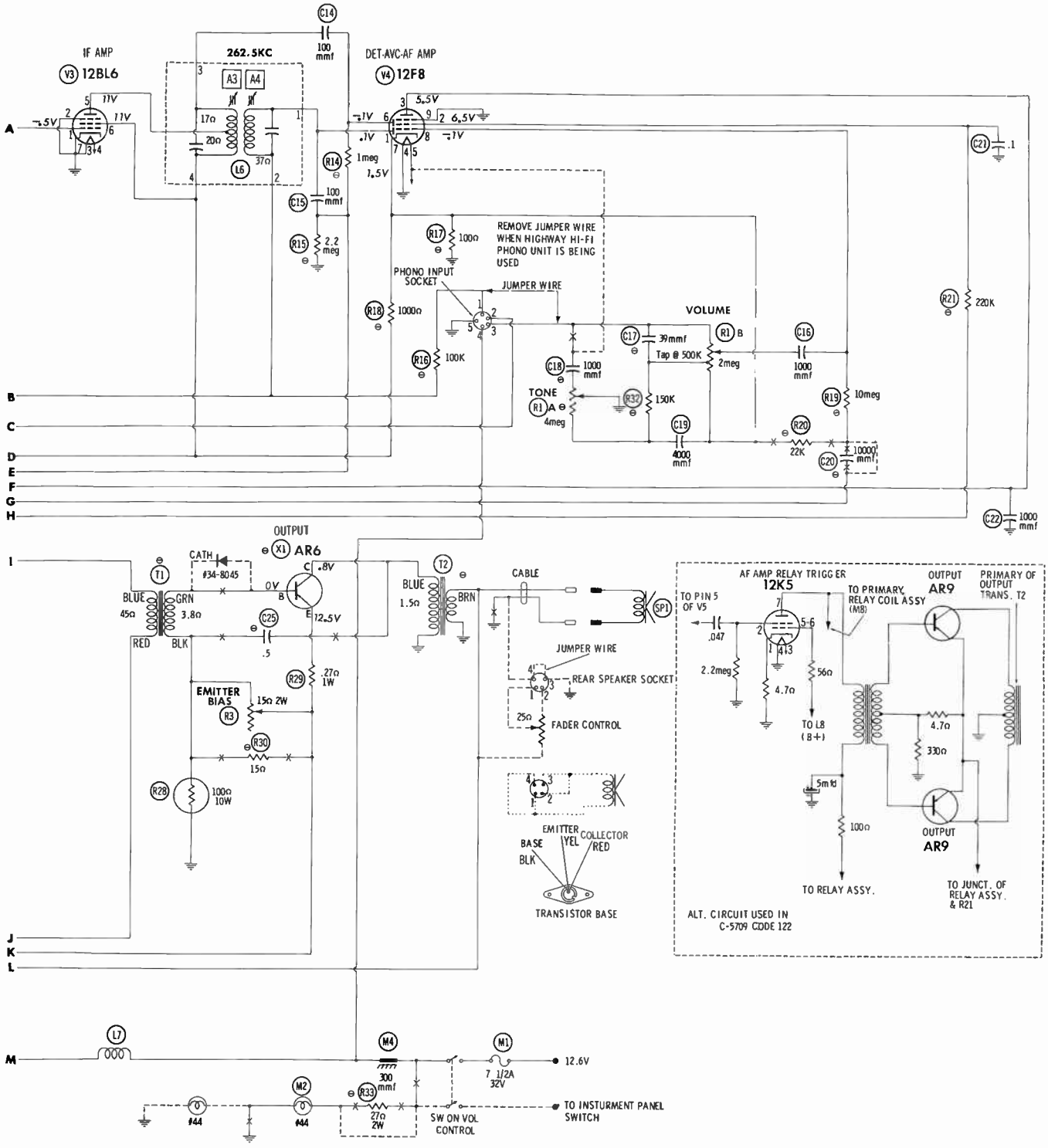
TRANSISTOR CIRCUIT RESISTANCE NOT GIVEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE

⊖ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC

1. DC voltage measurements taken with vacuum tube voltmeter;
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes posssible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

A PHOTOFACT STANDARD NOTATION SCHEMATIC
Howard W. Sams & Co., Inc. 1958



PARTS LIST AND DESCRIPTIONS (Continued)

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	PHILCO PART No.	QUAM PART No.	
SP1	5½"X7½"	PM	3-4Ω	36-1670-2	57A15	

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					
		PHILCO PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Ram PART No.	NOTES
L1	Antenna Coil	32-4730-19					
L2	RF Choke	32-4480-24	19-3160	TV-196	6120		150 Microhenries
L3	RF Coil	32-4730-20					
L4	Osc. Coil	32-4730-21					
L5	Input IF	32-4676-2	16-6756	BC-344	12-H1	RF-3	
L6	Output IF	32-4677-3					
L7	Hash Choke	32-4720-3					

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					
	TOTAL DIRECT CURRENT	D. C. RESISTANCE	INDUCTANCE (0 CURRENT 1000 ∿)	PHILCO PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordorson PART No.	Triad PART No.
L8	.011A	19Ω	500 Millihys.	32-8788					

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			PHILCO PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	SFE	7½A 32V	45-2656-53	41-4244-2	30707.5 (7AG 7½A 32V)	155009	SFE 7½	HDH

MISCELLANEOUS

ITEM No.	PART NAME	PHILCO PART No.	NOTES
M2	Dial Lamp	34-2064	#44 (Two used in Models 920HR & 921HR).
M3	Tuner	76-11550-1	Model 917HR (Complete Assembly)
	Tuner	76-11348-2	Model 920HR (Complete Assembly)
	Tuner	76-11348-1	Model 921HR (Complete Assembly)
M4	Spark Plate	30-1254-1	300mmf
M5	Switch	76-11522	Motor Reversing
M6	Switch Ass'y	76-11411-1	Sensitivity, Model 917HR
	Switch Ass'y	76-11411-2	Sensitivity, Model 920HR
	Switch Ass'y	76-11411-3	Sensitivity, Model 921HR
M7	Tuner Motor	76-11381	
M8	Relay	42-4032	
M9	Clutch Ass'y	76-11519	Magnetic

PARTS LIST AND DESCRIPTIONS (Continued)

CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

NAME	PART NO.	DESCRIPTION
Knob	28-11675-1	Tone, Model 917HR
Knob	28-11691	Tone, Model 920HR
Knob	28-11702	Tone, Fader, Model 921HR
Knob	27-4687-24	Tuning, Model 917HR
Knob	27-4687-25	Tuning, On-Off-Volume, Model 920HR
Knob	27-4687-23	Tuning, On-Off-Volume, Model 921HR
Knob	76-11340	On-Off-Volume, Model 917HR
Knob	27-11691	Fader, Model 920HR
Pushbutton	54-6351-2	Local, Model 917HR
Pushbutton	76-11387-2	Local, Model 920HR
Pushbutton	76-11387-5	Local, Model 921HR
Pushbutton	54-6351-3	Distant, Model 917HR
Pushbutton	76-11387-3	Distant, Model 920HR
Pushbutton	76-11387-6	Distant, Model 921HR
Pushbutton	54-6351-1	Station Selector, Model 917HR
Pushbutton	76-11387-1	Station Selector, Model 920HR
Pushbutton	76-11387-4	Station Selector, Model 921HR
Dial Scale	28-11796	Model 917HR
Dial Scale	54-9990	Model 920HR
Dial Scale	54-9998	Model 921HR

WIRING DATA

General-use Unshielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors
Shielded Hook-up Wire ..... Use BELDEN No. 8885
Bonding Strap ..... Use BELDEN No. 8661

TRIGGER BIAS ADJUSTMENT (R2)

1. Short antenna to chassis.
2. Turn the bias control (R2) clockwise.
3. Press "DISTANT" search button and turn R2 slightly counter clockwise.
4. Repeat step 3 until R2 is adjusted at the point where the tuner continues to search.
5. Turn R2 1/8 turn further counter clockwise.

EMITTER BIAS ADJUSTMENT (R3)

The transistor bias should be checked when the transistor (X1) is replaced. To do this, connect a low range DC voltmeter (not a VTVM) across the primary winding of the output transformer (T2). Apply power to the receiver and allow a 15 minute warm-up period. With the input voltage at 14 volts DC, adjust R3 for a reading of .75 volts on the meter. This is equivalent to a collector current of 750MA.
On models having feedback, R3 should be adjusted for a reading of .85V to .90V. This is equivalent to a collector current of 850MA to 900MA.

TRADE NAME	Motorola Model 8M
MANUFACTURER	Motorola Inc., 4545 W. Augusta Blvd., Chicago 51, Illinois
TYPE SET	Battery Operated Universal Type Automobile Receiver
TUBES (Six)	Types 6BD6 RF Amplifier, 6BE6 Converter, 6BD6 IF Amplifier, 6CR6 Det.-AVC-AF Amp., 6AQ5 Output, 6X4 Rectifier
POWER SUPPLY	6 Volt Storage Battery — RATING 4.8 Amp. @6.3 Volts DC
TUNING RANGE—BROADCAST	540-1600KC

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING 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.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.1mfd	High side to pin 7 (grid) of 6BE6 (V2). Low side to chassis.	455KC (400% Mod.)	High frequency end stop.	Across voice coil.	A1, A2. A3, A4,	Adjust for maximum output.
2.	Fig. 1	Thru dummy to antenna receptacle.	1610KC	"	"	A5, A6, A7	"
	Steps 3 & 4 are not necessary unless tuner has been tampered with or associated components have been replaced. If necessary back tuning cores (A8, A9, A10) 1" out of coils. Alignment tool similar to Fig. 2 may be used. Repeat Step 2.						
3.	Fig. 1	Thru dummy to antenna receptacle.	1400KC	13/64" from high frequency end stop.	Acorss voice coil.	A8, A9 A10	Adjust for maximum output.
4.	Fig. 1	"	1610KC	High frequency end stop.	Across voice coil.	A5, A6, A7	Adjust for maximum output. Repeat steps 3 & 4. Cement cores.
	With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A7 for maximum output.						

POINTER ADJUSTMENT

Set radio to high frequency end stop. Slide pointer so that it coincides with calibration dot at extreme right. Cement pointer to dial cord.

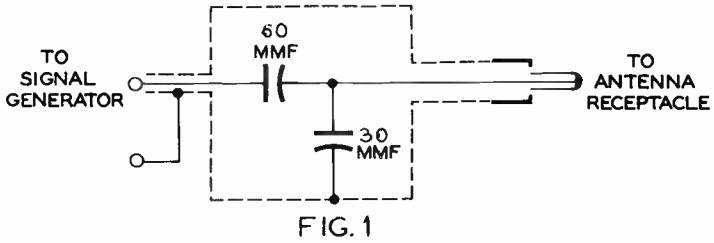


FIG. 1

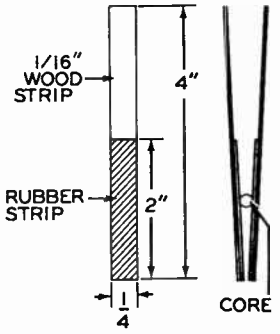


FIG. 2

H591

PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier	6BD6	
V2	Converter	6BE6	
V3	IF Amplifier	6BD6	
V4	Det. -AVC-AF Amp.	6CR6	
V5	Output	6AQ5	
V6	Rectifier	6X4	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP.	RATING VOLT.	MOTOROLA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	■15	350	23A485677	AFH3-104	C0770	FP328	TMT-89	T-455	R2274*
B	▲10	350							
C	20	25							

*Non-Catalog Item.

FIXED CAPACITORS

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

ITEM No.	RATING CAP.	RATING VOLT	MOTOROLA PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	NOTES
C2	90		21K533453						
C3	50-280		20A502338						
C4	20-120		20K541014						
C5	160		21R410112	BPD-00015	DD-151	L10T15	UC-5315	5GA-T15	
C6	.05	200	8R121005	P288N-05	DF-503	CUB2S5	GEM-415	2TM-S5	
C7	4.7		21R115955	NP0-SI4.7	TCZ-4R7	CTA6V47C	ZT-5547	5TCCB-V47	
C8	47		21R115593	N750-DI47	DTN-47	C10Q47U	NT-5447	5TCU- Q47	N750
C9	365-470		20A485708						
C10	.05	400	8R121567	P488N-05	DF-503	CUB4S5	GEM-415	4TM-S5	
C11	10000		21R482726	BPD-01	DD-103	BYA6S1	DC511	5HK-S1	
C12	.002	600	8R121568	P688N-002	D6-202	CUB6D2	GEM-622	6TM-D2	
C13	.02	400	8R121004	P488N-02	DD-203	CUB4S2	GEM-412	4TM-S2	
C14	.1	400	8R121006	P488N-1	DF-104	CUB4P1	GEM-401	4TM-P1	
C15	.01	400	8R121002	P488N-01	D6-103	CUB4S1	GEM-411	4TM-S1	
C16	470		21R410121	BPD-00047	DD-471	BYA10T47	UC-5347	5GA-T47	
C17	.004	600	8R121000	P688N-004	D6-402	CUB6D4	GEM-624	6TM-D4	
C18	.02	1000	8R121003	P1088N-02		CUB10S2	GEM-1012	10TM-S2	
C19	.5	100	8K121666	P288N-5		CUB2P5	GEM-205	2TM-P5	
C20	.5	100	8K121666	P288N-5		CUB2P5	GEM-205	2TM-P5	
C21A	300		21A522033						
B	300								

CONTROLS

ITEM No.	RATING RESISTANCE	RATING WATTS	MOTOROLA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	INSTALLATION NOTES
R1A	1meg		18K533457	F1-55		QJ-800A		Tone
B	250K			R4-37				Volume, Tap@125K
C	Switch			KB-4				

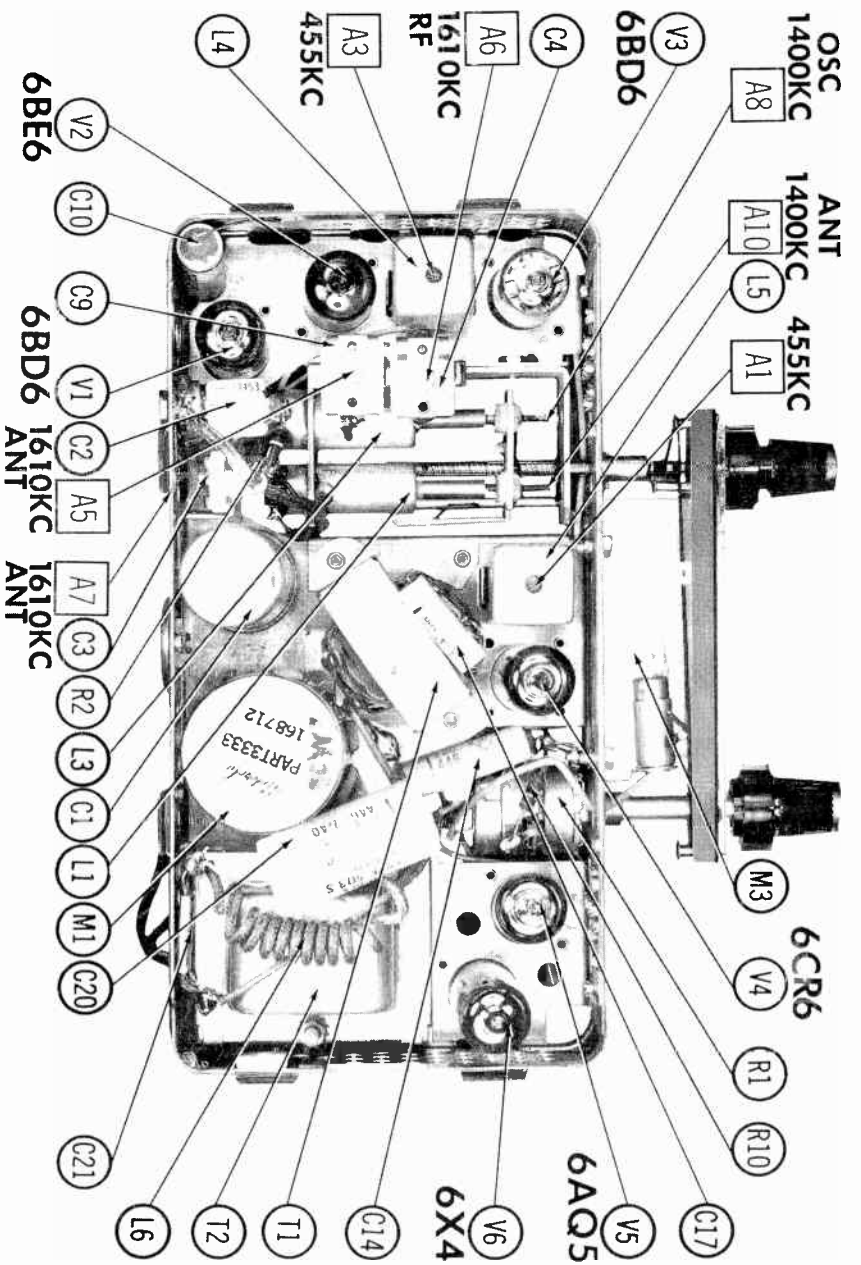
"Concentrikit" Equivalent; K-6Kit, Base Elements and Shafts: B11-137, P17-129 (Panel)
B13-130X, R9-214 (Rear)
76-1 (Switch)

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING OHMS	RATING WATT	MOTOROLA PART No.	NOTES
R2	100K		6K122313	
R3	1meg		6K122324	
R4	220Ω		6R6270	
R5	100K		6K122313	
R6	47K		6K121687	
R7	150Ω		6K124797	
R8	6800Ω	2	6K122012	
R9	3.3meg		6K119407	
R10	15K		6R410033	
R11	2.2meg		6R3927	
R12	1meg		6K122324	
R13	220K		6R6015	
R14	270K		6R6414	
R15	4.7meg		6K122326	
R16	270Ω		6R6270	
R17	2200Ω	2	6R476130	
R18	56Ω	1	6K125697	
R19	56Ω	1	6K125697	

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					
		MOTOROLA PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Ram PART No.	NOTES
L1	Ant. Coil	24B536919					Note 1.
	Ant. Coil	1K536807					Note 2.
L2	RF Coil	24K536585					Note 1.
	RF Coil	1K536806					Note 2.
L3	Osc. Coil	24B536594					Note 1.
	Osc. Coil	1K536805					Note 2.
L4	Input IF	24K533461	16-6758	BC-352	12-C1	RF-1	
L5	Output IF	24B533460	16-6770	BC-355	12-C6		
L6	"A" Lead Choke	24K533822					
L7	Hash Choke	24A538914					10.3 microhenries

Note 1. Part of M4 (MT-178) Note 2. Part of M4 (MT-177)

TRANSFORMER (VIBRATOR)

ITEM No.	RATING			REPLACEMENT DATA						
	PRI.	SEC. 1	SEC. 2	MOTOROLA PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
T1	6.3VCT @2.5A	400VCT @.040A		25C534978①					22R63	

① Use Part #25C501303 for replacement.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA							NOTES
	PRI.	SEC.	MOTOROLA PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	5200Ω	3-4Ω	25B70171	Z1107	A-2930	AU-601	A-3877	24S51	S-3X	

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	MOTOROLA PART No.	QUAM PART No.	
SP1	5" x 7"	PM	3-4Ω	50C541964	57A21	① Alternate
	6" x 9"	PM	3-4Ω	50K541105①	69A3	
	5"	PM	3-4Ω	50C542774①		

VIBRATOR

ITEM No.	TYPE	INPUT VOLTS	FREQUENCY	REPLACEMENT DATA				NOTES
				MOTOROLA PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	RADIART PART No.	
M1	Interrupter	6.3V	115v	48B3333	5342	903M	5342	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			MOTOROLA PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M2	SFE	9A 32V	65K16248	9K536617	307009. (SFE9A 32V)	155009	SFE9	HDH

MISCELLANEOUS

ITEM No.	PART NAME	MOTOROLA PART No.	NOTES
M3	Dial Lamp	65R10867	#44
M4	Tuner	77D536917	(MT-178) Complete
	Tuner	77D536804	(MT-177) Complete

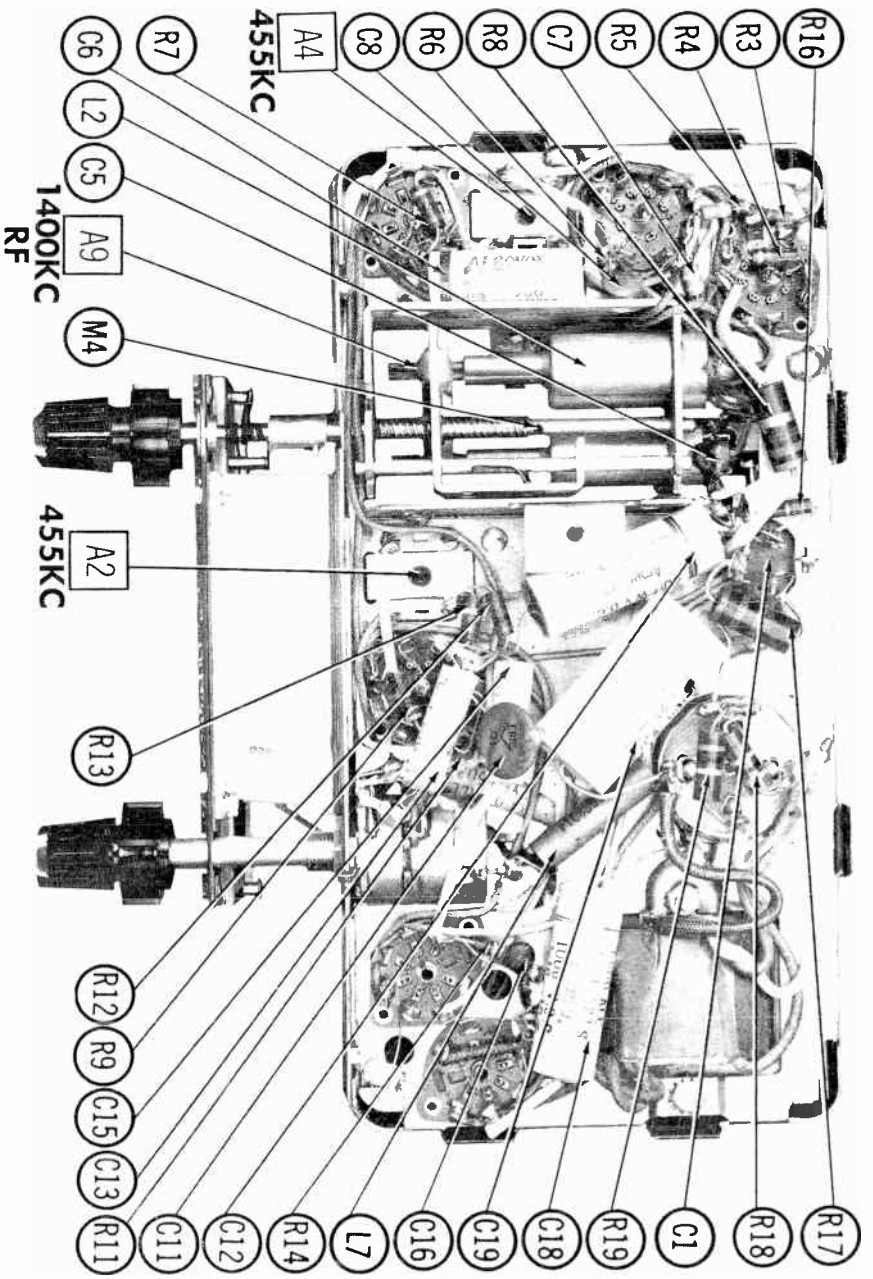
CABINETS & CABINET PARTS

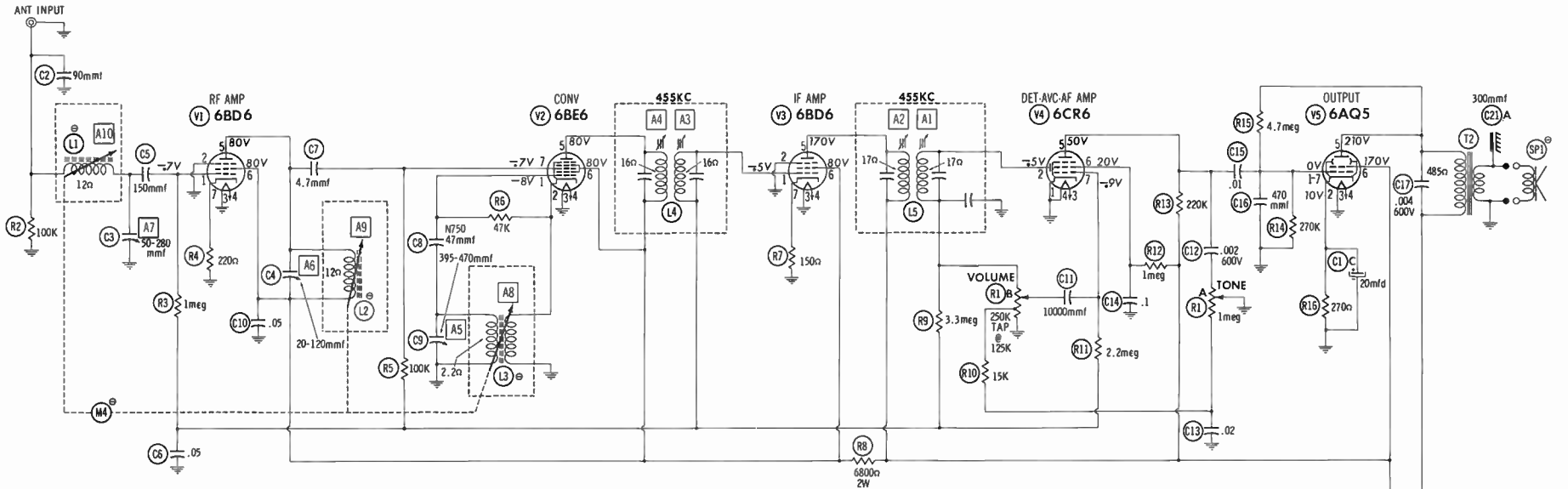
(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

WIRING DATA

General-use Unshielded Hook-up Wire .....Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors

CHASSIS—BOTTOM VIEW

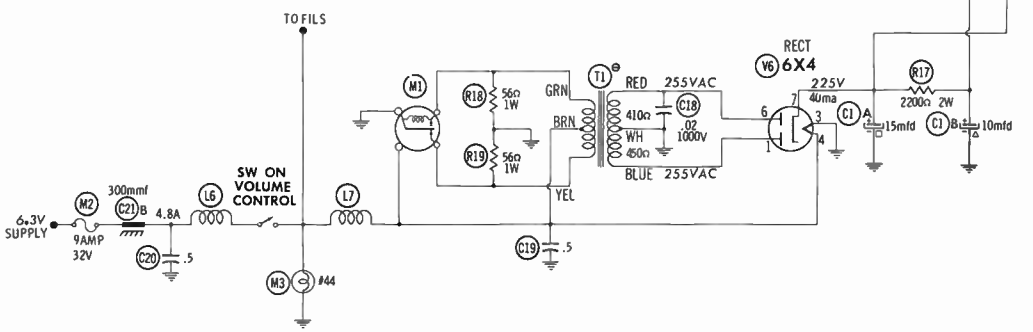




RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7
V1	6BD6	4.3meg	0Ω	0Ω	.3Ω	↑9000Ω	↑9000Ω	220Ω
V2	6BE6	47K	.5Ω	0Ω	.3Ω	↑9000Ω	↑9000Ω	3.5meg
V3	6BD6	3.4meg	0Ω	0Ω	.3Ω	↑2200Ω	↑9000Ω	150Ω
V4	6CR6	0Ω	125K	.3Ω	0Ω	↑220K	↑1meg	5.6meg
V5	6AQ5	270K	270Ω	0Ω	.3Ω	↑484Ω	↑2200Ω	270K
V6	6X4	450Ω	NC	0Ω	.3Ω	NC	410Ω	20K(MIN)

↑ MEASURED FROM PIN 7 OF V6
NC NO CONNECTION

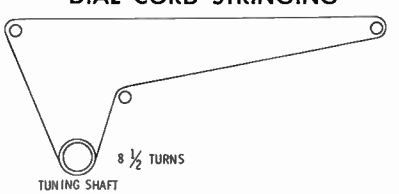


Θ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

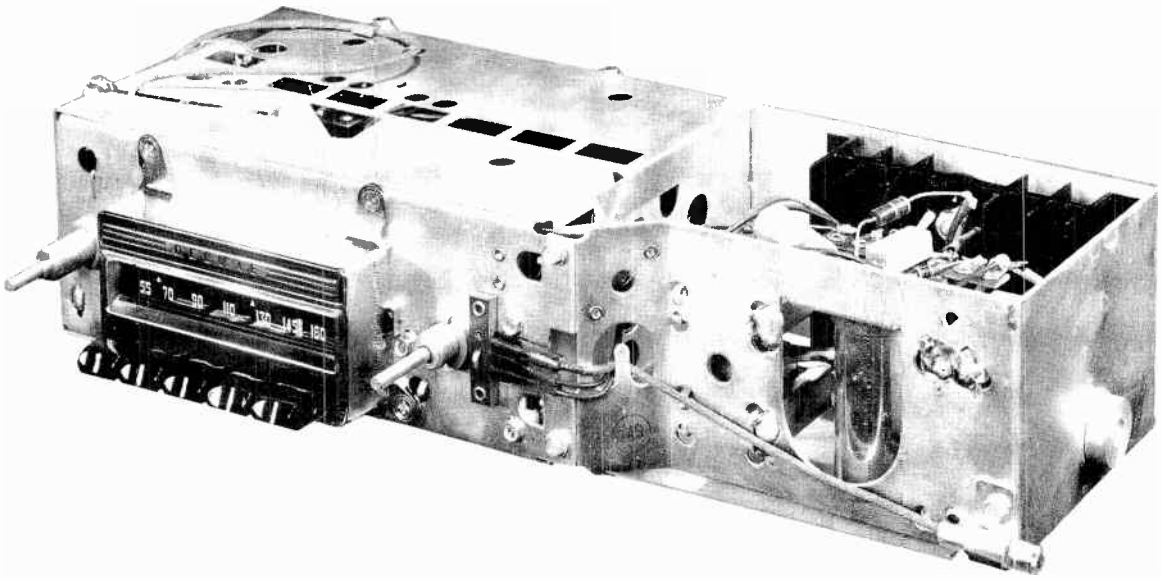
DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

1. DC voltage measurements taken with vacuum tube voltmeter.
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 6.3 volts for voltage readings.
5. Nominal tolerance on component values makes posssible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

DIAL CORD STRINGING



A PHOTOFACT STANDARD NOTATION SCHEMATIC



TRADE NAME	Oldsmobile Model 989127 (For 1958 Oldsmobile Automobiles)
MANUFACTURER	Delco Radio Div., G.M. Corp., Kokomo, Indiana.
TYPE SET	Battery Operated Custom Built AM Automobile Receiver with Transistorized Output
TUBES (Five)	Types 12BL6 RF Amplifier, 12AD6 Converter, 12AF6 IF Amplifier, 12F8 Det.-AVC-1st AF Amp. 12K5 2nd AF Amplifier
POWER SUPPLY	12 Volt Storage Battery RATING 1.9 Amp. @12.6 Volts DC
TUNING RANGE—BROADCAST	540-1600KC

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING 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.
Tone control to "Treble"

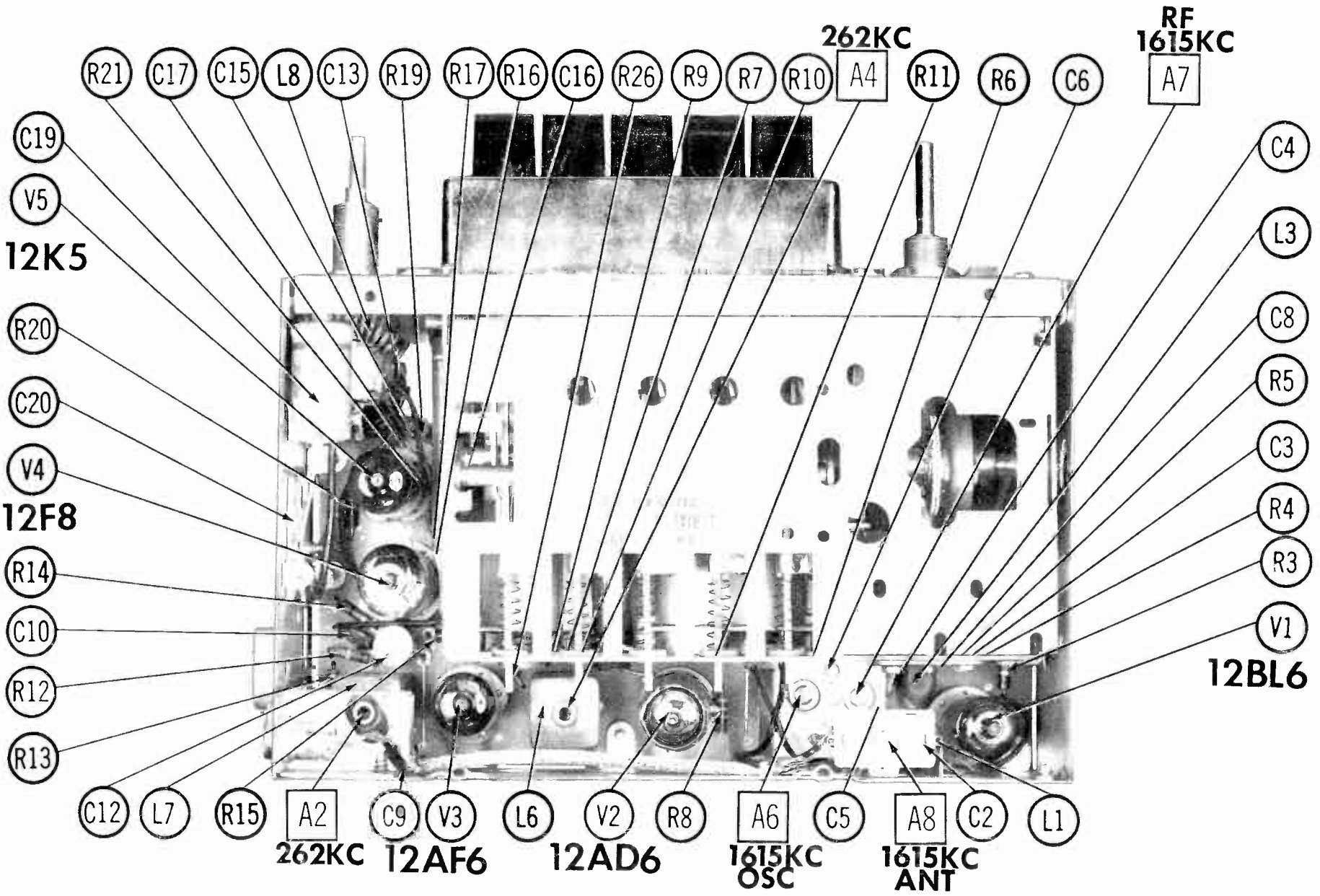
	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.1mfd	High side to pin 7 (grid) of 12AD6 (V2) Low side to chassis.	262KC (400~ Mod.)	High frequency end stop.	Across voice coil.	A1, A2. A3, A4	Adjust for maximum output.
2.	68mmf	High side to antenna receptacle. Low side to chassis.	1615KC	"	"	A6, A7, A8	Check setting of osc. coil core (A5) Rear of core should be 1 5/8" from mounting end of coil form. Adjust for maximum output.
3.	"	"	600KC.	Tune to 600KC signal.	"	A9, A10	Adjust for maximum output.
4.	"	"	1615KC	High frequency end stop.	"	A7, A8	"
5.	With radio tuned to 1100KC signal, adjust pointer adjustment so that pointer coincides with 1100KC mark on dial.						
6.	With radio installed in car and antenna fully extended, tune in a weak station near 1000KC and adjust A8 for maximum output.						

PUSHBUTTON ADJUSTMENT

1. Pull pushbutton to the left and out.
2. Tune manually to desired station.
3. Press pushbutton in firmly.
4. Repeat for remaining pushbuttons

HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana

H585



CHASSIS-TOP VIEW

PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier	12BL6	
V2	Converter	12AD6	
V3	IF Amplifier	12AF6	
V4	Det-AVC-1st AF Amp.	12F8	
V5	2nd AF Amplifier	12K5	

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA				NOTES
			CBS PART No.	RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	2N278	Output					

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	DELCO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	■1000	16	7270691	AFH2-02-70		W P200.27			R2668 *
B	▲500	16							

* Non-Catalog Item.

FIXED CAPACITORS

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

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT	DELCO PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
C2A	9-58		7268811						
B	18								
C3	.022	200	6611	P288N-022	DD-203	CUB2S22	GEM-4122	2TM-S22	
C4	68		6369	N750-DI68	DTN-68	C10Q68U		5TCU-Q68	N750
C5	39		6366	DI-000039	DD-390	L10Q39	UC-5439	5GA-Q39	
C6A			7268828						
B									
C									
D									
C7	200		7270129	1469-0002		5R5T2	MCE237	MS-32	5%
C8	.047	200	6612	P288N-047	DF-503	CUB2S47	GEM-4147	2TM-S47	
C9	47		6367	1469-000047	D6-470	22R5Q47		MS-447	10%
C10	47		6367	BPD-000047	DD-470	L10Q47	UC-5447	5GA-Q47	
C11	.0047	200	6631	P288N-0047	D6-472	CUB6D47	GEM-6247	6TM-D47	

PARTS LIST AND DESCRIPTIONS (Continued)

CAPACITORS (cont)

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT	DELCO PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
C12	.1	50	7269714	P288N-1	DF-104	BC2P1J	ACE401	2SE-P10	
C13	220		6375	BPD-00022	DD-221	L10T22	UC-5322	5GA-T22	
C14	100		6371	BPD-0001	DD-101	L10T1	UC-531	5GA-T1	
C15	220		6375	BPD-00022	DD-221	L10T22	UC-5322	5GA-T22	
C16	2000		6352	BPD-002	DD-202	BYA10D2	DC522	5HK-D2	
C17	.022	200	6611	P288N-022	DD-203	CUB2S22	GEM-4122	2TM-S22	
C18	.1	200		P288N-1	DF-104	CUB2P1	GEM-201	2TM-P1	Note 1
C19	.47	50	7269780	P288N-47		CUB2P47	GEM-2047	2TM-P47	
C20			1220682						

Note 1. Some versions may use .27mfd in this application (Part #7271414)

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	DELCO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1A	250K	½	7270679				■UE3820S	Tone
B	5meg							Volume
C	Switch							On-Off
R2	100Ω	2(WW)	7269637		39-100		FL-150	Transistor Bias

■"STA-LOC" Equivalent FG254A, OS1125, RU56A, IS1687, US-41

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING		DELCO PART No.	NOTES
	OHMS	WATT		
R3	1.8meg		1238	Note 1.
R4	1.8meg		1238	Note 1.
R5	10K		1137	
R6	680K		1233	
R7	2.2meg		1239	
R8	33K		1217	
R9	12meg			Note 2
R10	3.3meg		1241	
R11	4.7meg		1243	Note 3
R12	560K		1232	
R13	47K		1219	
R14	1000Ω		1125	

ITEM No.	RATING		DELCO PART No.	NOTES
	OHMS	WATT		
R15	12K		1212	
R16	270K		1228	
R17	120K		1224	
R18	220K		1227	
R19	3.3meg		1241	Note 4
R20	33Ω		1107	
R21	22Ω		1105	
R22	.47Ω	2	7270608	Fuse Type
R23	10Ω		1101	
R24	100Ω	2(WW)	1187	
R25	150Ω	1	1152	
R26	100Ω		1113	

Note 1. Some versions may use 1.5 meg in this application (Part #1237)
Note 2. Some versions may use 4.7meg in this application (Part #1243)
Note 3. Some versions may use 1.8meg in this application (Part #1238)
Note 4. Some versions may use 470K in this application (Part #1231)

PARTS LIST AND DESCRIPTIONS (Continued)

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					
		DELCO PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Rom PART No.	NOTES
L1	Ant. Coil	7255738	19-1004	BC-565	4610		6.5 microhenries
L2	Ant. Coil	1221138					
L3	RF Choke	7269684					1772 microhenries
L4	RF Coil	1221138					
L5	Osc. Coil	1221151					
L6	Input IF	1221015	16-6756	BC-317	13-PH1		
L7	Output IF	1221021		BC-318			
L8	Fil. Choke	7241708					1.4 microhenry

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA						
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000 ~)	DELCO PART No.	Halldorson PART No.	Merit PART No.	Rom PART No.	Stancor PART No.	Thordorson PART No.	Triad PART No.
L9	.9A	.7Ω	.010HY	7270689						

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA							NOTES
	PRI.	SEC.	DELCO PART No.	Halldorson PART No.	Merit PART No.	Rom PART No.	Stancor PART No.	Thordorson PART No.	Triad PART No.	
T1	50	:1	7269877							

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA							NOTES
	PRI.	SEC.	DELCO PART No.	Halldorson PART No.	Merit PART No.	Rom PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	9Ω	4Ω	7269650				TA-50			

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	DELCO PART No.	QUAM PART No.	
SP1	6" x 9"	PM	4-5Ω	7270842	69A3Z5	

PARTS LIST AND DESCRIPTIONS (Continued)

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			DELCO PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1		4A 32V	7270622					

MISCELLANEOUS

ITEM No.	PART NAME	DELCO PART No.	NOTES
M2	Lamp		#1891
M3	Switch	7271424	Speaker Interlock
	Printed Board	7271333-E	
	Speaker Ass'y.	Model 989145	Complete, for 6" x 9" Rear Seat Speaker Installation

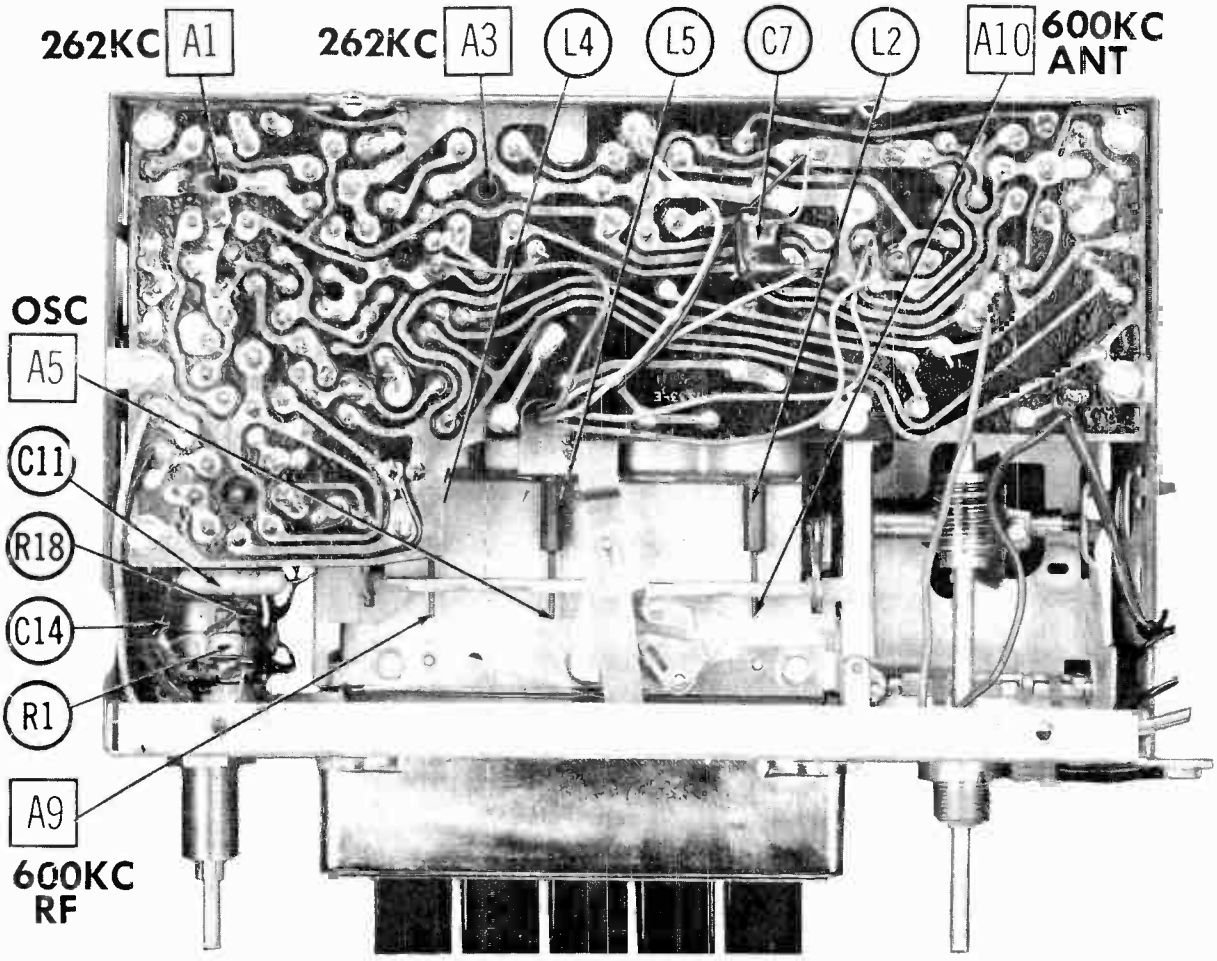
CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

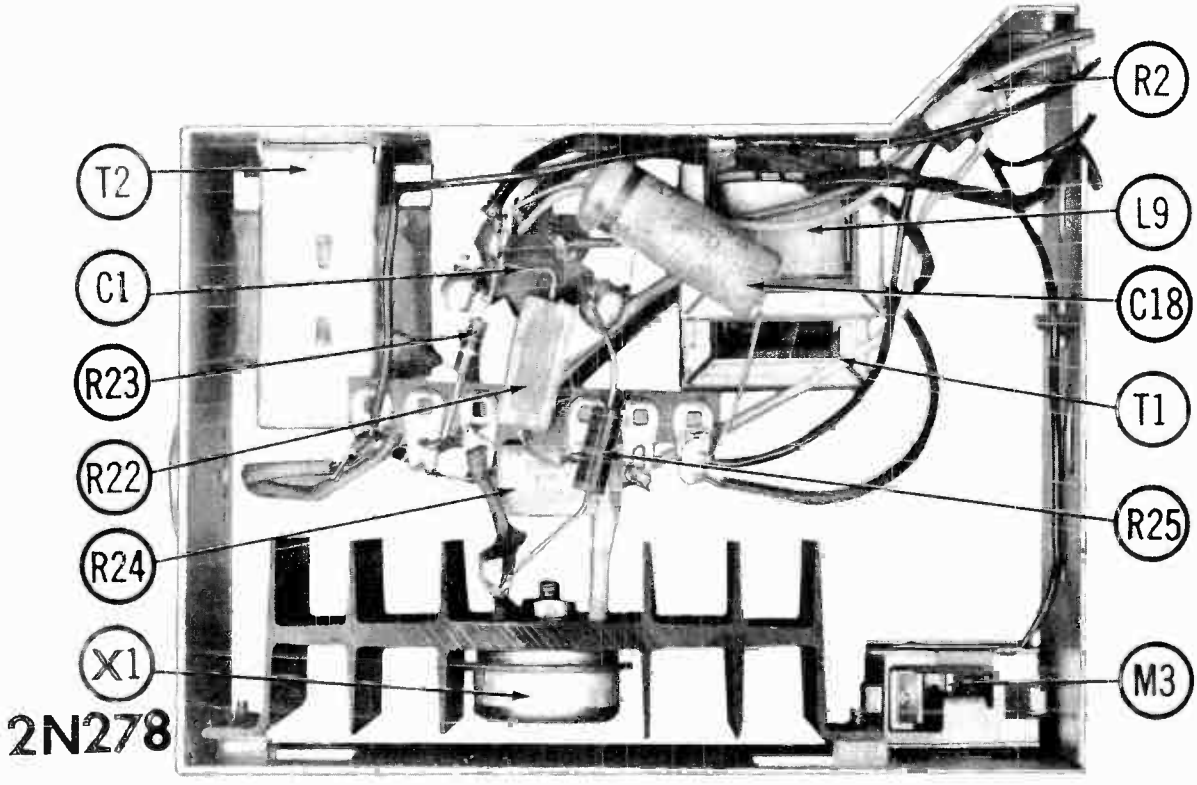
NAME	PART NO.	DESCRIPTION
Knob	572330	Control
Knob	572995	Dummy
Knob	572994	Tone
Push Button	1221065	Five used (Includes Front Bearing Plate & Slides)
Push Button	7268848	Individual
Pointer Ass'y.	1221067	
Dial	7271694	

WIRING DATA

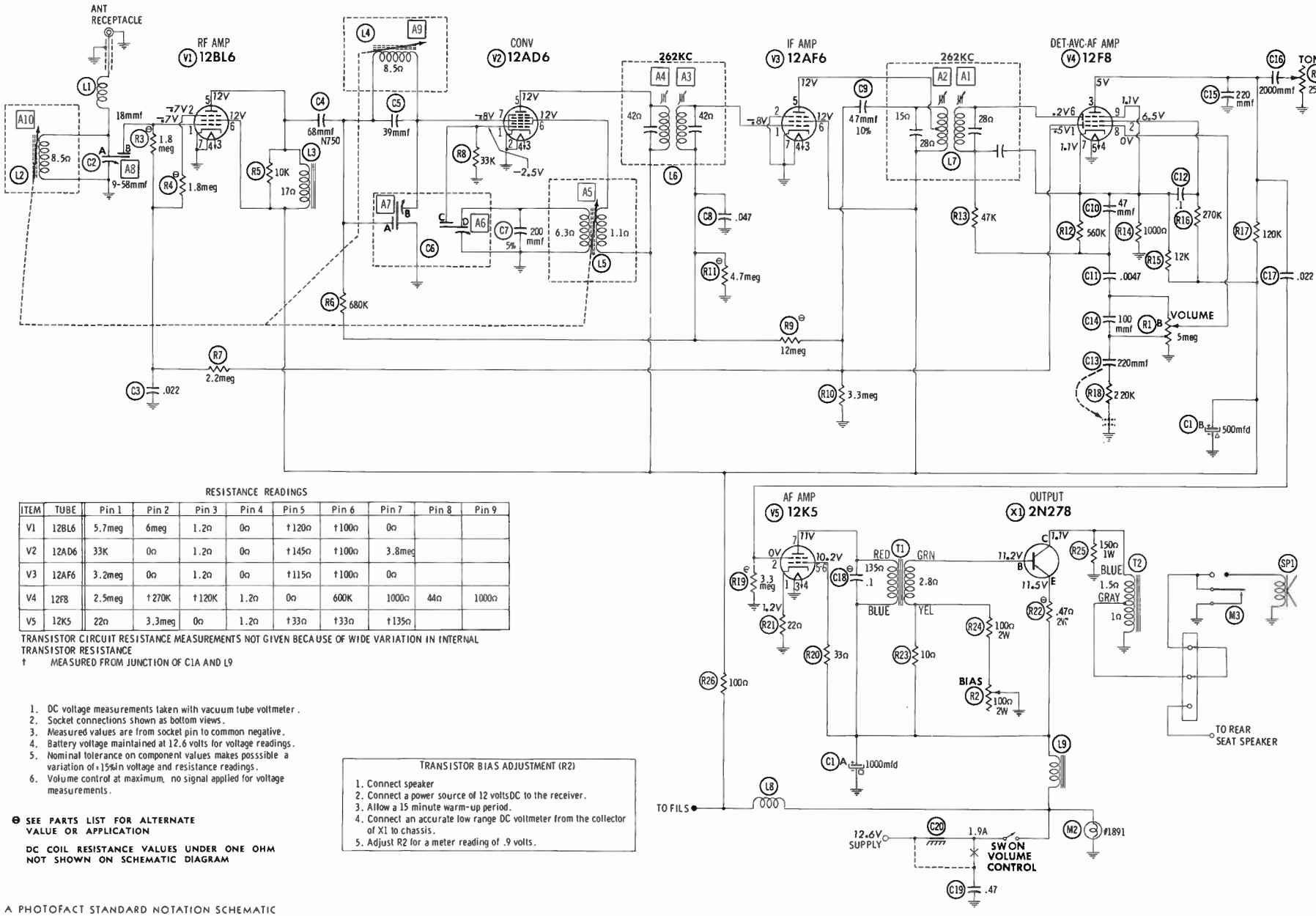
General-use Unshielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors
Shielded Hook-up Wire ..... Use BELDEN No. 8885
Bonding Strap ..... Use BELDEN No. 8661



CHASSIS-BOTTOM VIEW



POWER CHASSIS



RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12BL6	5.7meg	6meg	1.2Ω	0Ω	†120Ω	†100Ω	0Ω		
V2	12AD6	33K	0Ω	1.2Ω	0Ω	†145Ω	†100Ω	3.8meg		
V3	12AF6	3.2meg	0Ω	1.2Ω	0Ω	†115Ω	†100Ω	0Ω		
V4	12F8	2.5meg	†270K	†120K	1.2Ω	0Ω	600K	1000Ω	44Ω	1000Ω
V5	12K5	22Ω	3.3meg	0Ω	1.2Ω	†33Ω	†33Ω	†135Ω		

TRANSISTOR CIRCUIT RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE

† MEASURED FROM JUNCTION OF C1A AND L9

1. DC voltage measurements taken with vacuum tube voltmeter.
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

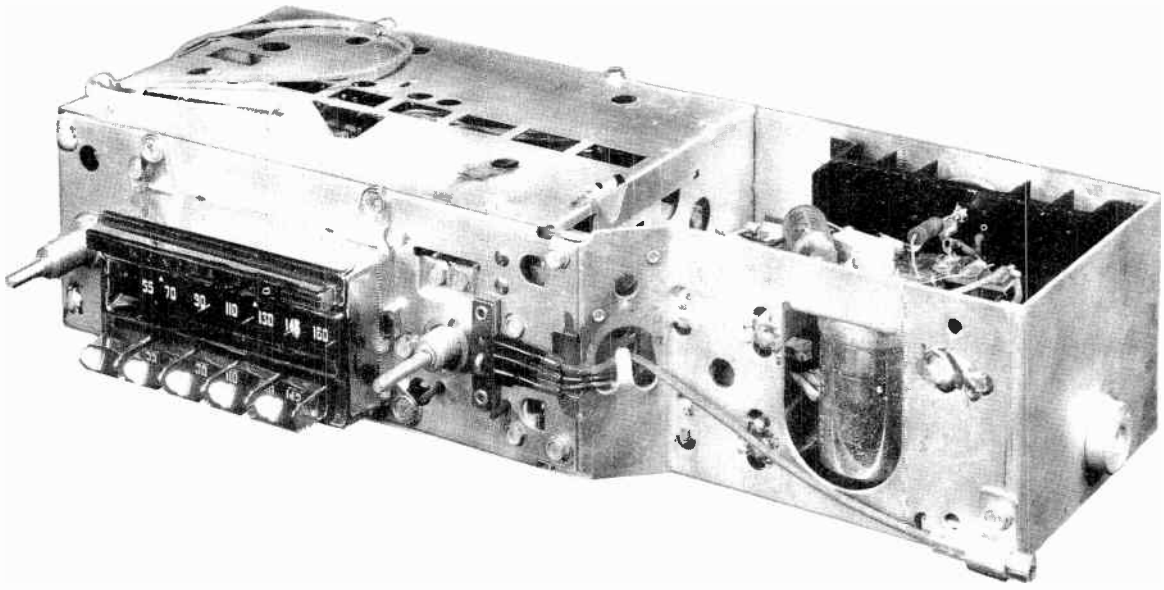
Θ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

TRANSISTOR BIAS ADJUSTMENT (R2)

1. Connect speaker
2. Connect a power source of 12 volts DC to the receiver.
3. Allow a 15 minute warm-up period.
4. Connect an accurate low range DC voltmeter from the collector of X1 to chassis.
5. Adjust R2 for a meter reading of .9 volts.

A PHOTOFACT STANDARD NOTATION SCHEMATIC
Howard W. Sams & Co., Inc. 1958



TRADE NAME	Oldsmobile Model 989129 (For 1958 Oldsmobile Automobiles)
MANUFACTURER	Delco Radio Div., G. M. Corp., Kokomo, Indiana
TYPE SET	Battery Operated Custom Built AM Automobile Receiver With Transistorized Output
TUBES (Five)	Types 12DZ6 RF Amplifier, 12AD6 Converter, 12EA6 IF Amplifier, 12DV8 Det.-AVC-AF Amp., 12AL8 Trigger
POWER SUPPLY	12 Volt Storage Battery — RATING 2.5 Amp. @ 12.6 Volts DC
TUNING RANGE—BROADCAST	540 - 1600KC

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING 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.
Set sensitivity control to position 1 (maximum). Set tone control to treble (maximum clockwise).

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.1mfd	High side to pin 7 (grid) of 12AD6 (V2). Low side to chassis.	262KC (400~ Mod)	High frequency end stop	Across voice coil	A1, A2, A3, A4	Place a .070" feeler gauge in slot against high frequency stop. Tune manually until arm is against feeler gauge. Remove gauge. Adjust for maximum output.
	Check setting of oscillator coil core (A5). Rear of core should be 1 5/8" from mounting end of coil form.						
2.	68mmf	High side to antenna terminal. Low side to chassis.	1615KC	High frequency end stop	Across voice coil	A6, A7, A8	Place a .070" feeler gauge in slot against high frequency stop. Tune manually until arm is against feeler gauge. Remove gauge. Adjust for maximum output.
3.	"	"	600KC	Tune to 600KC signal	"	A9, A10	Adjust for maximum output.
4.	"	"	1400KC	Tune to 1400KC signal	"	A7, A8	"
5.	With radio installed in car and antenna fully extended, tune in a weak station between 600KC and 1000KC. Adjust A8 for maximum output.						

POINTER ADJUSTMENT

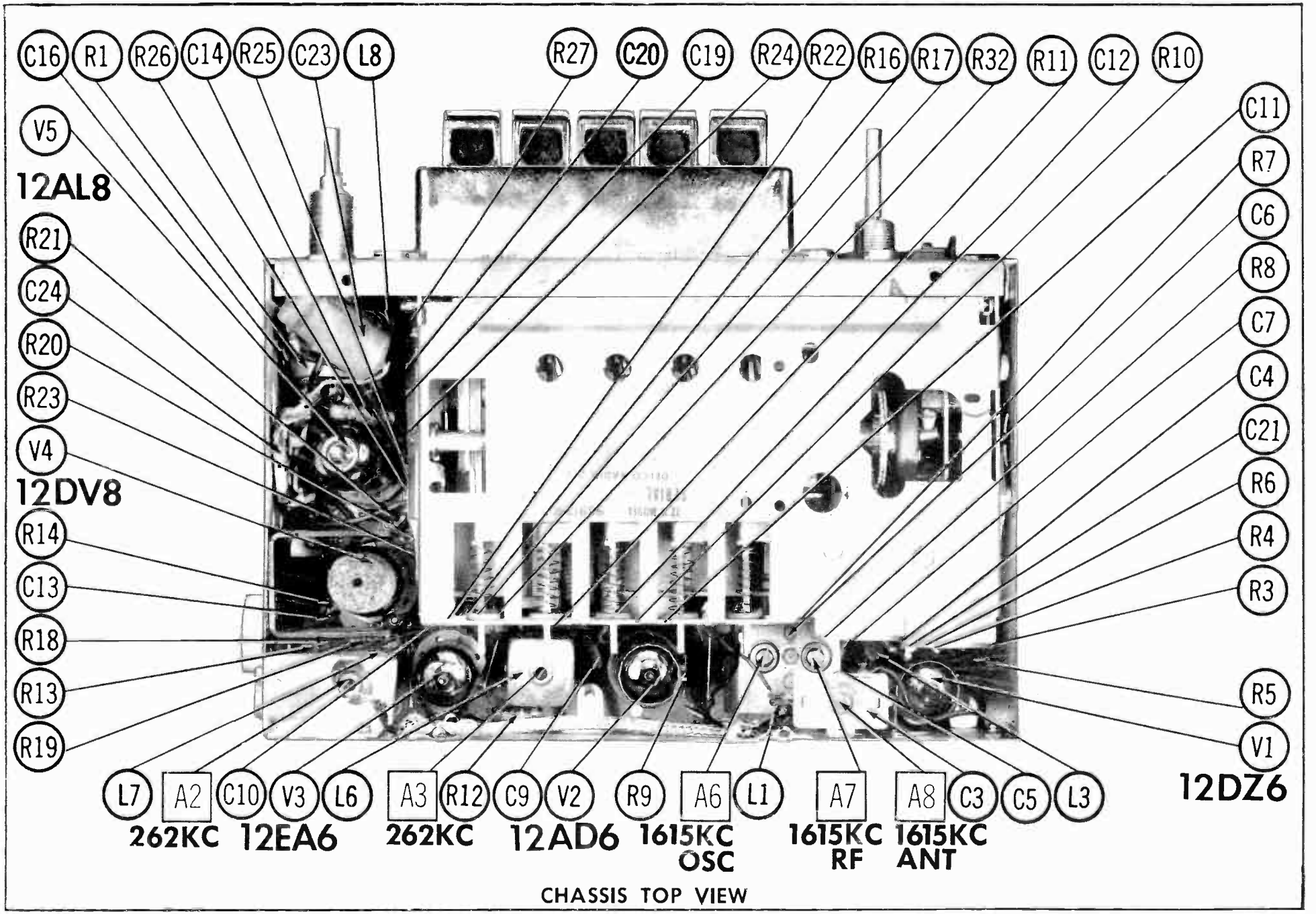
With radio tuned to an 1100KC signal, adjust pointer adjustment so that pointer coincides with 1100KC mark on dial.

PUSHBUTTON ADJUSTMENT

1. Pull pushbutton to the left and out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.

HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana

H587



CHASSIS TOP VIEW

PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier	12DZ6	
V2	Converter	12AD6	
V3	IF Amplifier	12EA6	
V4	Det.-AVC-AF Amp.	12DV8	
V5	Trigger	12AL8	

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA				NOTES
			CBS PART No.	RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	2N278	Output					

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	DELCO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	▲1000	16	7269719	AFH3-00-97		WP300			R2424 *
B	■500	16							
C	▲20	16							
C2	1000	1	7271557	PRS6V1000	BBR1000-6	TC310	TD-1000-6	MTH-06100	TVA-1104

* Non-Catalog Item

FIXED CAPACITORS

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

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT	DELCO PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
C3A	9-58		7268811						
B	18								
C4	.022	200	6611	P288N-022	DD-203	CUB4S22	GEM-4122	2TM-S22	
C5	68		6369	BPD-000068	DD-680	L10Q68		5GA-Q68	
C6A			7268828						
B									
C									
D									
C7	39		6366	BPD-000039	DD-390	L10Q39	UC-5439	5GA-Q39	
C8	200		7270129	1469-0002	DTZ-200	22R5T2	MCE237	MS-32	5%
C9	2000		6352	BPD-002	DD-202	BYA10D2	DC522	5HK-D2	
C10	100		1219498	1469-0001	DTZ-100	22R5T1	MCE235	MS-31	5%
C11	.1	200	6690	P288N-1	DF-104	CUB2P1	GEM-201	2TM-P1	
C12	.1	200	6690	P288N-1	DF-104	CUB2P1	GEM-201	2TM-P1	
C13	47		6367	1469-000047	DD-470	22R5Q47		MS-447	10%
C14	.0047	200	6631	P288N-0047	D6-472	CUB6D47	GEM-6247	6TM-D47	
C15	100		6371	BPD-0001	DD-101	L10T1	UC-531	5GA-T1	
C16	220		6375	BPD-00022	DD-221	L10T22	UC-5322	5GA-T22	
C17	.22	200	6691	P288N-22		CUB2P22	GEM-2022	2TM-P22	
C18	100		1219498	1469-0001	DTZ-100	22R5T1	MCE235	MS-31	5%
C19	100			N750-DI 100	DTN-100	C10T1U	NT-531	5TCU-T1	N750 ①
C20	.047	100		P288N-047	DF-503	CUB2S47	GEM-4147	2TM-S47	②
C21	.1	200	6690	P288N-1	DF-104	CUB2P1	GEM-201	2TM-P1	
C22	.1	200	6690	P288N-1	DF-104	CUB2P1	GEM-201	2TM-P1	
C23	.47	100	7269780	P288N-47		CUB2P47	GEM-2047	2TM-P47	
C24			1212278						

① Some versions may use 1000mmf in this application (Part #6350).
② Some versions may use .022mfd in this application (Part #6611).

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESIST-ANCE	WATTS	DELCO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1A	250K	½	7270679					Tone
B	5meg	½						Volume , Tap ② 1meg
C	Switch							Power On-Off
R2	100Ω	2(WW)	7269637		39-100		FL-150	Transistor Bias

PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS

All wattages 1/2 watt, or less. unless otherwise listed.

ITEM No.	RATING		DELCO PART No.	NOTES
	OHMS	WATT		
R3	2.2meg		1239	
R4	10K		1137	
R5	150K		1225	
R6	1.5meg		1237	
R7	680K		1233	
R8	1.5meg		1237	
R9	33K		1217	
R10	680K		1233	
R11	1.5meg		1237	
R12	220Ω		1117	
R13	47K		1219	
R14	1meg		1235	
R15	220K		1227	
R16	3.3meg		1241	
R17	1.5meg		1237	
R18	18K 5%		7271632	
R19	33K 5%		7271461	
R20	18Ω		1104	
R21	1meg		1235	
R22	3.9meg 5%		7271627	
R23	4.7meg 5%		7271456	
R24	680K		1233	Note 1
R25	330Ω			Note 2
R26	2200Ω			Note 3
R27	2.2meg			Note 4
R28	100Ω	2	1187	
R29	10Ω		1101	
R30	150Ω	1	1152	
R31	.36Ω Cold	2W	7270608	Note 5
R32	56Ω		1110	
R33	1800Ω			Note 6
R34	33K			Note 6
R35	33K			Note 7

Note 1. Some versions may use 2.2meg in this application (Part #1239).
Note 2. Some versions may use 820Ω 5% in this application (Part #7266231).
Note 3. Some versions may use 3900Ω 5% in this application (Part #7266280).
Note 4. Some versions may use 4.7meg in this application (Part #1243).
Note 5. Fuse type resistor.
Note 6. In some versions, R33 is 1200Ω and R34 is 27K (Part of M3).
Note 7. Not used in some versions.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		DELCO PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Ram PART No.	
L1	Antenna Coil	7255738	19-1004	BC-565	4610		6.5 Microhenries
L2	Antenna Coil	1221138					
L3	RF Choke	7269684					1772 Microhenries
L4	RF Coil	1221138					
L5	Osc. Coil	1221151					
L6	Input IF	1220990	16-6756	BC-317	13-PH1		
L7	Output IF	1221124					
L8	Fil. Choke	7241708					1.4 Microhenries

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA						
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000 ~)	DELCO PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
L9	.9A	.7Ω	.010 Hy.	7270689						

TRANSFORMER (INTERSTAGE)

ITEM No.	TURNS RATIO		REPLACEMENT DATA							NOTES
	PRI.	SEC.	DELCO PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T1	11	:1	1221159							

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA							NOTES
	PRI.	SEC.	DELCO PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	9Ω	3-4Ω	7269650							

PARTS LIST AND DESCRIPTIONS (Continued)

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	DELCO PART No.	QUAM PART No.	
SP1	6" X 9"	PM	5Ω	7270842	69A3Z5	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			DELCO PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1		7½A 32V	455640					

MISCELLANEOUS

ITEM No.	PART NAME	DELCO PART No.	NOTES
M2	Dial Lamp	456985	#1891
M3	Switch	7270710	Sensitivity
M4	Switch	7268030	Power Solenoid, Treadle Solenoid
M5	Switch	7269872	Station Selector
M6	Switch	7258903	Foot Control
M7	Switch	1221152	Speaker Interlock
M8	Relay	7270545	Tuning Operating
	Printed Board	7270719 REV. D	
	Speaker Ass'y	Model 989145	Complete for 6" X 9" Rear Seat Speaker Installation (Part #7270999 Fader Control, #7261397 Speaker, #7262331 Speaker Grille, #7267137 Speaker Bezel, #7266055 Speaker Ground Spring, #1867675 Tip Jack)

CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

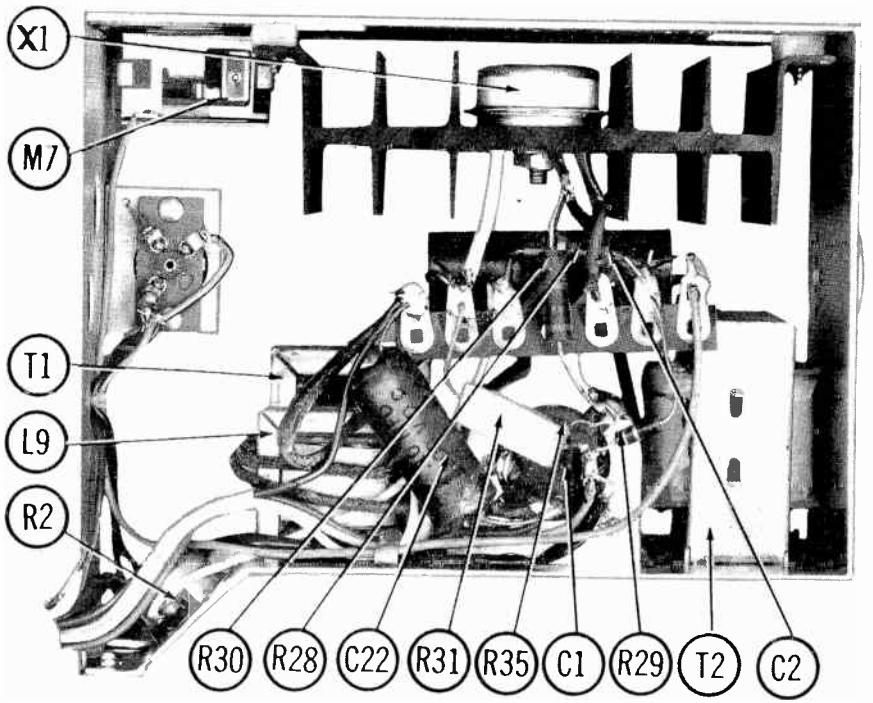
NAME	PART NO.	DESCRIPTION
Knob	572330	Control
Knob	572995	Dummy
Knob	572994	Tone
Pushbutton	1221069	Five used, includes Front Bearing Plate & Slides
Pointer Ass'y	1221067	
Dial	7271695	

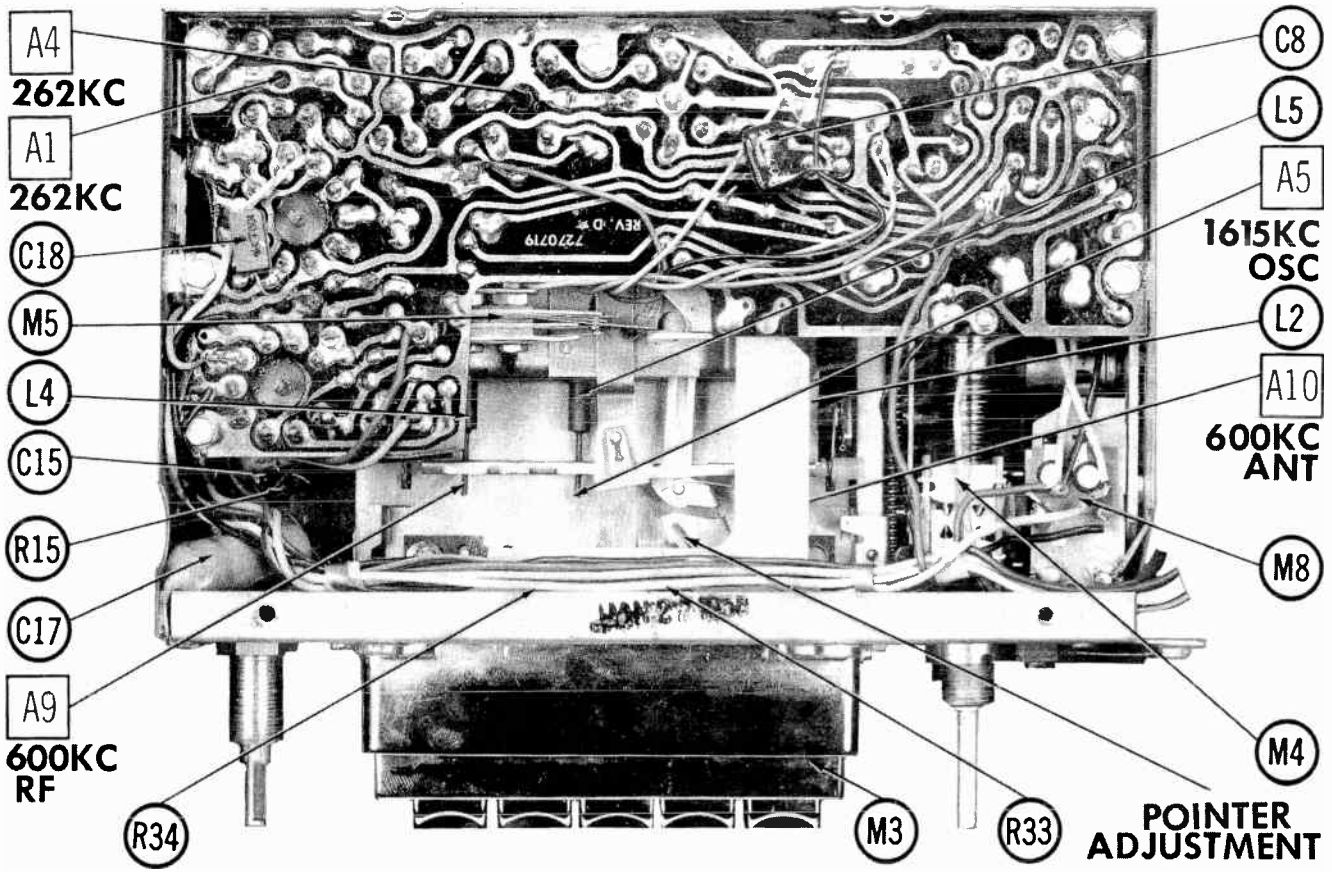
WIRING DATA

General-use Unshielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors
Shielded Hook-up Wire ..... Use BELDEN No. 8885
Bonding Strap ..... Use BELDEN No. 8661

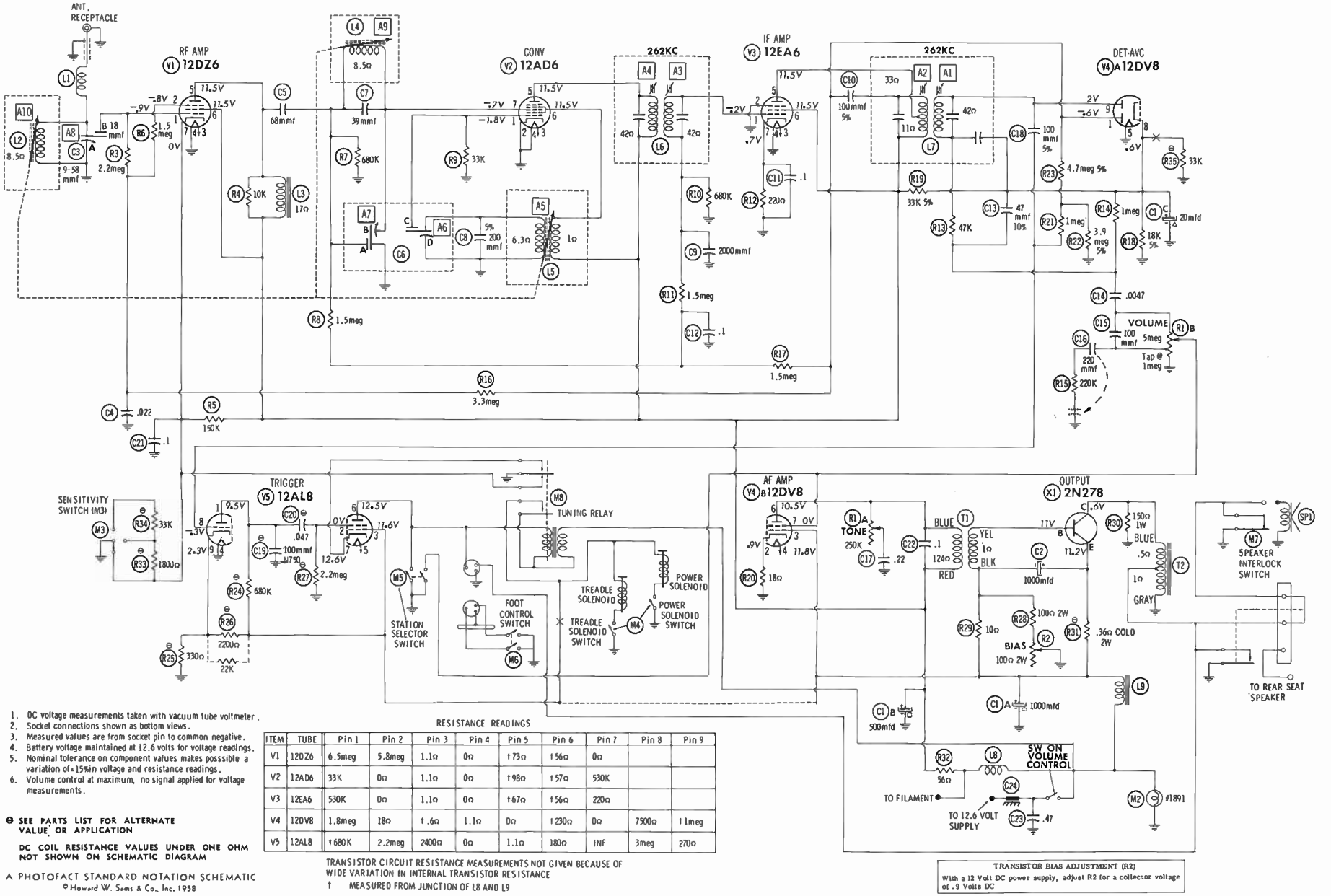
POWER CHASSIS

2N278





CHASSIS BOTTOM VIEW



1. DC voltage measurements taken with vacuum tube voltmeter.
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes posssible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

⊖ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

A PHOTOFACT STANDARD NOTATION SCHEMATIC

RESISTANCE READINGS

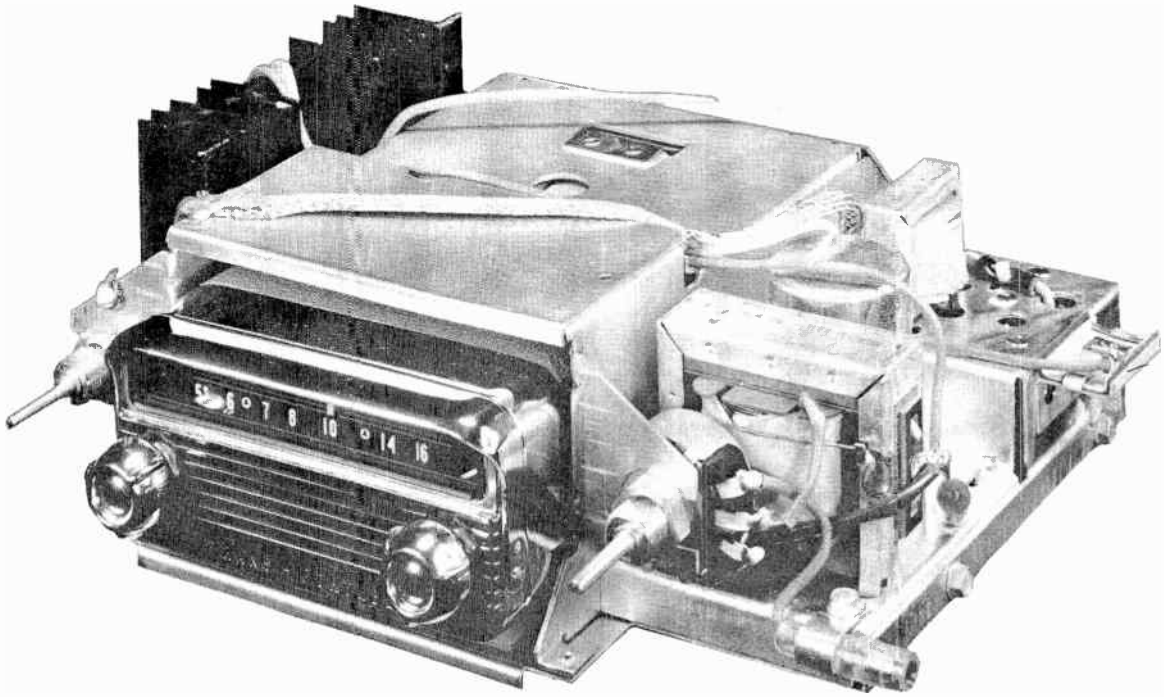
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12DZ6	6.5meg	5.8meg	1.1Ω	0Ω	†73Ω	†56Ω	0Ω		
V2	12AD6	33K	0Ω	1.1Ω	0Ω	†98Ω	†57Ω	530K		
V3	12EA6	530K	0Ω	1.1Ω	0Ω	†67Ω	†56Ω	220Ω		
V4	12DV8	1.8meg	18Ω	†.6Ω	1.1Ω	0Ω	†230Ω	0Ω	7500Ω	†1meg
V5	12AL8	†680K	2.2meg	2400Ω	0Ω	1.1Ω	180Ω	INF	3meg	270Ω

TRANSISTOR CIRCUIT RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE

† MEASURED FROM JUNCTION OF L8 AND L9

TRANSISTOR BIAS ADJUSTMENT (R2)

With a 12 Volt DC power supply, adjust R2 for a collector voltage of .9 Volts DC



OLDSMOBILE
MODEL 989131

TRADE NAME	Oldsmobile Model 989131 (For 1958 Oldsmobile Automobiles)
MANUFACTURER	Delco Radio Div., G. M. Corp., Kokomo, Indiana
TYPE SET	Battery Operated Custom Built AM Transistorized Automobile Or Portable Receiver
POWER SUPPLY	12 Volt Storage Battery (or) 6 Volts DC Self Contained Battery
RATING	1.2 Amp. @ 12.6 Volts DC (or) 6.2MA @ 6 Volts DC (Portable)
TUNING RANGE—BROADCAST	550 - 1600KC

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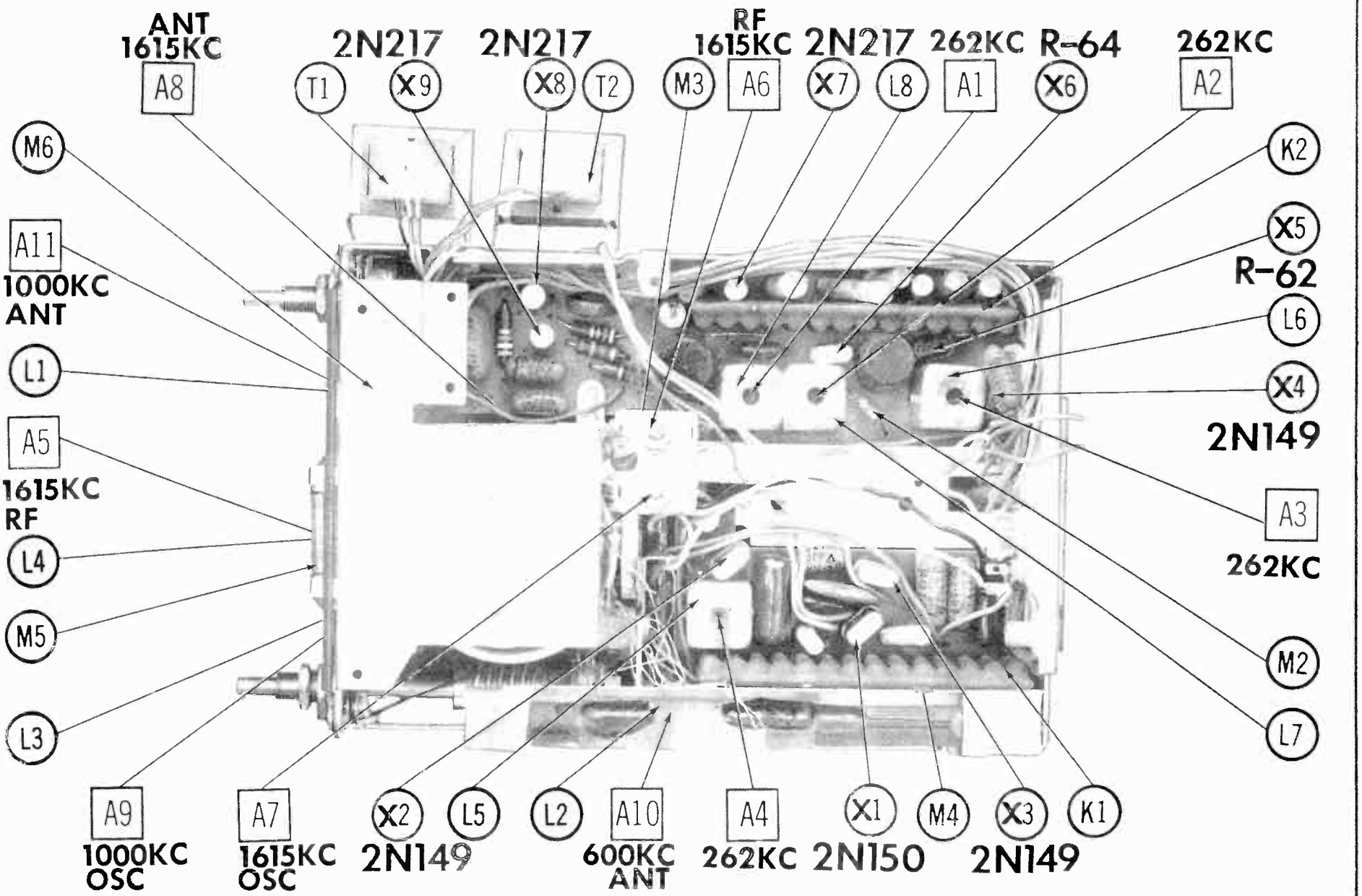


CHASSIS PORTABLE UNIT - ALIGNMENT. INDUCTOR & MISC. IDENT.

ALIGNMENT INSTRUCTIONS

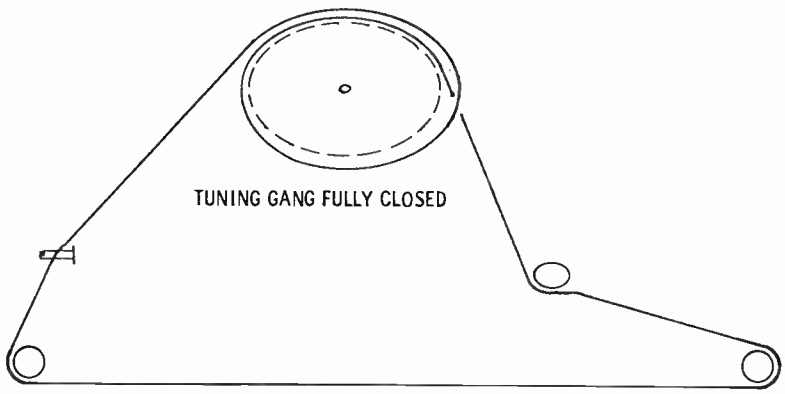
ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

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.
ORIGINAL IF transformer cores (A1, A2, A3, A4) are cemented and need not be adjusted.

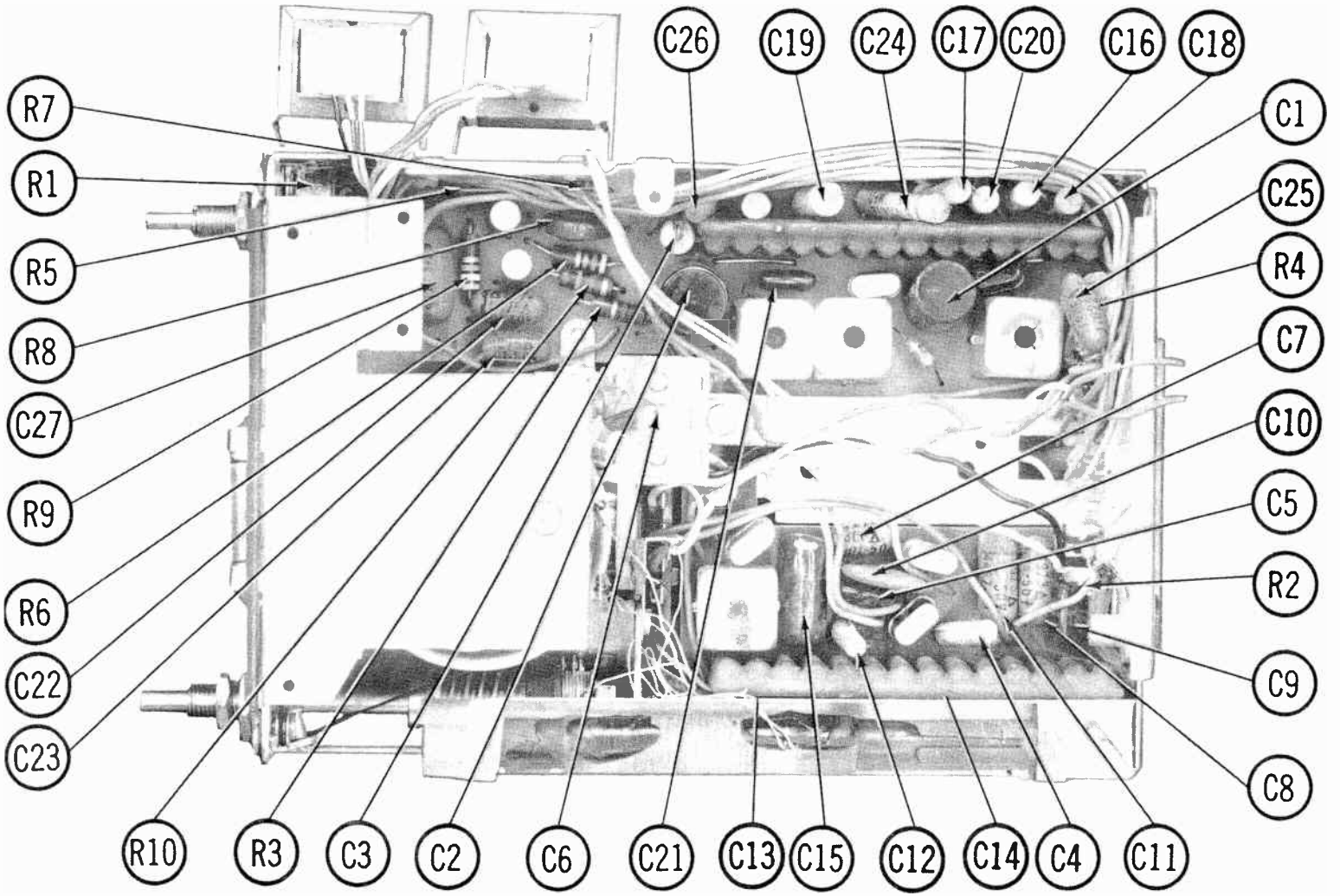
	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.1mfd	High side to base of 2N149 (X2 Mixer). Low side to chassis.	262KC (400∿ Mod)	High frequency end stop	Across voice coil	A1, A2, A3, A4	Adjust for maximum output.
	Check setting of tuning cores A5, A9, A11. Rear of cores should be 1 11/32" from back of coil forms.						
2.		Loop	1615KC	High frequency end stop	Across voice coil	A6, A7, A8	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
3.		"	1000KC	Tune to 1000KC signal	"	A9	"
4.		"	1615KC	High frequency end stop	"	A7	"
5.		"	600KC	Tune to 600KC signal	"	A10	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output by changing coil position on core.
6.		"	1400KC	Tune to 1400KC signal	"	A8	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
	Step 7 is not necessary unless antenna coil or core is replaced. If necessary, install portable unit in rack and remove covers from both rack and portable unit.						
7.	68mmf	High side to antenna receptacle. Low side to chassis.	1000KC	Tune to 1000KC signal	Across voice coil	A11	Adjust for maximum output.
	With radio installed in car and antenna fully extended, tune in a weak station between 600KC and 1000KC. Adjust A12 for maximum output.						

POINTER ADJUSTMENT

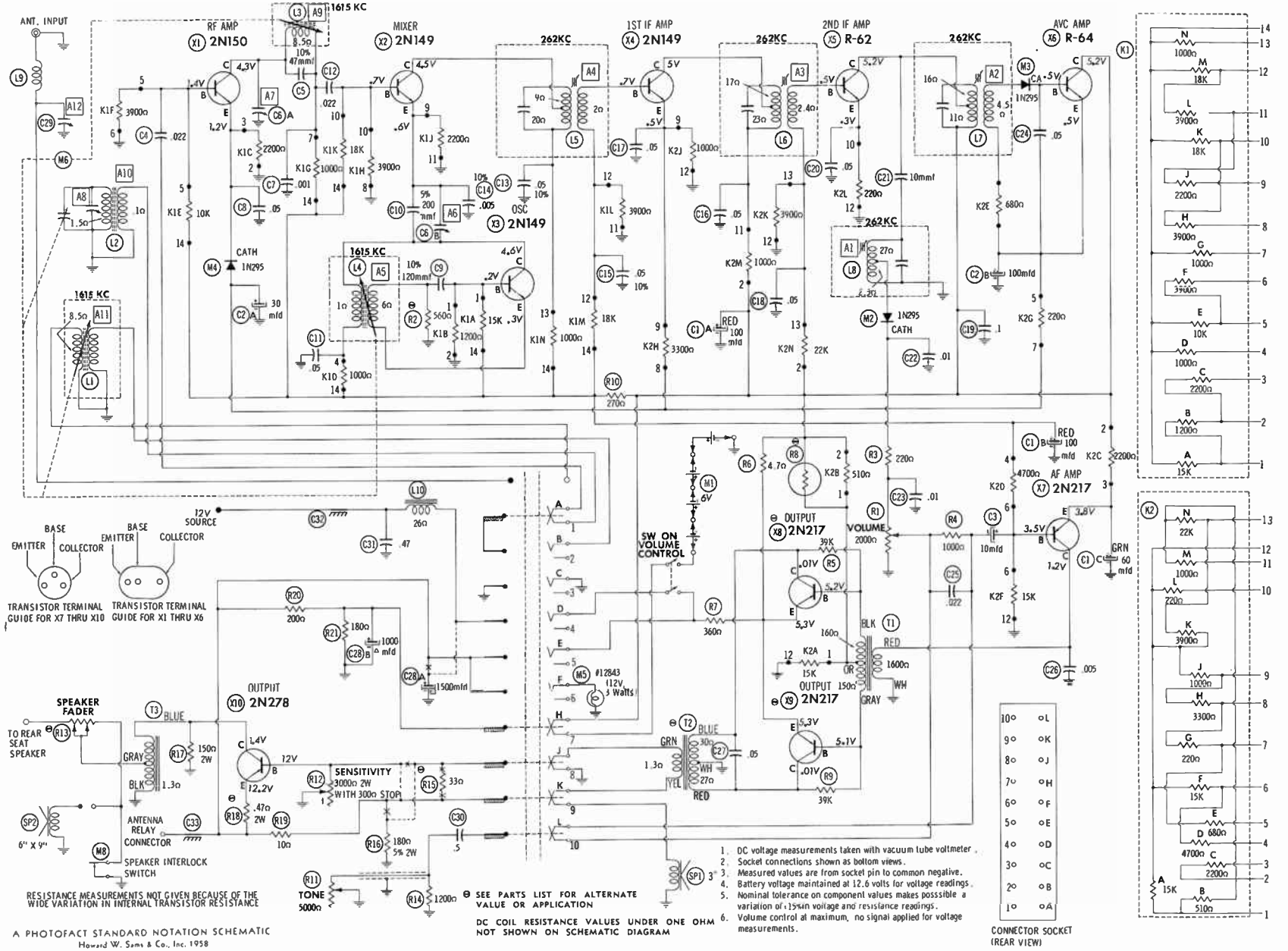
With radio tuned to an 1100KC signal, adjust pointer to coincide with 11 on dial.



DIAL CORD STRINGING



CHASSIS PORTABLE UNIT - CAPACITOR & RESISTOR IDENT.



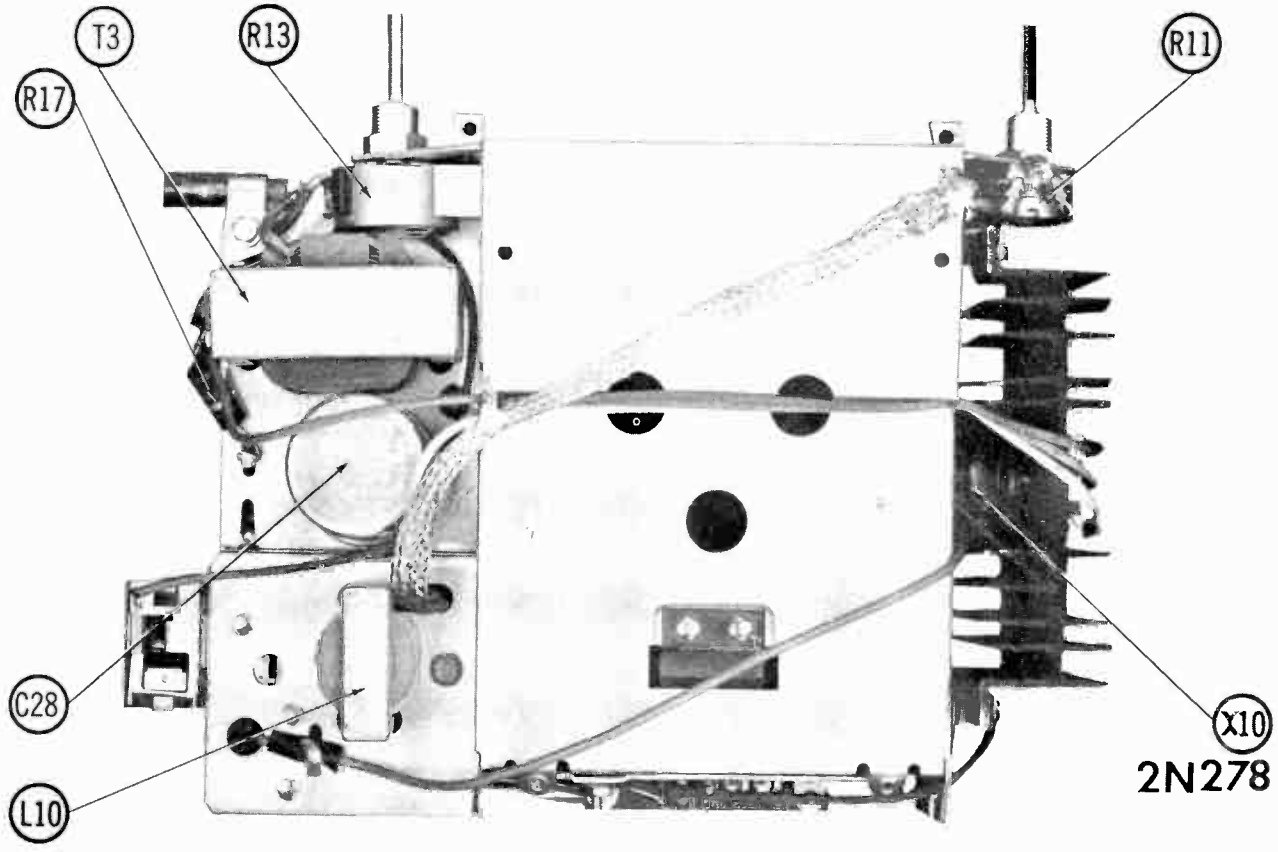
RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE

A PHOTOFACT STANDARD NOTATION SCHEMATIC

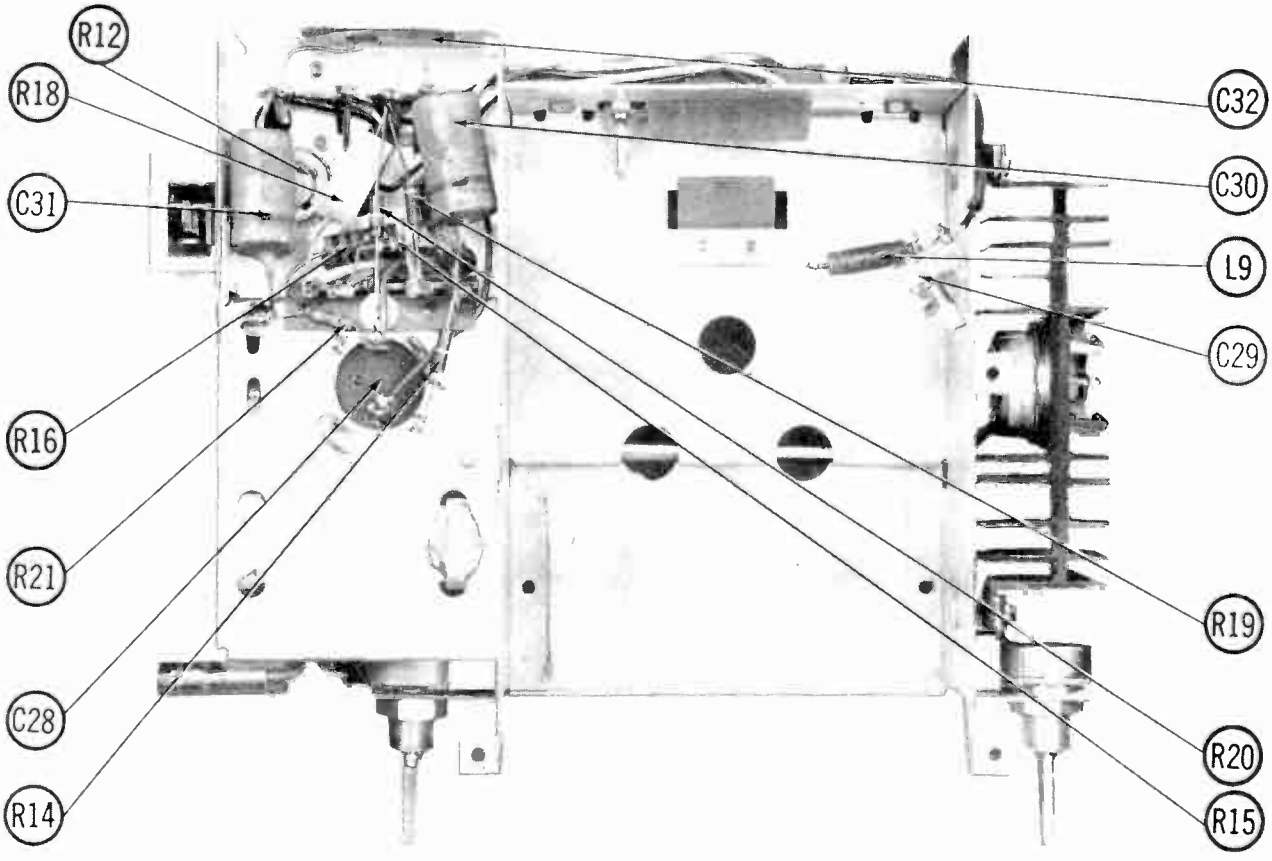
⊖ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

1. DC voltage measurements taken with vacuum tube voltmeter.
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.



CHASSIS RACK-TOP VIEW



CHASSIS RACK - BOTTOM VIEW

PARTS LIST AND DESCRIPTIONS

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA				NOTES
			CBS PART No.	RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	2N150	RF Amplifier					
X2	2N149	Mixer					
X3	2N149	Oscillator					
X4	2N149	1st IF Amplifier					
X5	R-62	2nd IF Amplifier					
X6	R-64	AGC Amplifier					
X7	2N217	Driver					
X8	2N217	Output					Used as Driver when radio is in car
X9	2N217	Output					Used as Driver when radio is in car

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	DELCO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	100	8	7271256						R2671 *
B	100	8							
C	60	8							
C2A	30	6	7271257						R2672 *
B	100	6							
C3	10	8	7271255			TT12X10			TE-1114

* Non Catalog Item

FIXED CAPACITORS

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

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT	DELCO PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
C4	.022	50	7271301						
C5	47		6367						10%
C6A			7270793						
B									
C7	.001	50	6627						
C8	.05	50	7270974						
C9	120		6372						10%
C10	200		7271299		TCZ-200	5R5T2		MS-32	5%
C11	.05	50	7270974						
C12	.022	50	7271301						
C13	.05	50	7270974						10%
C14	.005	50	6631						10%
C15	.05	50	7270974						10%
C16	.05	50	7270974						
C17	.05	50	7270974						
C18	.05	50	7270974						
C19	.1	50	7271302						
C20	.05	50	7270974						
C21	10		1215549						5%
C22	.01	50	7270975						
C23	.01	50	7270975						
C24	.05	50	7270974						
C25	.022	50	7271905						
C26	.005	50	6631						
C27	.05	50	7270974						

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	DELCO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1	2000Ω	½	7270665					Volume & Switch

PARTS LIST & DESCRIPTION (continued)

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING		DELCO PART No.	NOTES
	OHMS	WATT		
R2	560Ω			Note 1
R3	220Ω		1117	
R4	1000Ω		1125	
R5	39K		1218	
R6	4.7Ω		7269775	

ITEM No.	RATING		DELCO PART No.	NOTES
	OHMS	WATT		
R7	360Ω		1213225	
R8			7270782	Note 2
R9	39K		1218	
R10	270Ω		1118	

Note 1. Some versions may use 1200Ω in this application (Part #1126).
Note 2. Temperature compensating unit.

TRANSFORMER (DRIVER)

ITEM No.	Turns Ratio		REPLACEMENT DATA							NOTES
	PRI.	SEC.	DELCO PART No.	Holldorson PART No.	Merit PART No.	Ram PART No.	Stoncor PART No.	Thordorson PART No.	Triad PART No.	
T1	2.2	:1	7270811							

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA							NOTES
	PRI.	SEC.	DELCO PART No.	Holldorson PART No.	Merit PART No.	Ram PART No.	Stoncor PART No.	Thordorson PART No.	Triad PART No.	
T2	400Ω CT	12Ω	7270804 ①	GH4 ②						① Used as driver when radio is in car. ② Use original channel frame.

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	DELCO PART No.	QUAM PART No.	
SP1	3"	PM	12Ω	7270796		

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		DELCO PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Ram PART No.	
L1	Ant. Trans.	7270860					
L2	Loop Stick	7270777					
L3	RF Coil	7270789					
L4	Osc. Coil	7270756					
L5	1st IF	7270814					
L6	2nd IF	7270815					
L7	3rd IF	7270817					
L8	4th IF	7270816					

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	DELCO PART No.	REPLACEMENT DATA
K1	Resistor Pack	15K, 1200Ω, 2200Ω, 1000Ω, 10K, 3900Ω, 1000Ω, 3900Ω, 2200Ω, 18K, 3900Ω, 18K, 1000Ω	7271310	
K2	Resistor Pack	15K, 510Ω, 2200Ω, 4700Ω, 680Ω, 15K, 220Ω, 3300Ω, 1000Ω, 3900Ω, 220Ω, 1000Ω, 22K	7271309	

BATTERIES

ITEM No.	VOLTAGE	DELCO PART No.	REPLACEMENT DATA						NOTES
			BURGESS		EVEREADY		MALLORY		
			"A"	"B"	"A"	"B"	"A"	"B"	
M1	6V			Z		915		M-15R	Four required.

PORTABLE
PARTS LIST AND DESCRIPTIONS (Continued)

CRYSTAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA			NOTES
		DELCO PART No.	CBS PART No.	SYLVANIA PART No.	
M2	1N295	7269746	1N60	1N60	2nd Det. (Pigtail)
M3	1N295	7269746	1N60	1N60	AVC Rect. (Pigtail)
M4	1N295	7269746	1N60	1N60	Overload Limiter (Pigtail)

MISCELLANEOUS

ITEM No.	PART NAME	DELCO PART No.	NOTES
M5	Lamp	7270646	Holland, Philips, #12843, 12V. 3 Watts
M6	Tuning Cap.	7270662	Ant. 25—277mmf
	IF Printed Board	7270962	
	RF Printed Board	7270963	

WIRING DATA

General-use Unshielded Hook-up Wire .....Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors

RACK
PARTS LIST AND DESCRIPTIONS

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA				NOTES
			CBS PART No.	RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X10	2N278	Output					

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	DELCO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C28A	▲1500	16	7270954	AFH2-75-50		WP200.25			R2670 *
B	▲1000	10							

* Non Catalog Item

FIXED CAPACITORS

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

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT	DELCO PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
C29			7270909						
C30	.5	100	7270955	P288N-5			GEM-205	2TM-P5	
C31	.47	100	6692	P288N-47			GEM-2047	2TM-P47	
C32			7270901						

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	DELCO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R11A	5000Ω	½	7270904	AB-11 †				Tone
B	Shaft			AK-8				
R12	3000Ω	2(WW)	7269743					Sensitivity, Stop ⓐ 300Ω
R13		2(WW)	7270906 ①					Speaker Fader Note 1

† Use AK-28 Adaptor Bushing.
① Part #7270999 may be used in some versions.

RACK
PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING		DELCO PART No.	NOTES
	OHMS	WATT		
R14	1200Ω		1126	Note 1
R15	33Ω			
R16	180Ω 5%	2	1190	
R17	150Ω	2	1189	

ITEM No.	RATING		DELCO PART No.	NOTES
	OHMS	WATT		
R18	.47Ω	2	7270608	Fusible
R19	10Ω		1101	
R20	200Ω		1213221	
R21	180Ω		1116	

Note 1. Not used in some versions.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA							NOTES
	PRI.	DELCO PART No.	Halldorson PART No.	Merit PART No.	Rom PART No.	Stoncor PART No.	Thordorson PART No.	Triod PART No.	
T3	9Ω tap ⓐ 3.4Ω	7269650							Not used with portable unit.

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	DELCO PART No.	QUAM PART No.	
SP2	6" X 9"	PM	5Ω	7270842	69A3Z5	Not used with portable unit

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		DELCO PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Rom PART No.	
L9	Antenna Coil	7255738	19-1004	BC-565	4610		6.5 Microhenries

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA						
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000 ∿)	DELCO PART No.	Halldorson PART No.	Merit PART No.	Rom PART No.	Stoncor PART No.	Thordorson PART No.	Triod PART No.
L10	1A	.26Ω	.003 Hy.	7269647						

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			DELCO PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M7		4A 32V	7270622					

MISCELLANEOUS

ITEM No.	PART NAME	DELCO PART No.	NOTES
M8	Switch Speaker Ass'y	1221152 Model 989145	Speaker Interlock Complete, for 6" X 9" Rear Seat Speaker Installation

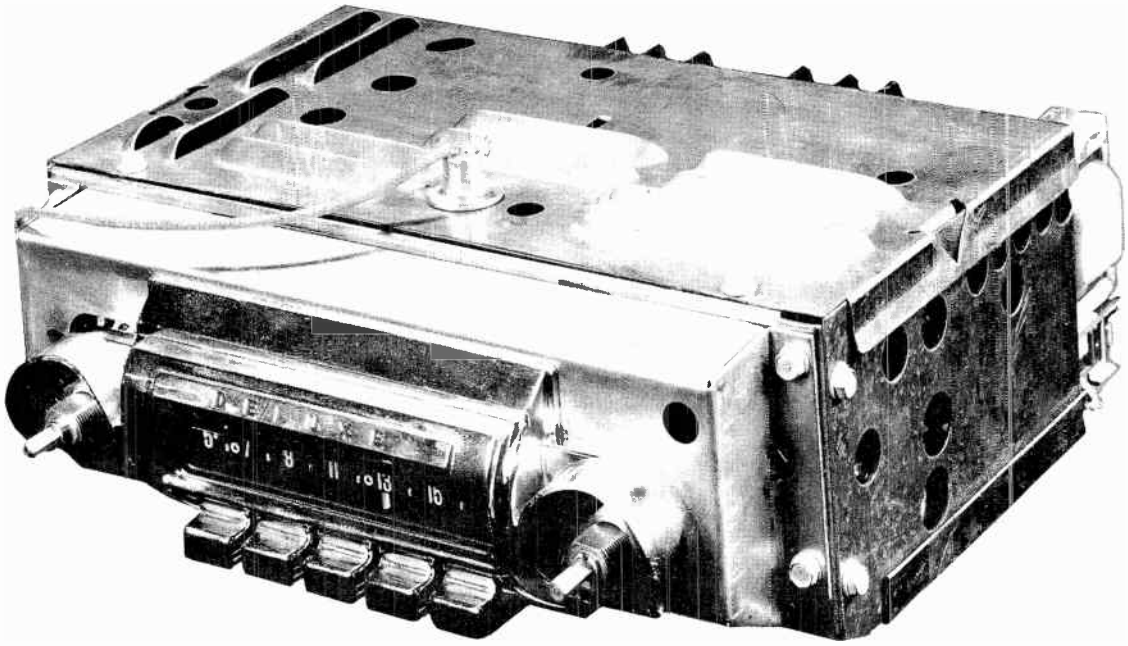
CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

NAME	PART NO.	DESCRIPTION
Knob	7270385	Control, Four used
Escutcheon	7070794	Includes Dial

WIRING DATA

General-use Unshielded Hook-up Wire .....Use BELDEN No. 6530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors
Shielded Hook-up Wire .....Use BELDEN No. 8885
Bonding Strap .....Use BELDEN No. 8661



TRADE NAME	Pontiac Model 988822 (For 1958 Pontiac Automobiles)
MANUFACTURER	Delco Radio Div., G. M. Corp., Kokomo, Indiana
TYPE SET	Battery Operated Custom Built AM Automobile Receiver With Transistorized Output
TUBES (Five)	Types 12BL6 RF Amplifier, 12AD6 Converter, 12AF6 IF Amplifier, 12F8 Det.-AVC-AF Amp., 12K5 AF Amplifier
POWER SUPPLY	12 Volt Storage Battery
RATING	2 Amp. @ 12.6 Volts DC
TUNING RANGE—BROADCAST	540 - 1600KC

PONTIAC
MODEL 988822

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING 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. Set tone control to Treble.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.1mfd	High side to pin 7 (grid) of 12AD6 (V2). Low side to chassis.	262KC (400~ Mod)	High frequency end stop	Across voice coil	A1, A2, A3, A4	Adjust for maximum output.
	Check setting of oscillator coil core (A5). Rear of core should be 1 5/8" from mounting end of coil form.						
2.	68mmf	High side to antenna connector. Low side to chassis.	1615KC	High frequency end stop	Across voice coil	A6, A7, A8	Adjust for maximum output.
3.	"	"	600KC	Tune to 600KC signal	"	A9, A10	"
4.	"	"	1615KC	High frequency end stop	"	A7, A8	"
5.	With radio installed in car and antenna fully extended, tune in a weak station near 1000KC and adjust A8 for maximum output.						

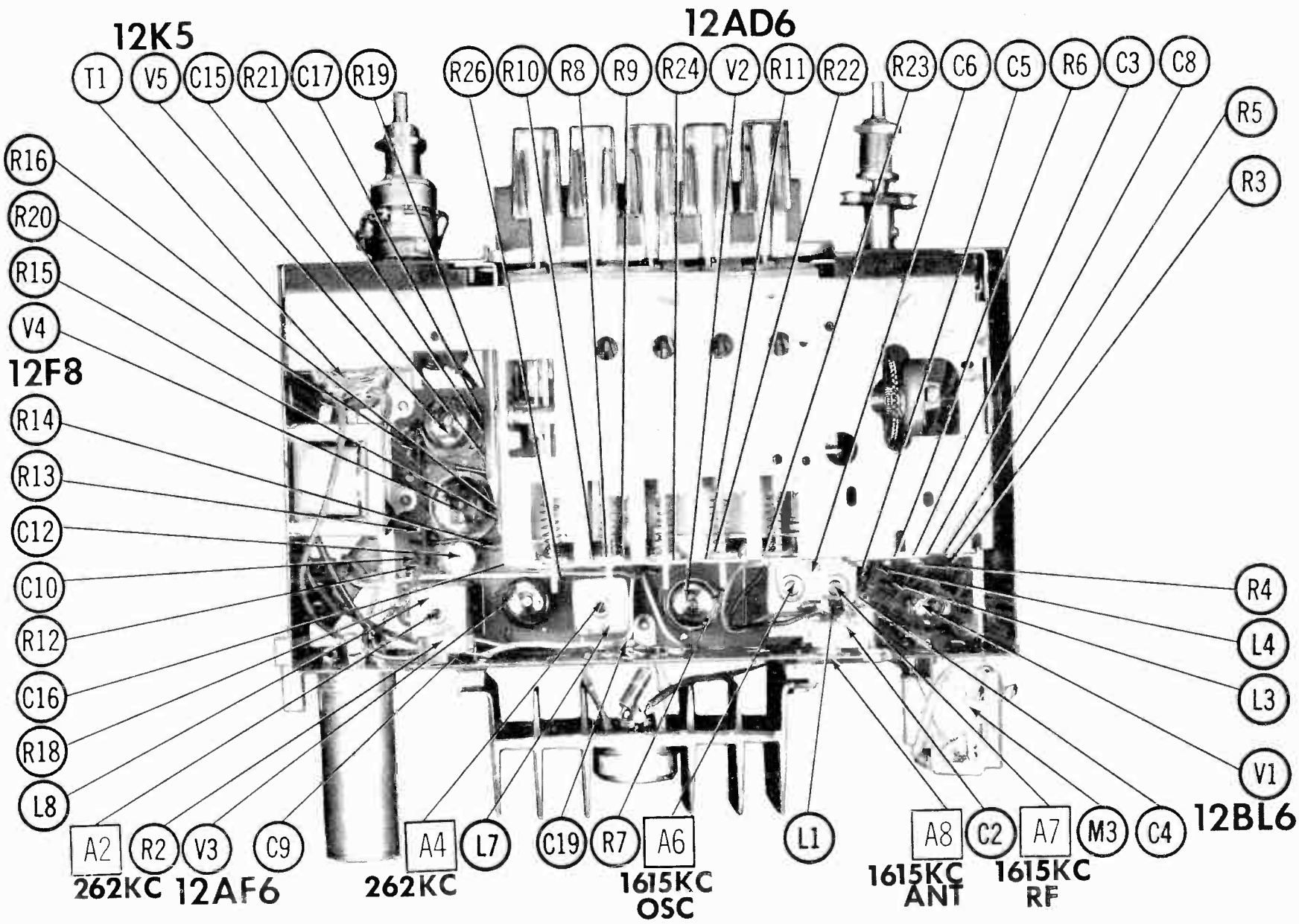
POINTER ADJUSTMENT

With radio tuned to an 1100KC signal, adjust pointer adjustment so that pointer coincides with 1100KC mark on dial.

PUSHBUTTON ADJUSTMENT

1. Pull pushbutton to the left and out.
2. Tune manually to desired station.
3. Press pushbutton in firmly.
4. Repeat for remaining pushbuttons.

HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana



CHASSIS TOP VIEW

PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier	12BL6	
V2	Converter	12AD6	
V3	IF Amplifier	12AF6	

ITEM No.	USE	TYPE	NOTES
V4	Det.-AVC-AF Amp.	12F8	
V5	AF Amplifier	12K5	

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA				NOTES
			CBS PART No.	RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	2N278	Output					

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	DELCO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	■1000	16	7270691	AFH2-02-70		WP200.27			R2668 *
B	▲500	16							

* Non Catalog Item

FIXED CAPACITORS

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

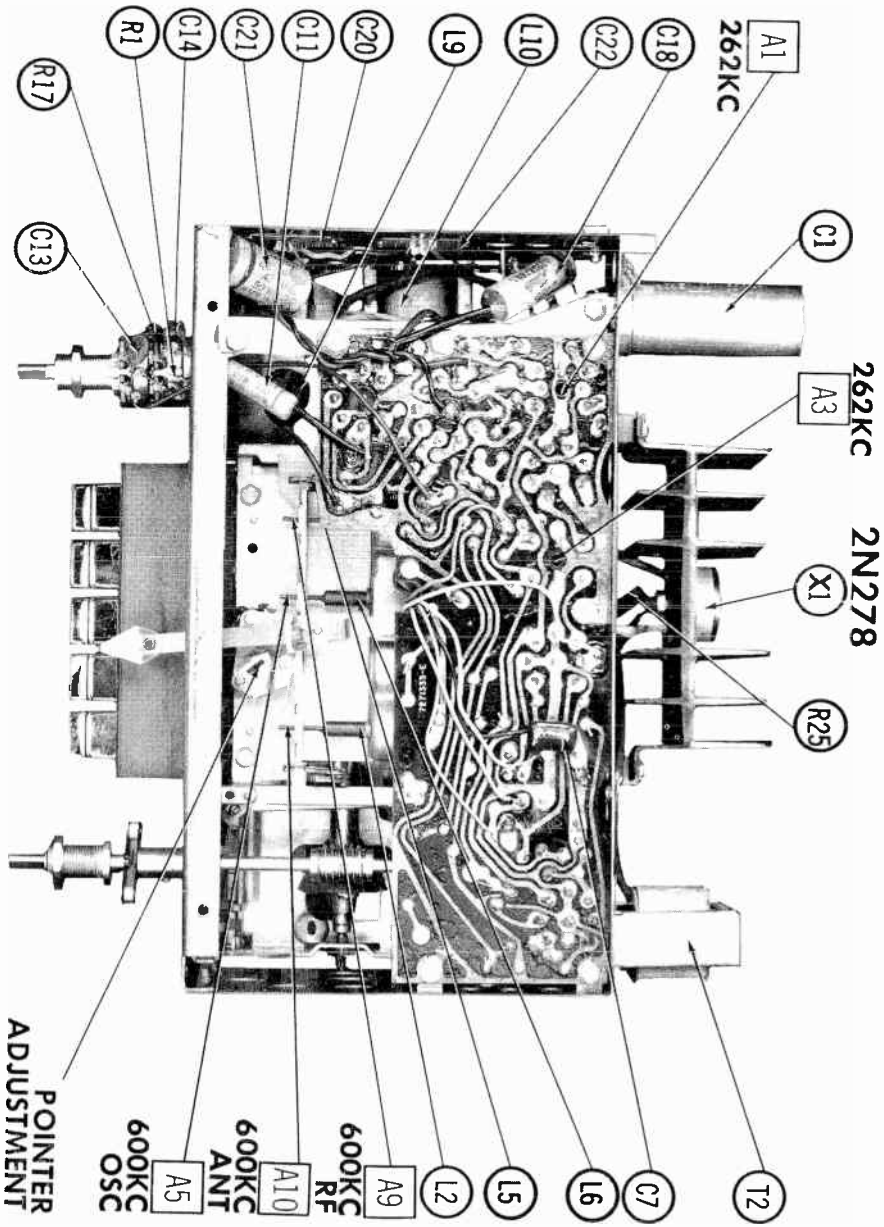
ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT	DELCO PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
C2A	15-65		7271397						
B	34								
C3	.022	200	6611	P288N-022	DD-203	CUB2S22	GEM-4122	2TM-S22	
C4	68		6369	BPD-000068	DD-680	L10Q68	UC-5468	5GA-Q68	
C5	39		6366	DI-000039	DD-390	L10Q39	UC-5439	5GA-Q39	
C6A									
B									
C			7268828						
D									
C7	200		7270129	1469-0002		5R5T2	MCE237	MS-32	5%
C8	.047	200	6612	P288N-047	DF-503	CUB2S47	GEM-4147	2TM-S47	
C9	47		6367	1468-000047	DD-470	1W5Q47	UC-5447	1FM-Q47	
C10	47		6367	BPD-000047	DD-470	L10Q47	UC-5447	5GA-Q47	
C11	.005	600	6631	P688N-005	D6-502	CUB6D5	GEM-625	6TM-D5	
C12	.1	50	7269714	P288N-1		BC2P1J	ACE401	2SE-P10	
C13	1000		6350	BPD-001	DD-102	BYA6D1	DC521	5HK-D1	
C14	15		6361	BPD-000015	DD-150	L10Q15	UC-5415	5GA-Q15	
C15	220		6375	BPD-00022	DD-221	L10T22	UC-5322	5GA-T22	
C16	2000		6352	BPD-002	DD-202	BYA10D2	DC522	5HK-D2	
C17	.022	200	6611	P288N-022	DD-203	CUB2S22	GEM-4122	2TM-S22	
C18	.1	200	6690	P288N-1	DF-104	CUB2P1	GEM-201	2TM-P1	
C19A	220			BPD-00022	DD-221	L10T22	UC-5322	5GA-T22	
B	220		6375	BPD-00022	DD-221	L10T22	UC-5322	5GA-T22	
C20			1212278						
C21	.47	50	7269780	P288N-47		CUB2P47	GEM-2047	2TM-P47	
C22			1212278						

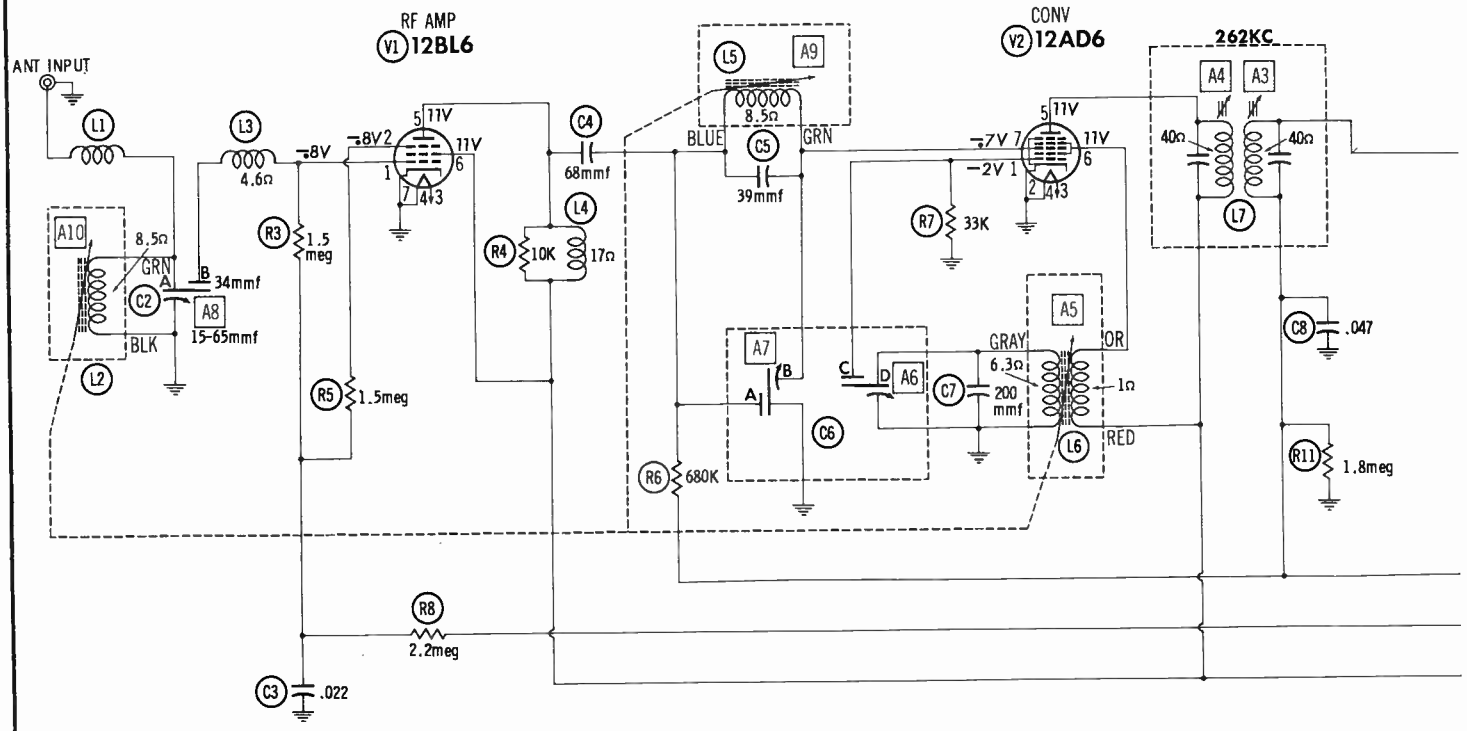
CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESIST-ANCE	WATTS	DELCO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1A	5meg	½	7271466				■UE3816S	Tone
B	5meg	½						Volume, Tap @ 1meg
C	Switch							
R2	100Ω	2(WW)	7269637		39-100		FL-150	Transistor Bias

■ "STA-LOC" Equivalent FG56A, OS875, RU56T16, IS1187, US-41

CHASSIS—BOTTOM VIEW





RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12BL6	6meg	6meg	1.3Ω	0Ω	†117Ω	†100Ω	0Ω		
V2	12AD6	33K	0Ω	1.3Ω	0Ω	†140Ω	†100Ω	2.3meg		
V3	12AF6	1.5meg	0Ω	1.3Ω	0Ω	†126Ω	†100Ω	0Ω		
V4	12F8	2meg	†270K	†120K	1.3Ω	0Ω	580K	800Ω	0Ω	800Ω
V5	12K5	22Ω	3.3meg	0Ω	1.3Ω	†33Ω	†33Ω	†235Ω		

TRANSISTOR CIRCUIT RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE

† MEASURED FROM JUNCTION OF L9 AND L10

1. DC voltage measurements taken with vacuum tube voltmeter.
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes posssible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

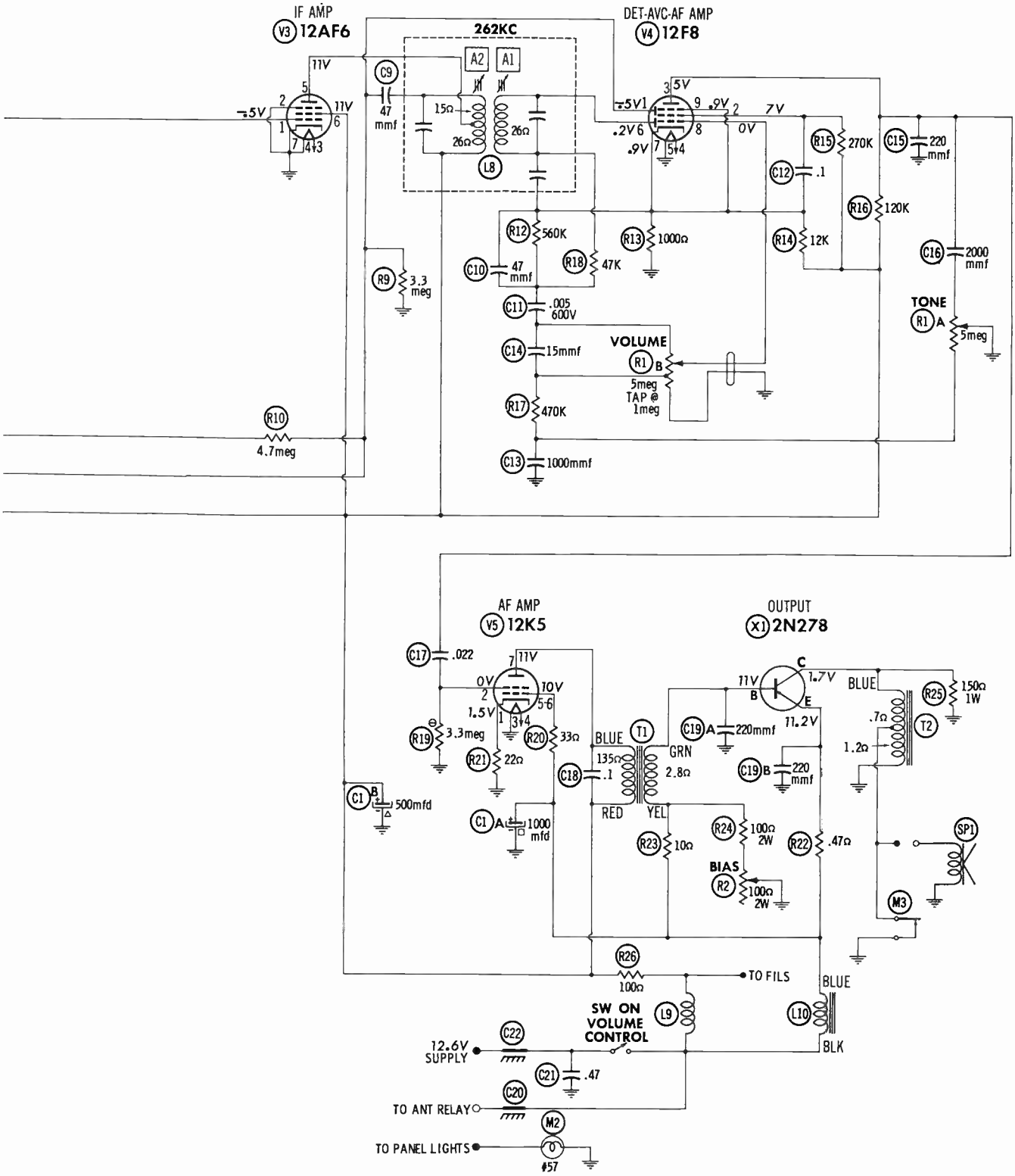
TRANSISTOR BIAS ADJUSTMENT (R2)

1. Connect an accurate DC milliammeter in series with the transistor collector terminal.
2. Adjust R2 for a meter reading of 1050 MA.

Θ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

A PHOTOFACT STANDARD NOTATION SCHEMATIC



PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING OHMS	RATING WATT	DELCO PART No.	NOTES
R3	1.5meg		1237	
R4	10K		1137	
R5	1.5meg		1237	
R6	680K		1233	
R7	33K		1217	
R8	2.2meg		1239	
R9	3.3meg		1241	
R10	4.7meg		1243	
R11	1.8meg		1238	
R12	560K		1232	
R13	1000Ω		1125	
R14	12K		1212	
R15	270K		1228	
R16	120K		1224	
R17	470K		1231	
R18	47K		1219	
R19	3.3meg		1241	Note 1
R20	33Ω		1107	
R21	22Ω		1105	
R22	.47Ω		7270608	
R23	10Ω		1101	
R24	100Ω	2	1187	
R25	150Ω	1	1152	
R26	100Ω		1113	

Note 1. Some versions may use 470K in this application (Part #1231).

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA DELCO PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Ram PART No.	NOTES
L1	Ant. Coil	7255738	19-1004	BC-565	4610		6.5 Microhenries
L2	Ant. Coil	1221138					
L3	RF Choke	7258487					26 Microhenries
L4	RF Choke	7269684					1772 Microhenries
L5	RF Coil	1221138					
L6	Osc. Coil	1221151					
L7	Input IF	1221015	16-6756	BC-317	13-PH1		
L8	Output IF	1221021		BC-318			
L9	Fil. Choke	1217846					1.4 Microhenry

FILTER CHOKE

ITEM No.	RATINGS CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000 ∿)	REPLACEMENT DATA DELCO PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
L10	.92A	.75Ω	.011 Hy.	7271321						

TRANSFORMER (INTERSTAGE)

ITEM No.	TURNS RATIO PRI.	TURNS RATIO SEC.	REPLACEMENT DATA DELCO PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
T1	50	:1	7269877							

PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE PRI.	REPLACEMENT DATA DELCO PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
T2	10.2Ω Tap @ 3-4Ω	7271527							

SPEAKER

ITEM No.	TYPE SIZE	FIELD	V. C. IMP.	REPLACEMENT DATA DELCO PART No.	QUAM PART No.	NOTES
SP1	6" X 9"	PM	3-4Ω	7270132	69A3	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA DELCO PART No. FUSE	DELCO PART No. HOLDER	LITTELFUSE PART No. FUSE	LITTELFUSE PART No. HOLDER	BUSS PART No. FUSE	BUSS PART No. HOLDER
M1		7½A 32V	455640					

MISCELLANEOUS

ITEM No.	PART NAME	DELCO PART No.	NOTES
M2	Lamp		#57
M3	Switch	7271425	Speaker Interlock
M4	Speaker Ass'y	Models 988838, 988839	Complete, for Dual 6" X 9" Rear Seat Speaker Installation
	Printed Board	7271333-E	

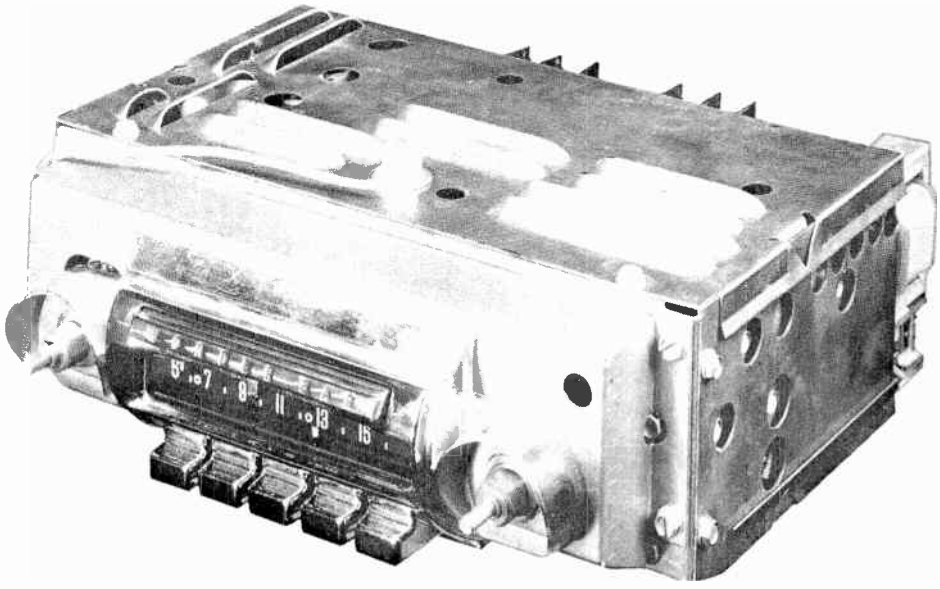
CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

NAME	PART NO.	DESCRIPTION
Knob	529079	Control, two used
Knob	529077	Dummy
Knob	529078	Tone
Pushbutton	1221144	Five used, incl. front bearing plate and slides
Pointer Ass'y	1221146	
Dial	7270491	

WIRING DATA

General-use Unshielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors
Shielded Hook-up Wire ..... Use BELDEN No. 8885
Bonding Strap ..... Use BELDEN No. 8661



TRADE NAME	Pontiac Model 988823 (for 1958 Pontiac Automobiles)
MANUFACTURER	Delco Radio Div., G.M. Corp., Kokomo, Indiana.
TYPE SET	Battery Operated Custom Built AM Automobile Receiver with Transistorized Output
TUBES (Five)	Types 12DZ6 RF Amplifier, 12AD6 Converter, 12EA6 IF Amplifier, 12DV8 Det-AVC-AF Amp., 12AL8 Trigger
POWER SUPPLY	12 Volt Storage Battery
RATING	2.6 Amp@12.6 Volts DC (4.5A when seeking)
TUNING RANGE—BROADCAST	540-1600KC

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING 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.
Set Sensitivity control to position 1.
Set Tone control fully clockwise.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.1mfd	High side to pin 7 (grid) of 12AD6 (V2). Low side to chassis.	262KC (400∿ Mod.)	High frequency stop.	Across voice coil.	A1, A2, A3, A4	To tune to high frequency stop, put a .070" feeler gauge in slot against high frequency stop. Tune manually to allow treadly bar arm to run against feeler gauge. Remove gauge. Adjust for maximum output.
	Check setting of oscillator coil core (A5). Rear of core should be 1 5/8" from mounting end of coil form.						
2.	68mmf.	High side to antenna receptacle. Low side to chassis.	1615KC	High frequency stop.	Across voice coil	A6, A7 A8	To tune to high frequency stop, put a .070" feeler gauge in slot against high frequency stop. Tune manually to allow treadle bar arm to run against feeler gauge. Remove gauge. Adjust for maximum output.
3.	"	"	600KC	Tune to 600KC signal.	Across voice coil.	A9, A10	Adjust for maximum output.
4.	"	"	1400KC	Tune to 1400KC signal.	"	A7, A8	"

With radio installed in car and antenna fully extended, tune in a weak station between 600KC and 1000KC and adjust A8 for maximum output.

POINTER ADJUSTMENT

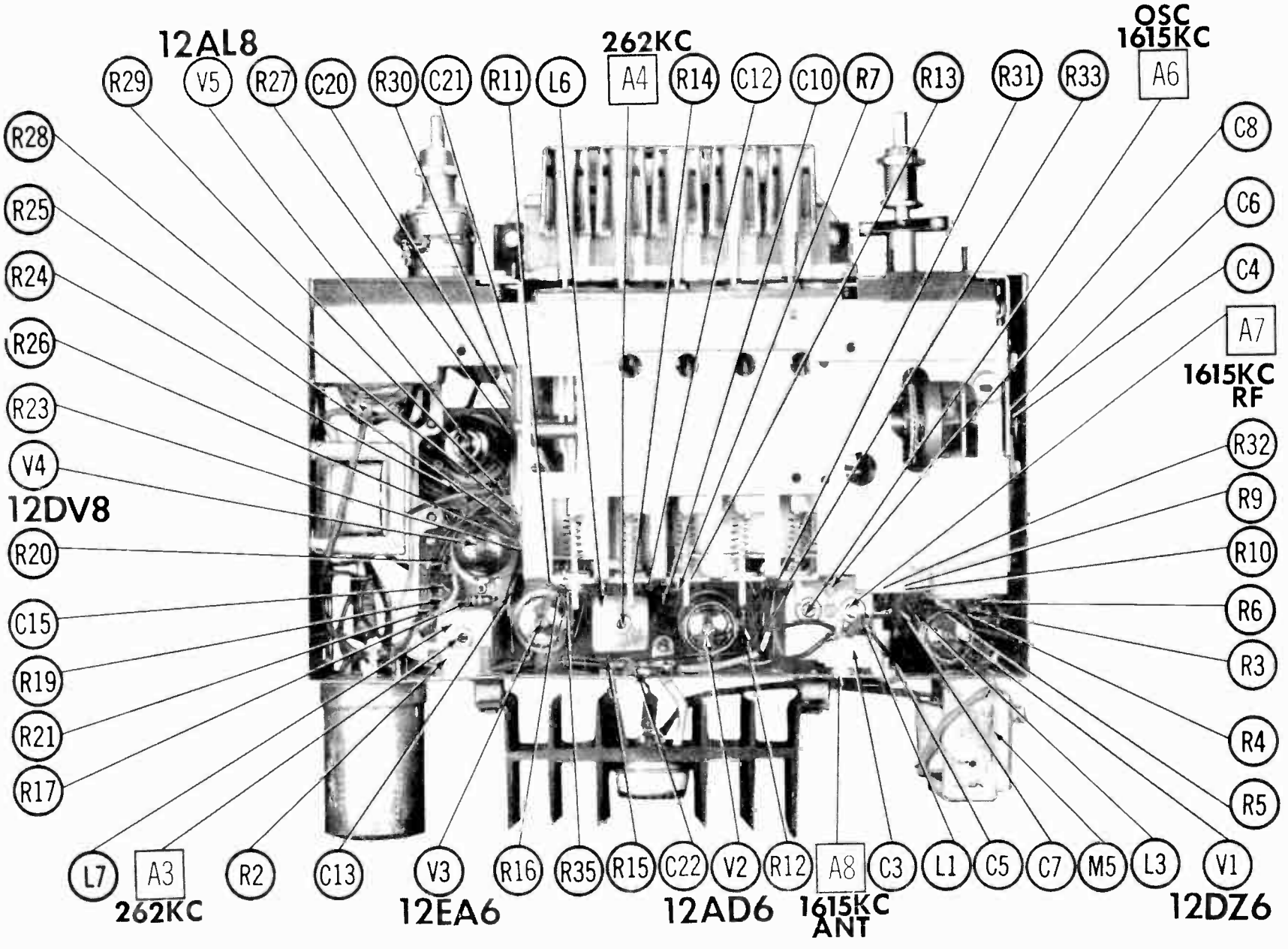
With radio tuned to an 1100KC signal, adjust pointer adjustment so that pointer coincides with 1100KC amrk on dial.

PUSHBUTTON ADJUSTMENT

1. Pull pushbutton to the left and out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.

HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana

H595



CHASSIS TOP VIEW

PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier	12DZ6	
V2	Converter	12AD6	
V3	IF Amplifier	12EA6	
V4	Det-AVC-AF Amp.	12DV8	
V5	Trigger	12AL8	

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA				NOTES
			CBS PART No.	RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	2N278	Output					

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	DELCO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	▲1000	16	7269719	AFH3-00-97		WP300			R2424*
B	■500	16							
C	▲20	16							
C2	1000	1	7271557	PRS6V1000	BBR1000-6	TC310	TD-1000-6	MTH-06100	TVA-1104

* Non Catalog Item

FIXED CAPACITORS

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

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT	DELCO PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
C3A	15-65		7271397						
B	34								
C4	.022	200	6611	P288N-022	DD-203	CUB2S22	GEM-4122	2TM-S22	
C5	68		8369	BPD-000068	DD-680	L10Q68	UC-5468	5GA-Q68	
C6	.1	200	6690	P288N-1	DF-104	CUB2P1	GEM-201	2TM-P1	
C7	39		6366	DI-000039	DD-390	L10Q39	UC-5439	5GA-Q39	
C8A									
B									
C			7268828						
D									
C9	200		7270129	1469-0002		5R5T2	MCE237	MS-32	5%
C10	2000		6352	BPD-002	DD-202	BYA10D2	DC522	5HK-D2	
C11	.1	200	6690	P288N-1	DF-104	CUB2P1	GEM-201	2TM-P1	
C12	.1	200	6690	P288N-1	DF-104	CUB2P1	GEM-201	2TM-P1	
C13	100		1219498	1489-0001		5R5T1	MCE230	MS-31	5%
C14	100		1219498	1489-0001		5R5T1	MCE230	MS-31	5%
C15	47		6367	1468-000047	DD-470	1W5Q47	UC-5447	1FM-447	
C16	.02	200	6611	P288N-02	DD-203	CUB2S2	GEM-4122	2TM-S22	

PARTS LIST AND DESCRIPTIONS (Continued)

CAPACITORS (cont)

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT	DELCO PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
C17	1000		6350	BPD-001	DD-102	BYA6D1	DC521	5HK-D1	
C18	27		6364	DI-000027	DD-270	L10Q27	UC-5427	5GA-Q27	
C19	.22	200	6691	P288N-22		CUB2P22	GEM-2022	2TM-P22	
C20	1000		6350	BPD-001	DD-102	BYA6D1	DC521	5HK-D1	
C21	.022	200	6611	P288N-022	DD-203	CUB2S22	GEM-4122	2TM-S22	
C22A	220		6375	BPD-00022	DD-221	L10T22	UC-5322	5GA-T22	
B	220			BPD-00022	DD-221	L10T22	UC-5322	5GA-T22	
C23	.1	200	6690	P288N-1	DF-104	CUB2P1	GEM-201	2TM-P1	
C24			1212278						
C25			1212278						
C26	.47	50		P288N-47		CUB2P47	GEM-2047	2TM-P47	

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	DELCO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1A	2meg	½	7270939		RTV-658C*		■ UE3821S	Tone
B	5meg	½						Volume, Tap ⓐ 1meg
C	Switch							Power On-Off
R2	100Ω	2	7269637		39-100		39-150	Transistor Bias

Speaker Fader (Part #7270413 may be used in some versions.

*Use XB-1 Adaptor Bushing

■ "STA-LOC" Equivalent: FG26A, OS875, RU56T16, IS1187, US-41

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING		DELCO PART No.	NOTES
	OHMS	WATT		
R3	2.2meg		1239	
R4	1.5meg		1237	
R5	10K		1137	
R6	150K		1225	
R7	33K			Note 1.
R8	3900Ω			Note 1.
R9	1.5meg		1237	
R10	680K		1123	
R11	3.3meg		1241	
R12	33K		1217	
R13	680K		1123	
R14	1.5meg		1237	
R15	220Ω		1117	
R16	1.5meg		1237	
R17	33K 5%		7271461	
R18	33K		1217	Note 2
R19	18K 5%		7271632	

ITEM No.	RATING		DELCO PART No.	NOTES
	OHMS	WATT		
R20	1meg		1235	
R21	47K		1219	
R22	560K		1232	
R23	18Ω		104	
R24	1meg		1235	
R25	3.9meg		7271627	5%
R26	4.7meg		1221136	5%
R27	2.2meg		1239	
R28	8200 5%		7268231	
R29	2200			Note 3.
R30	4.7meg		1243	
R31	.36Ω Cold	2(WW)	7270608	Fuse Type
R32	10Ω		1101	
R33	120Ω	5	7271576	
R34	150Ω	1	1152	
R35	56Ω		1110	

Note 1. Part of Sensitivity Switch M6

Note 2. Not used in some versions.

Note 3. Some versions may use 3900Ω 5% in this application (Part #7266280)

PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA							NOTES
	PRI.	SEC.	DELCO PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stoncor PART No.	Thordorson PART No.	Triad PART No.	
T1	11	:1	1221159				TA-51			

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA							NOTES
	PRI.	DELCO PART No.	Halldorson PART No.	Merit PART No.	Rom PART No.	Stancor PART No.	Thordorson PART No.	Triad PART No.	
T2	10. 2Ω Tap ⓐ 3-4Ω	7271527							

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	DELCO PART No.	QUAM PART No.	
SP1	6" x 9"	PM	3-4Ω	7270132	69A3	

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					
		DELCO PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Ram PART No.	NOTES
L1	Ant. Coil	7255738	19-1004	BC-565	4610		6. 5microhenries
L2	Ant. Coil	1221138					
L3	RF Choke	7269684					1772 microhenries
L4	RF Coil	1221138					
L5	Osc. Coil	1221151					
L6	Input IF	1220990	16-6756	BC-317	13-PH1		
L7	Output IF	1221124					
L8	Hash Choke	1217846					1. 4 microhenries

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA						
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000 ∿)	DELCO PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stoncor PART No.	Thordorson PART No.	Triad PART No.
L9	. 92A	. 75Ω	. 011HY	7271321				TC-2		

PARTS LIST AND DESCRIPTIONS (Continued)

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			DELCO PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1		7½A 32V	455640					

MISCELLANEOUS

ITEM No.	PART NAME	DELCO PART No.	NOTES
M2	Lamp	#57	#57
M3	Switch	7268030	Power Solenoid, Treadle Solenoid
M4	Switch	7269872	Station Selector
M5	Switch	7271425	Speaker Interlock
M6	Switch	7271264	Sensitivity
M7	Relay	7270545	
	Speaker Ass'y	Model 988838 Model 988839	Complete, for Dual 6" x 9" Rear Seat Speaker Installation
	Speaker Ass'y.	Model 988840 Model 988906	Complete, for 6" (or) 6" x 9" Rear Seat Speaker Installation
	Printed Board	7271496	

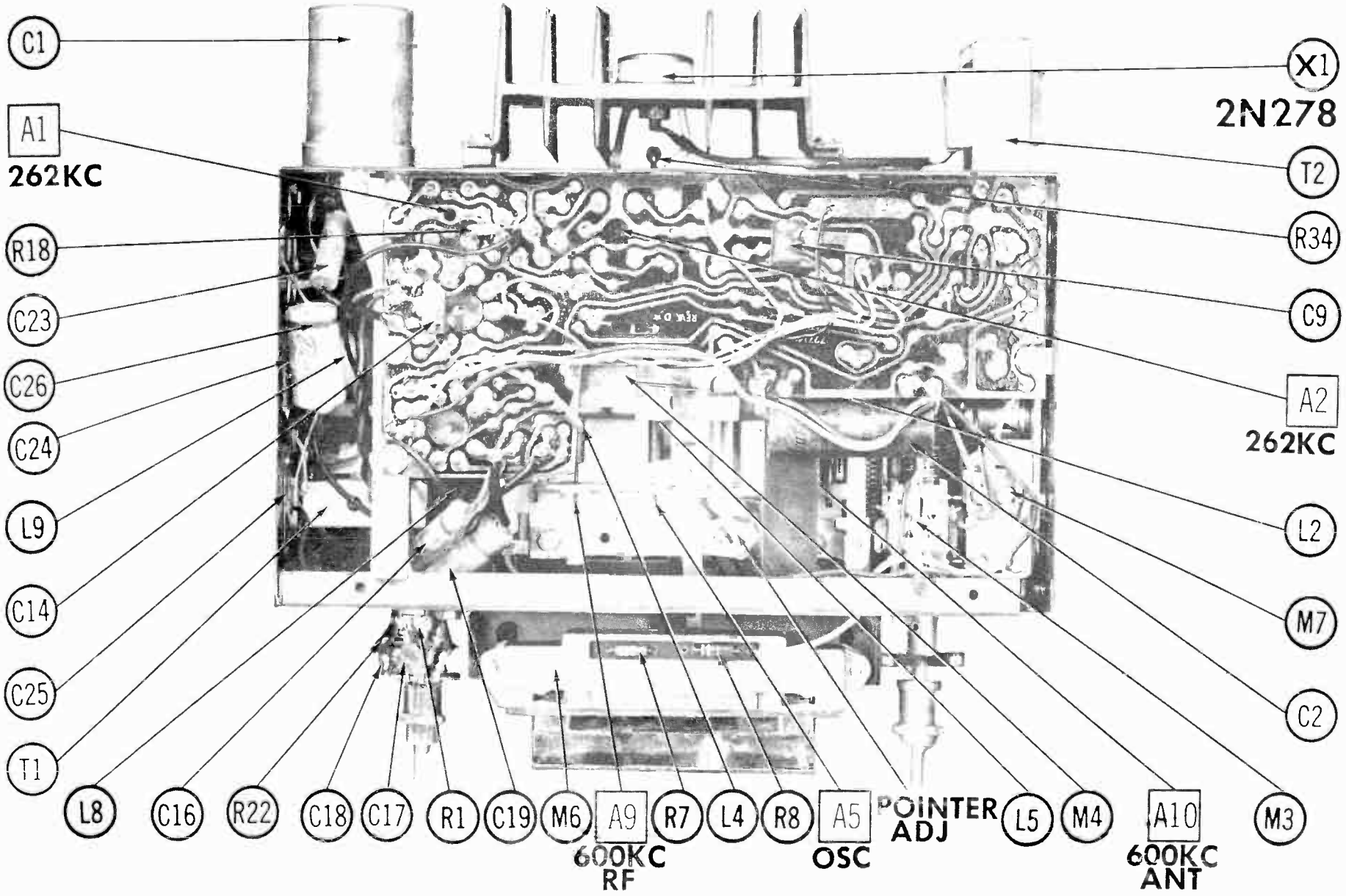
CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

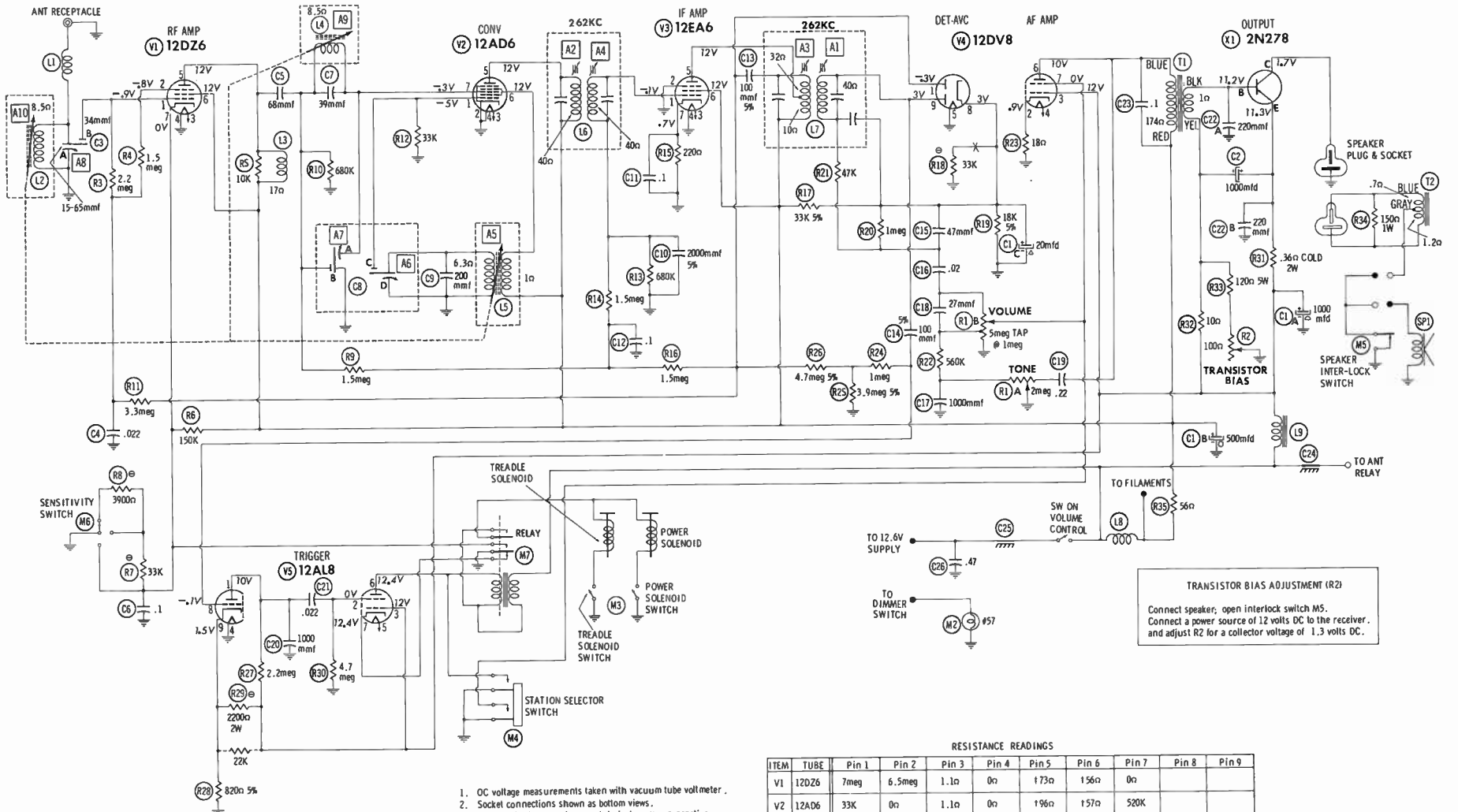
NAME	PART NO.	DESCRIPTION
Knob	529079	Control, Two Used
Knob	529077	Dummy
Knob	529078	Tone
Push Button	1221144	Five Used, Includes Front Bearing Plate and Slides
Pointer Ass'y.	1221146	
Dial	7270491	Calibrated
Backplate	7270486	Dial

WIRING DATA

General-use Unshielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors
Shielded Hook-up Wire ..... Use BELDEN No. 8885
Bonding Strap ..... Use BELDEN No. 8661



CHASSIS BOTTOM VIEW



TRANSISTOR BIAS ADJUSTMENT (R2)

Connect speaker; open interlock switch M5. Connect a power source of 12 volts DC to the receiver. and adjust R2 for a collector voltage of 1.3 volts DC.

Θ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

1. OC voltage measurements taken with vacuum tube voltmeter.
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

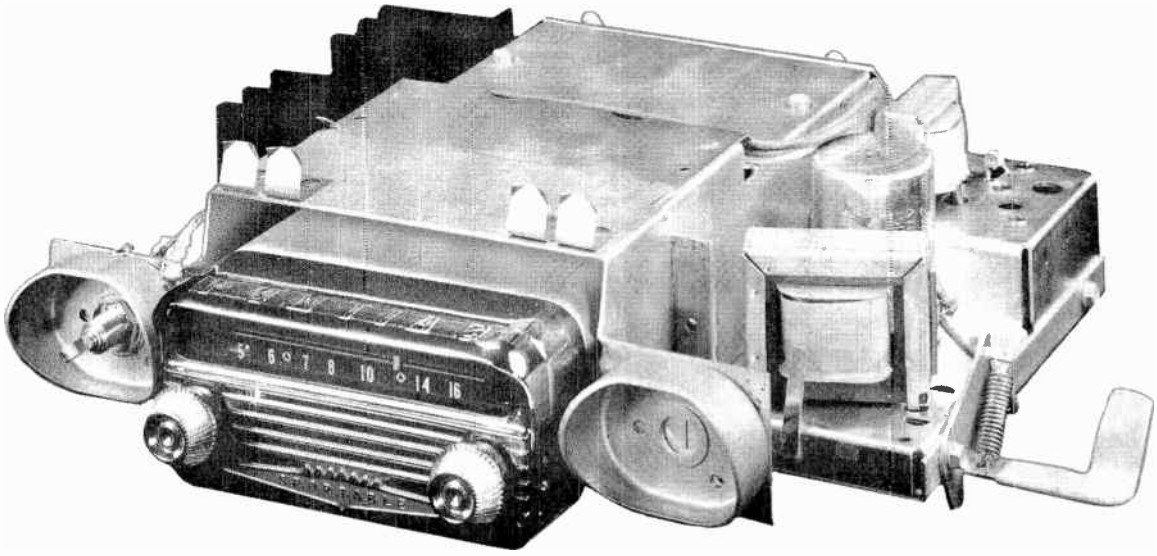
RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12DZ6	7meg	6.5meg	1.1Ω	0Ω	†73Ω	†56Ω	0Ω		
V2	12AD6	33K	0Ω	1.1Ω	0Ω	†96Ω	†57Ω	520K		
V3	12EA6	500K	0Ω	1.1Ω	0Ω	†66Ω	†56Ω	220Ω		
V4	12DV8	2meg	18Ω	†.7Ω	1.1Ω	0Ω	†230Ω	0Ω	7800Ω	1meg
V5	12AL8	†2.2meg	4.7meg	†.8Ω	0Ω	1.1Ω	†180Ω	0Ω	3meg	230Ω

TRANSISTOR CIRCUIT RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.

† MEASURED FROM JUNCTION OF R35 AND L8

A PHOTOFACT STANDARD NOTATION SCHEMATIC

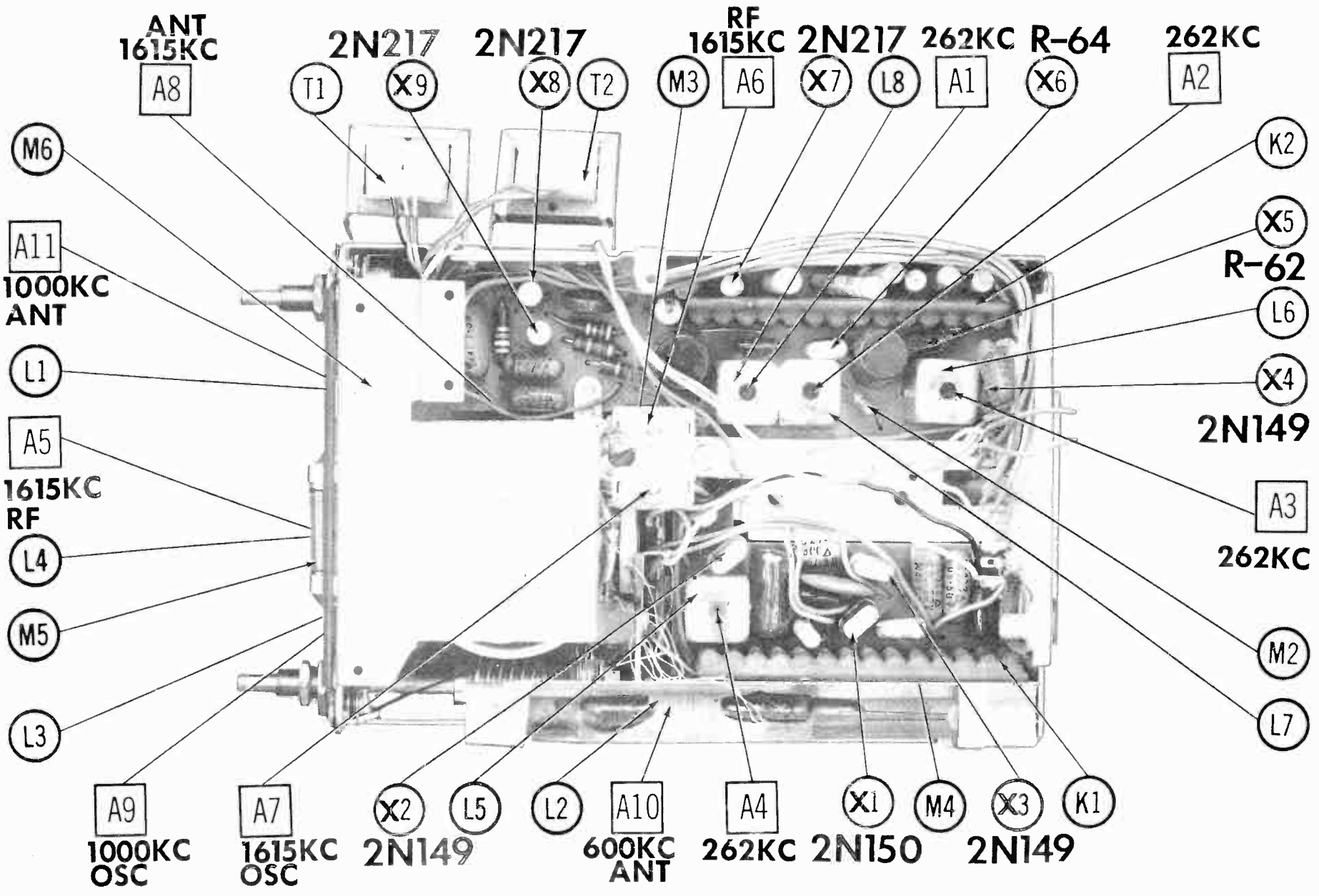


TRADE NAME	Pontiac Model 988837 (For 1958 Pontiac Automobiles)
MANUFACTURER	Delco Radio Div., G.M. Corp., Kokomo, Indiana
TYPE SET	Battery Operated Custom Built AM Transistorized Automobile or Portable Receiver
POWER SUPPLY	12 Volt Storage Battery (or) 6 Volts DC (Self Contained Battery)
RATING	1.2 Amp. @ 12.6 Volts DC (or) 6MA @ 6 Volts DC (Portable)
TUNING RANGE	BROADCAST 550-1600KC

PONTIAC
MODEL 988837

HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana

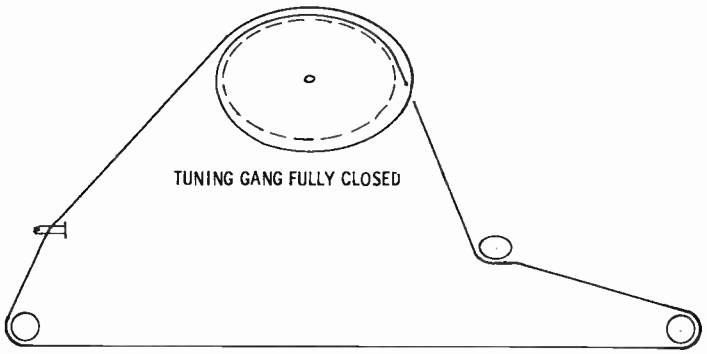
H590

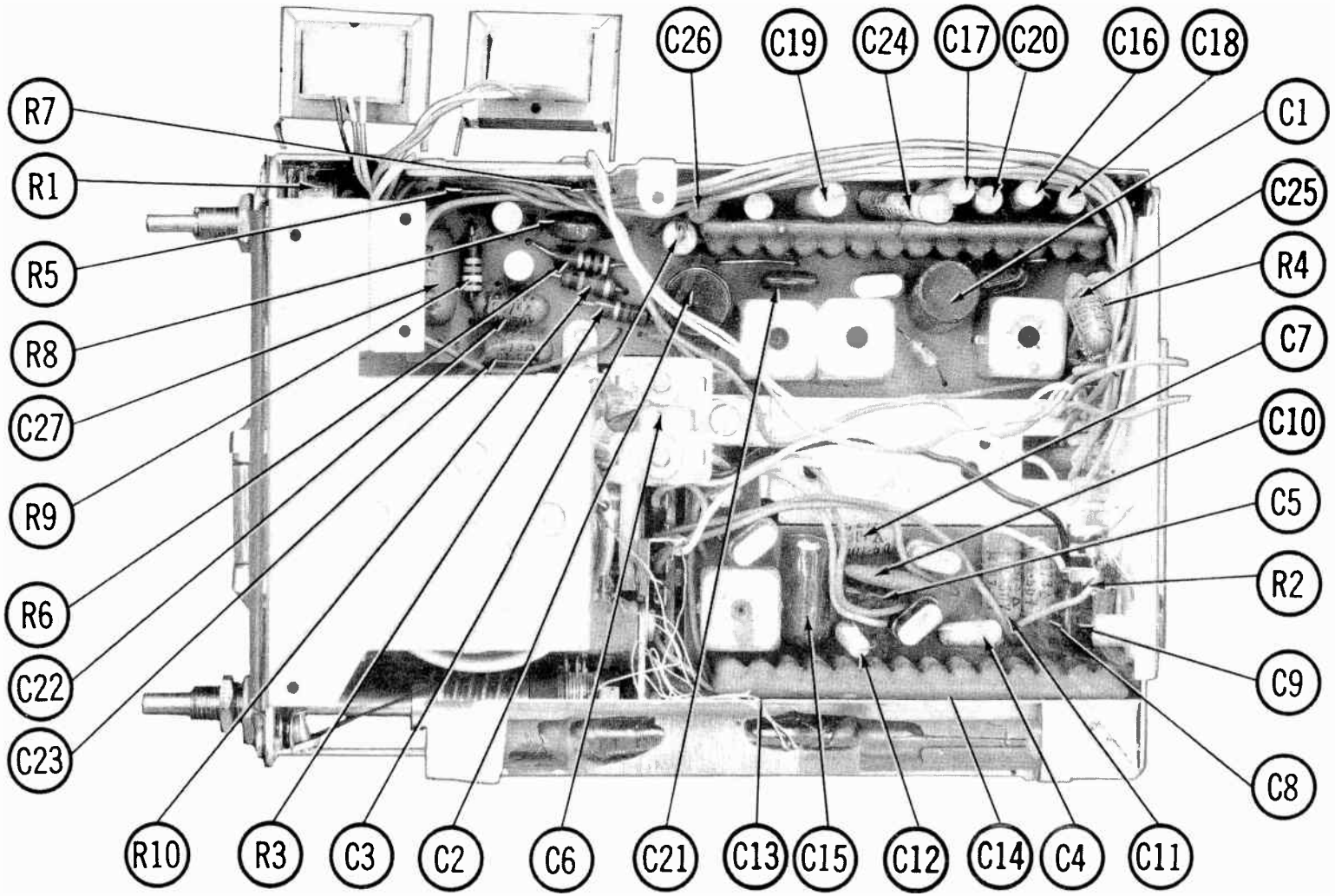


CHASSIS PORTABLE UNIT - ALIGNMENT. INDUCTOR & MISC. IDENT.

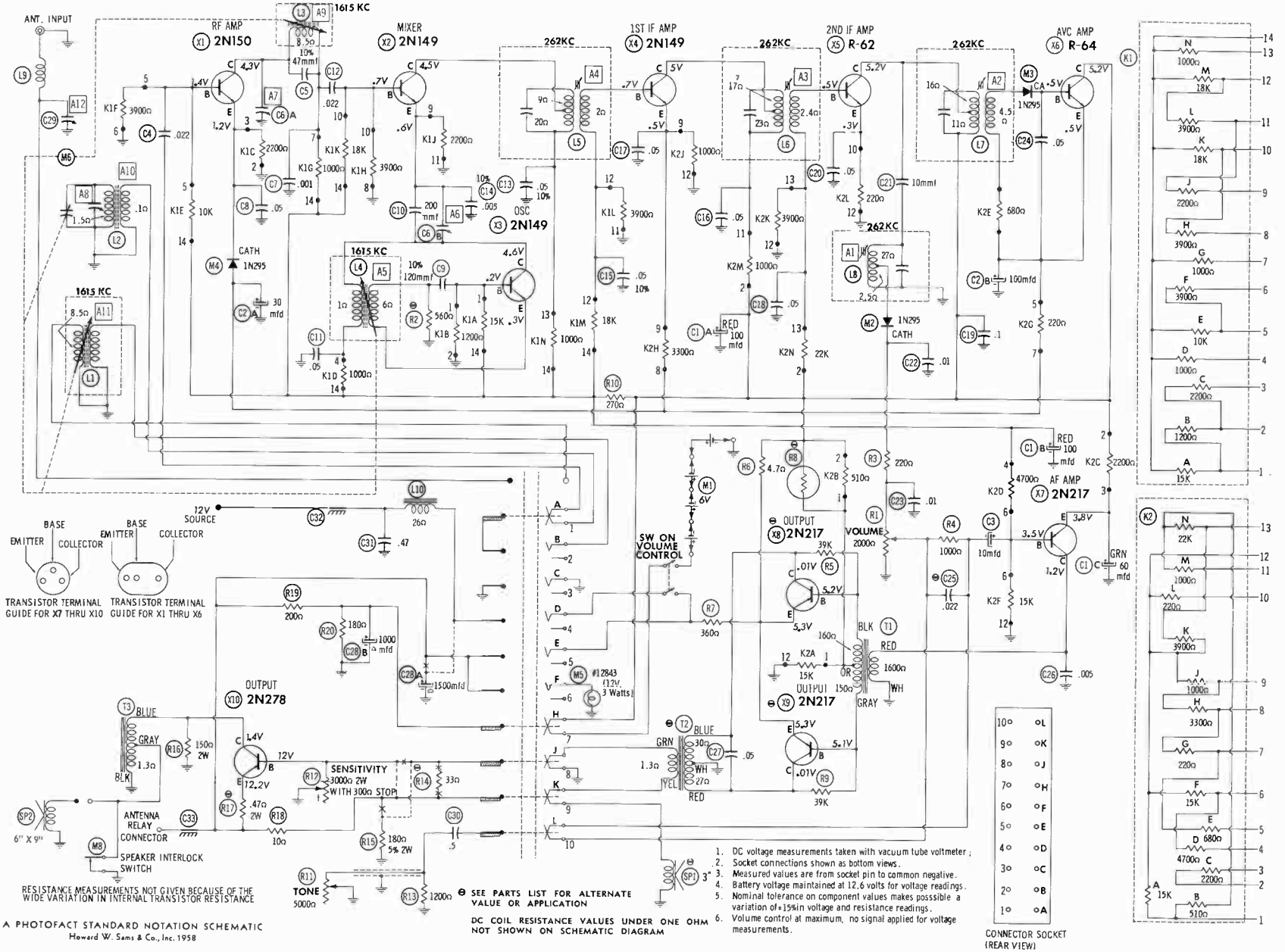
ALIGNMENT INSTRUCTIONS

	ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING 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.						
	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.1mfd	High side to base of 2N149 (X2 Mixer). Low side to chassis.	262KC	High frequency end stop	Across voice coil	A1, A2, A3, A4	Adjust for maximum output.
	Check setting of tuning cores (A5, A9, A11). Rear of cores should be 1 11/32" from back of coil form.						
2.		Loop	1615KC	High frequency end stop	Across voice coil	A6, A7 A8	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
3.		"	1000KC	1000KC	"	A9	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output. Repeat step 2.
4.		"	600KC	600KC	"	A10	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output by moving coil on core.
5.		"	1400KC	1400KC	"	A8	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
	Step 6 is not necessary unless antenna coil or core is replaced. Install portable unit in rack and remove covers from both portable unit and rack.						
6.	68mmf	High side to antenna receptacle. Low side to chassis.	1000KC	1000KC	Across voice coil	A11	Adjust for maximum output.
7.	With radio installed in car and antenna fully extended, tune in a weak station between 600KC and 1000KC. Adjust A12 for maximum output.						
	POINTER ADJUSTMENT With radio tuned to a 1100KC signal, adjust pointer adjusting screw so that pointer coincides with 11 on the dial.						





CHASSIS PORTABLE UNIT - CAPACITOR & RESISTOR IDENT.



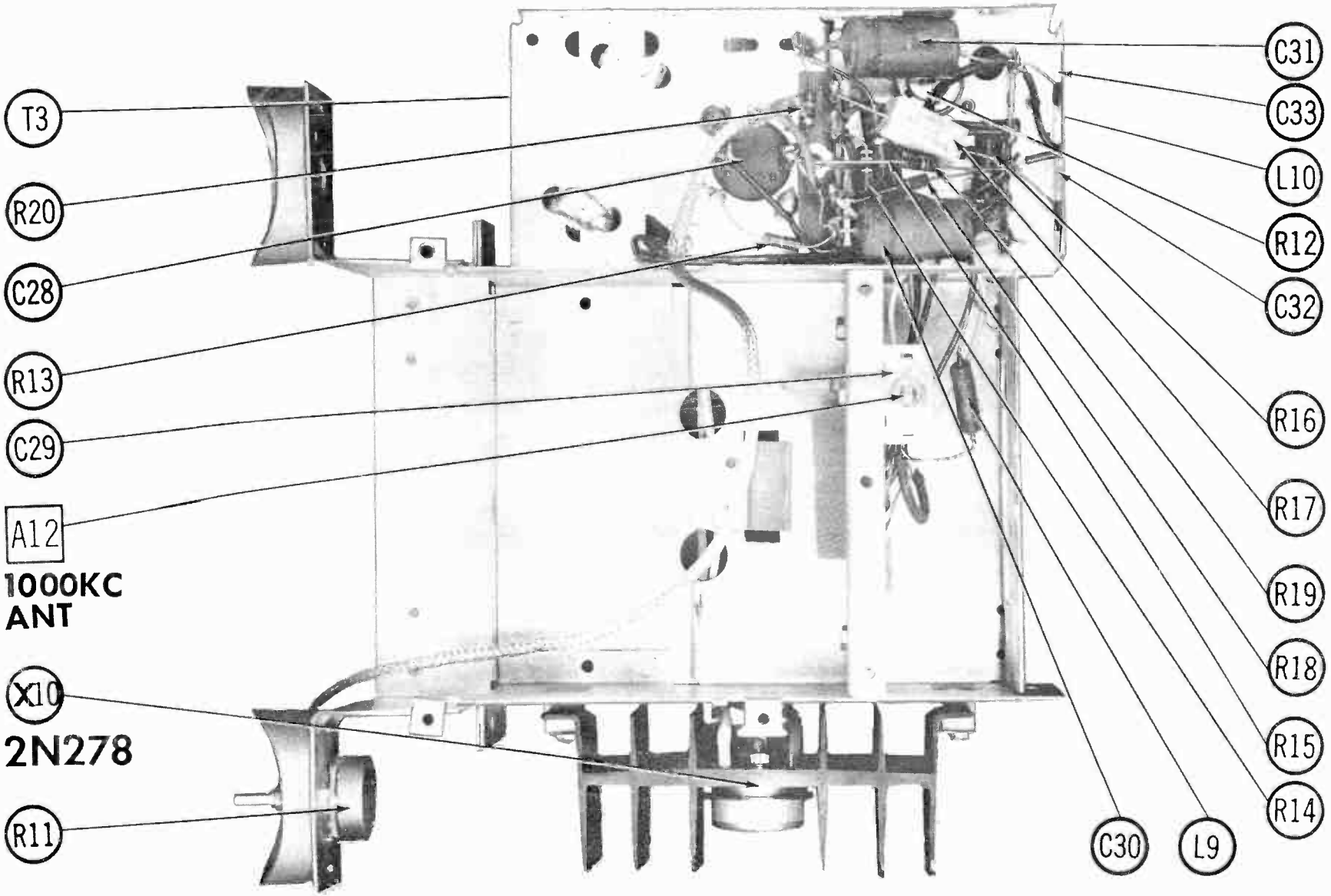
RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE

Θ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

1. DC voltage measurements taken with vacuum tube voltmeter ;
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes posssible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

A PHOTOFACT STANDARD NOTATION SCHEMATIC
Howard W. Sams & Co., Inc. 1958



CHASSIS RACK - BOTTOM VIEW

PORTABLE UNIT

PARTS LIST AND DESCRIPTIONS

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA				NOTES
			C8S PART No.	RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	2N150	RF Amplifier					
X2	2N149	Mixer					
X3	2N149	Oscillator					
X4	2N149	1st IF Amplifier					
X5	R-62	2nd IF Amplifier					
X6	R-64	AVC Amplifier					
X7	2N217	AF Amplifier					
X8	2N217	Output					Used as driver when radio is in car.
X9	2N217	Output					Used as driver when radio is in car

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	DELCO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	100	8	7271256						
B	100	8							
C	60	8							
C2A	30	6	7271257						
B	100	6							
C3	10	8	7271255			TT12X10			

FIXED CAPACITORS

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

ITEM No.	RATING		REPLACEMENT DATA							NOTES
	CAP.	VOLT	DELCO PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	
C4	.022	50	7271301							
C5	47		6367							10%
C6A			7270793							
B										
C7	.001	50	6627							
C8	.05	50	7270974							
C9	120		6372							10%
C10	200		7271299							
C11	.05	50	7270974							
C12	.022	50	7271301							
C13	.05	50	7270974							10%
C14	.005	50	6631							10%
C15	.05	50	7270974							10%
C16	.05	50	7270974							
C17	.05	50	7270974							
C18	.05	50	7270974							
C19	.1	50	7271302							
C20	.05	50	7270974							
C21	10		1215549							5%
C22	.01	50	7270975							
C23	.01	50	7270975							
C24	.05	50	7270974							
C25	.022	50								①
C26	.005	50	6631							
C27	.05	50	7270974							

① Some versions may use .05mfd in this application (Part #7270974).

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESIST-ANCE	WATTS	DELCO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1	2000Ω	½	7270665					Volume & Switch

PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING		DELCO PART No.	NOTES
	OHMS	WATT		
R2	560Ω			Note 1
R3	220Ω		1117	
R4	1000Ω		1125	
R5	39K		1218	
R6	4.7Ω		7269775	

ITEM No.	RATING		DELCO PART No.	NOTES
	OHMS	WATT		
R7	360Ω		1213225	
R8			7270782	Note 2
R9	39K		1218	
R10	270Ω		11118	

Note 1. Some versions may use 1200Ω in this application (Part #1126).
Note 2. Temperature compensating unit.

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA							NOTES
	PRI.	SEC.	DELCO PART No.	Halldorson PART No.	Merit PART No.	Rom PART No.	Stoncor PART No.	Thordorson PART No.	Triod PART No.	
T1	2.2	:1	7270811							

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA							NOTES
	PRI.	SEC.	DELCO PART No.	Halldorson PART No.	Merit PART No.	Rom PART No.	Stoncor PART No.	Thordorson PART No.	Triod PART No.	
T2	400Ω CT	12Ω	7270804 ①	GH4 ②						① Used as driver when radio is installed in car. ② Use original channel frame.
	Turns Ratio									
	5.8	: 1								

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	DELCO PART No.	QUAM PART No.	
SP1	3"	PM	12Ω	7270796 ①		① Not used when radio is installed in car.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		DELCO PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Rom PART No	
L1	Ant. Trans.	7270960					
L2	Loop Stick	7270777					
L3	RF Coil	7270789					
L4	Osc. Coil	7270756					
L5	1st IF	7270814					
L6	2nd IF	7270815					
L7	3rd IF	7270817					
L8	4th IF	7270816					

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	DELCO PART No.	REPLACEMENT DATA
K1	Resistor Unit	15K, 1200Ω, 2200Ω, 1000Ω, 10K, 3900Ω, 1000Ω, 3900Ω, 2200Ω, 18K, 3900Ω, 18K, 1000Ω	7271310	
K2	Resistor Unit	15K, 510Ω, 2200Ω, 4700Ω, 680Ω, 15K, 220Ω, 3300Ω, 1000Ω, 3900Ω, 220Ω, 1000Ω, 22K	7271309	

PORTABLE
PARTS LIST AND DESCRIPTIONS (Continued)

BATTERIES

ITEM No.	VOLTAGE	DELCO PART No.	REPLACEMENT DATA								NOTES
			BURGESS		EVEREADY		MALLORY		RAY-O-VAC		
			"A"	"B"	"A"	"B"	"A"	"B"	"A"	"B"	
M1	6V			Z		915		M-15R		7-R	4 used

CRYSTAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA			NOTES
		DELCO PART No.	CBS PART No.	SYLVANIA PART No.	
M2	1N295	7269746	1N60	1N60	Det. (Pigtail)
M3	1N295	7269746	1N60	1N60	AVC Rect. (Pigtail)
M4	1N295	7269746	1N60	1N60	Overload Limiter (Pigtail)

MISCELLANEOUS

ITEM No.	PART NAME	DELCO PART No.	NOTES
M5	Dial Lamp	7270646	#12843, (12V, 3 Watts)
M6	Tuning Cap.	7270662	Ant. 25-277mmf
	Printed Board	7270962	IF
	Printed Board	7270963	RF

WIRING DATA

General-use Unshielded Hook-up Wire .....Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors

RACK
PARTS LIST AND DESCRIPTIONS

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA				NOTES
			CBS PART No.	RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X10	2N278	Output					

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	DELCO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C28A	▬1500	16	7270954			WP200.25			
B	▲1000	10							

FIXED CAPACITORS

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

ITEM No.	RATING		REPLACEMENT DATA							NOTES
	CAP.	VOLT	DELCO PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	
C29			7271696							
C30	.5	100	7270955	P288N-5		CUB2P5		GEM-205	2TM-P5	
C31	.47	100	6692	P288N-47		CUB2P47		GEM-2047	2TM-P47	
C32			7271564							
C33			7271564							

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	DELCO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R11A	5000Ω	½	7271642					Tone
B	Shaft							
R12	3000Ω	2	7269743					Sensitivity With 300Ω Stop (Wire wound)

RACK
PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING		DELCO PART No.	NOTES
	OHMS	WATT		
R13	1200Ω		1126	Note 1
R14	33Ω			
R15	180Ω 5%	2	1190	
R16	150Ω	2	1189	

Note 1. Not used in some versions.

ITEM No.	RATING		DELCO PART No.	NOTES
	OHMS	WATT		
R17	.47Ω	2	7270608	Note 2
R18	10Ω		1101	
R19	200Ω		1213221	
R20	180Ω		1116	

Note 2. Fuse type resistor.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA							NOTES
	PRI.	SEC.	DELCO PART No.	Holldorson PART No.	Merit PART No.	Rom PART No.	Stoncor PART No.	Thordorson PART No.	Triad PART No.	
T3	Full winding	CT to Gnd	7271865							
	9.2Ω	3-4Ω								
	Turns Ratio									
	1.5	:1								

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	DELCO PART No.	QUAM PART No.	
SP2	6" X 9"	PM	3-4Ω	7270132	69A3	

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		DELCO PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Rom PART No.	
L9	Ant. Coil	7255738	19-1004	BC-565	4610		6.5 Microhenries

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA						
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000 ∿)	DELCO PART No.	Holldorson PART No.	Merit PART No.	Rom PART No.	Stoncor PART No.	Thordorson PART No.	Triad PART No.
L10	1A	26Ω	.003 Hy.	7269647						

FUSES

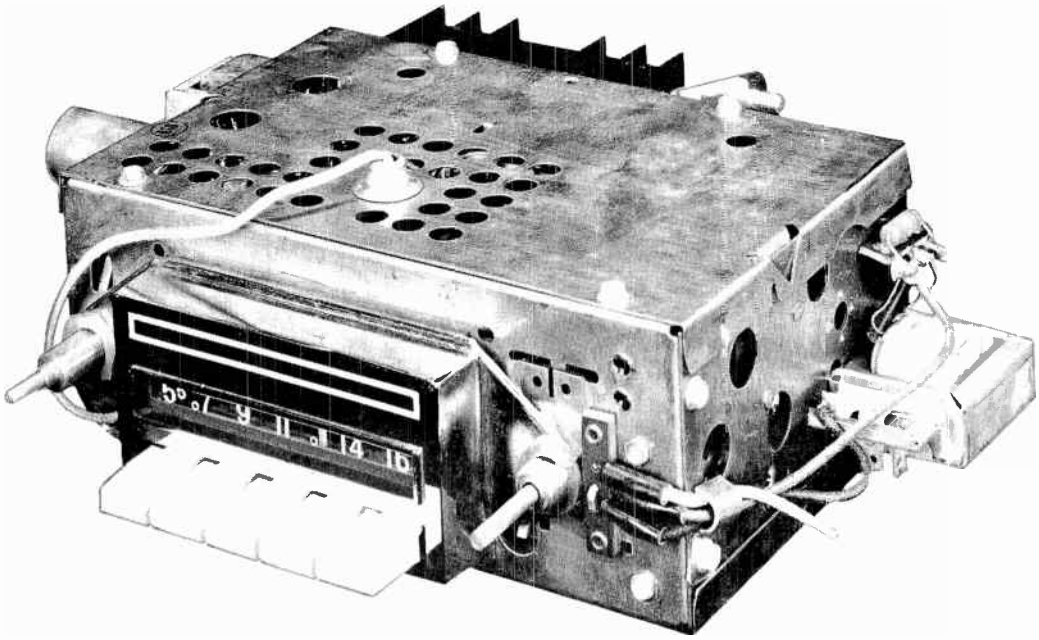
ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			DELCO PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M7		7 1/2A 32V	455640					

MISCELLANEOUS

ITEM No.	PART NAME	DELCO PART No.	NOTES
M8	Switch	1221152	Speaker Interlock
	Speaker Ass'y	Models 988838, 988839	Complete, for Dual 6" X 9" Rear Seat Speaker Installation
	Speaker Ass'y	Models 988840, 988906	Complete, for Single Rear Seat Speaker Installation

WIRING DATA

General-use Unshielded Hook-up Wire .....Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors
Shielded Hook-up Wire .....Use BELDEN No. 8885
Bonding Strap .....Use BELDEN No. 8661



TRADE NAME	Studebaker-Packard Model AC-2906 (For 1958 Studebaker & Packard Automobiles)
MANUFACTURER	Delco Radio Div., G. M. Corp., Kokomo, Indiana
TYPE SET	Battery Operated Custom Built AM Automobile Receiver With Transistorized Output
TUBES (Five)	Types 12BL6 RF Amplifier, 12AD6 Converter, 12AF6 IF Amplifier, 12F8 Det.-AVC-1st. AF Amp., 12K5 2nd. AF Amplifier
POWER SUPPLY	12 Volt Storage Battery — RATING 2.15 Amp. @ 12.6 Volts DC
TUNING RANGE—BROADCAST	540-1600KC

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING 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. Set tone control for maximum treble.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.1mfd	High side to pin 7 (grid) of 12AD6 (V2). Low side to chassis.	262KC (400~ Mod)	High freq. stop	Across voice coil	A1, A2, A3, A4	Adjust for maximum output.
	Check setting of oscillator coil core (A5). Rear of core should be 1 5/8" from mounting end of coil form.						
2.	68mmf	High side to antenna receptacle. Low side to chassis.	1615KC	High freq. stop	Across voice coil	A6, A7, A8	"
3.	"	"	600KC	Tune to 600KC signal	"	A9, A10	"
4.	"	"	1615KC	High freq. stop	"	A7, A8	"
5.	With radio installed in car and antenna fully extended, tune in a weak station near 1000KC and adjust A8 for maximum output.						

POINTER ADJUSTMENT

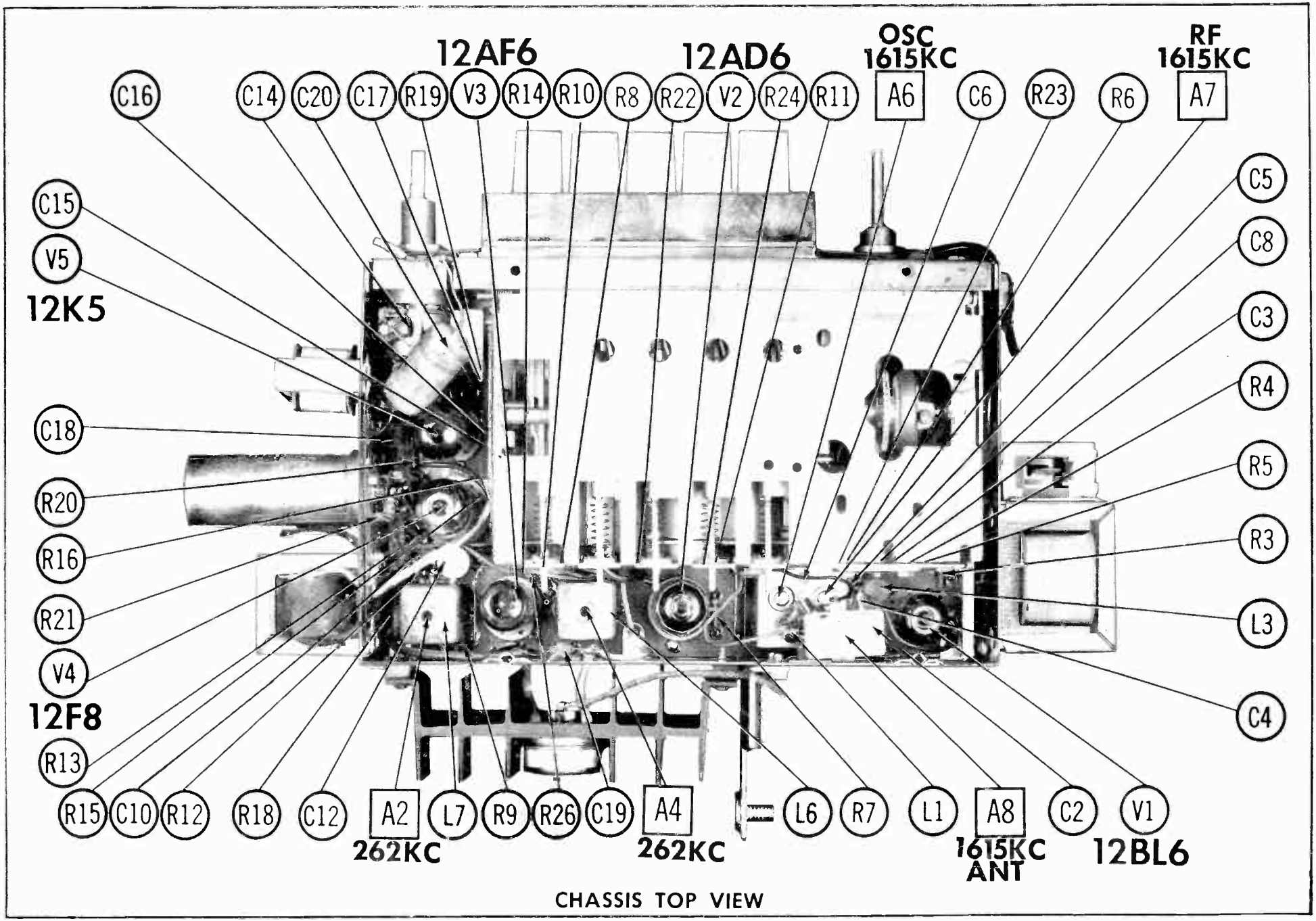
With radio tuned to a 1100KC signal, adjust pointer adjustment so that pointer coincides with 1100KC mark on dial.

PUSHBUTTON ADJUSTMENT

1. Pull pushbutton to the left and out.
2. Turfe manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.

HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana

H596



CHASSIS TOP VIEW

PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier	12BL8	
V2	Converter	12AD6	
V3	IF Amplifier	12AF6	

ITEM No.	USE	TYPE	NOTES
V4	Det.-AVC-1st. AF Amp.	12F8	
V5	2nd. AF Amplifier	12K5	

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA				NOTES
			CBS PART No.	RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	2N278	Output					

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	DELCO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	■1000	16	7270891	AFH2-02-70		WP200.8			R2668 *
B	▲500	16							

* Non-catalog item.

FIXED CAPACITORS

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

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT	DELCO PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
C2A	7-73		7268558						
B	42								
C3	.022	200	8611	P288N-022	DD-203	CUB2S22	GEM-2122	2TM-S22	
C4	68		6389	N750-DI 88	DTN-88	C10Q68U		5TCU-Q68	N750 10%
C5	39		6388						N470 10%
C6A									
B			7288828						
C									
D									
C7	200		7270129	1489-0002	DD-201	5R5T2	MCE237	MS-32	5%
C8	.047	200	8612	P288N-047	DF-503	CUB2S47	GEM-4147	2TM-S47	
C9	47		6387	1469-000047	D6-470	5R5Q47		MS-447	10%
C10	47		6387	N750-DI47	DD-470	C10Q47U	NT-5447	5TCU-Q47	N750
C11	.005	600	6631	P688N-005	D6-502	CUB8D5	GEM-625	8TM-D5	
C12	.1	50	7269714	P288N-1	DF-104	BC2P1J	ACE401	2SE-P10	
C13	470		8379	1489-00047	MD-471	5R5T47		MS-347	10%
C14	22		6383	1488-000022	DD-220	L10Q22	UC-5422	5GA-Q22	
C15	220		8375	BPD-00022	DD-221	L10T22	UC-5322	5GA-T22	
C16	2000		6352	BFD-002	DD-222	BYA10D2	DC522	5HK-D2	
C17	.022	200	6611	P288N-022	DD-203	CUB2S22	GEM-4122	2TM-S22	
C18	.05	100		P288N-05	DF-503	CUB2S5	GEM-415	2TM-S5	Note 1
C19A	220		8375	BPD-00022	DD-221	L10T22	UC-5322	5GA-T22	
B	220			BPD-00022	DD-221	L10T22	UC-5322	5GA-T22	
C20	.47	50	7269780	P288N-47		CUB2P47	GEM-2047	2TM-P47	
C21			7271769						

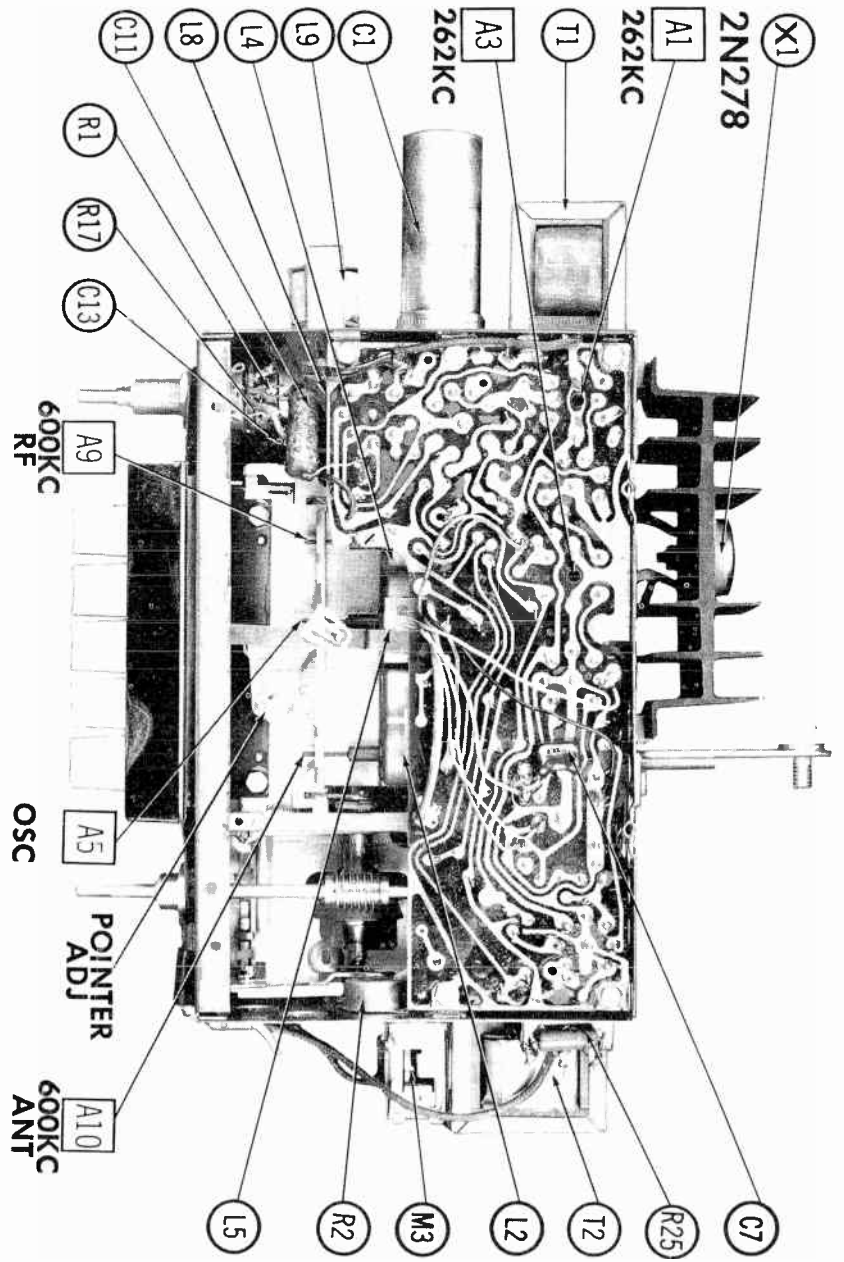
Note 1. Some versions may use .1mfd in this application (Part #8690).

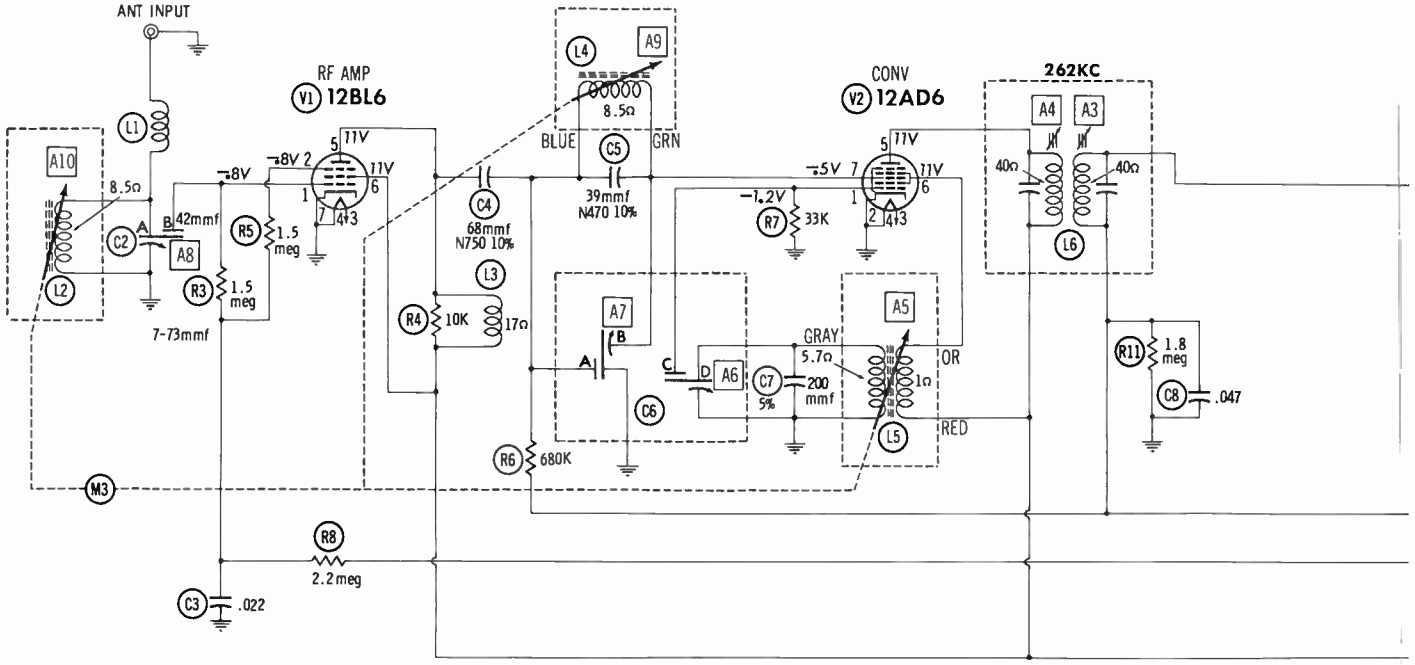
CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	DELCO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1A	2meg		7271782				■UE3814S	Tone
B	5meg							Volume, Tap @ 1meg
C	Switch							Power On-Off
R2	100Ω	2(WW)	7269837		39-100		FL-150	Transistor Bias

Speaker Fader(Part #7267827) may be used in some versions.
■ "STA-LOC" Equivalent: FH58A, OS1187, RU58T18, IS1825, US-41.

CHASSIS—BOTTOM VIEW





RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12BL6	5.5meg	5.5meg	1.2Ω	0Ω	†117Ω	†100Ω	0Ω		
V2	12AD6	33K	0Ω	1.2Ω	0Ω	†140Ω	†100Ω	1.8meg		
V3	12AF6	1.3meg	0Ω	1.2Ω	0Ω	†125Ω	†100Ω	0Ω		
V4	12F8	2meg	†270K	†120K	1.2Ω	0Ω	550K	1000Ω	0Ω	1000Ω
V5	12K5	22Ω	470K	0Ω	1.2Ω	†33Ω	†33Ω	†275Ω		

TRANSISTOR CIRCUIT RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.

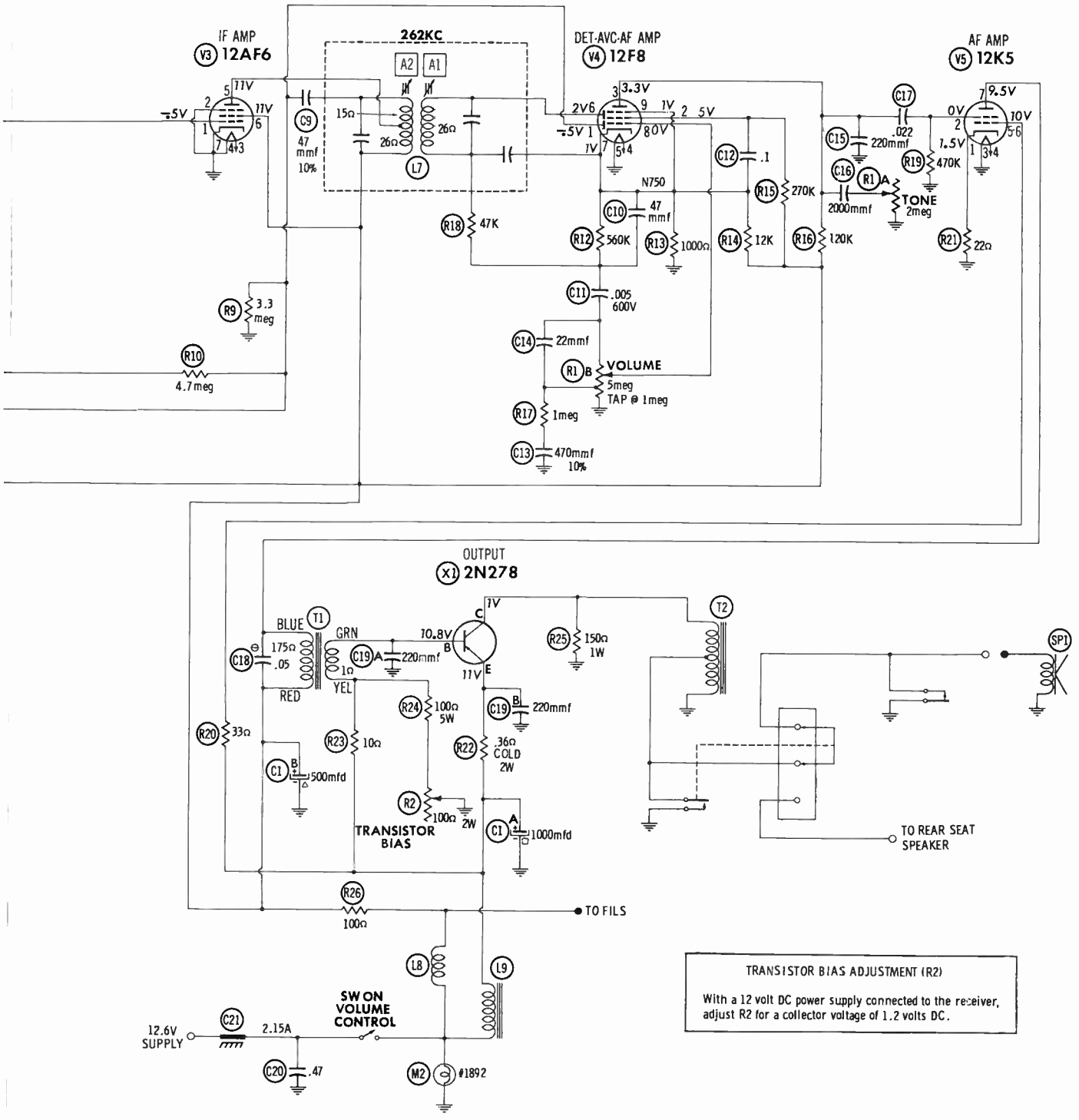
† MEASURED FROM JUNCTION OF L8 AND L9.

1. DC voltage measurements taken with vacuum tube voltmeter.
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

Θ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

A PHOTOFACT STANDARD NOTATION SCHEMATIC



TRANSISTOR BIAS ADJUSTMENT (R2)

With a 12 volt DC power supply connected to the receiver, adjust R2 for a collector voltage of 1.2 volts DC.

PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING OHMS	RATING WATT	DELCO PART No.	NOTES
R3	1.5meg		1237	
R4	10K		1137	
R5	1.5meg		1237	
R6	680K		1233	
R7	33K		1217	
R8	2.2meg		1239	
R9	3.3meg		1241	
R10	4.7meg		1243	
R11	1.8meg		1238	
R12	560K		1232	
R13	1000Ω		1125	
R14	12K		1212	
R15	270K		1228	
R16	120K		1224	
R17	1meg		1235	
R18	47K		1219	
R19	470K		1231	
R20	33Ω		1107	
R21	22Ω		1105	
R22	36Ω Cold	2	7270608	Fuse Type
R23	10Ω		1101	
R24	100Ω	5	7271525	
R25	150Ω	1	1152	
R28	100Ω		1113	

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA DELCO PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Ram PART No.	NOTES
L1	Ant. Coil	7255736	19-1004	BC-585	4610		6.5 Microhenries
L2	Ant. Coil	1221136					
L3	RF Choke	7289684					1772 Microhenries
L4	RF Coil	1221138					
L5	Osc. Coil	1221151					
L6	Input IF	1221015	16-6756	BC-317	13-PH1		
L7	Output IF	1221021		BC-318			
L8	Fil. Choke	1217846					1.4 Microhenries

FILTER CHOKE

ITEM No.	RATINGS CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000 ~)	REPLACEMENT DATA DELCO PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
L9	.92A	.75Ω	.011 Hy.	7271321						

TRANSFORMER (INTERSTAGE)

ITEM No.	Turns Ratio PRI.	Turns Ratio SEC.	REPLACEMENT DATA DELCO PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
T1	50 :	1	7269877							

PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE PRI.	IMPEDANCE SEC.	REPLACEMENT DATA DELCO PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
T2	9Ω Tap @ 3-4Ω		7271827							

SPEAKER

ITEM No.	TYPE SIZE	TYPE FIELD	TYPE V. C. IMP.	REPLACEMENT DATA DELCO PART No.	QUAM PART No.	NOTES
SP1	4" x 6"	PM	3-4Ω	7272388		

FUSES

ITEM No.	TYPE	RATING	DELCO PART No. FUSE	DELCO PART No. HOLDER	LITTELFUSE PART No. FUSE	LITTELFUSE PART No. HOLDER	BUSS PART No. FUSE	BUSS PART No. HOLDER
M1		7½A 32V	455840	153-R				

MISCELLANEOUS

ITEM No.	PART NAME	DELCO PART No.	NOTES
M2	Lamp	274020	#1892
M3	Switch Speaker Ass'y.	Model AC-2908	Speaker Interlock Complete, For 5" x 7" rear seat speaker installation
	Printed Board	7271333-C	

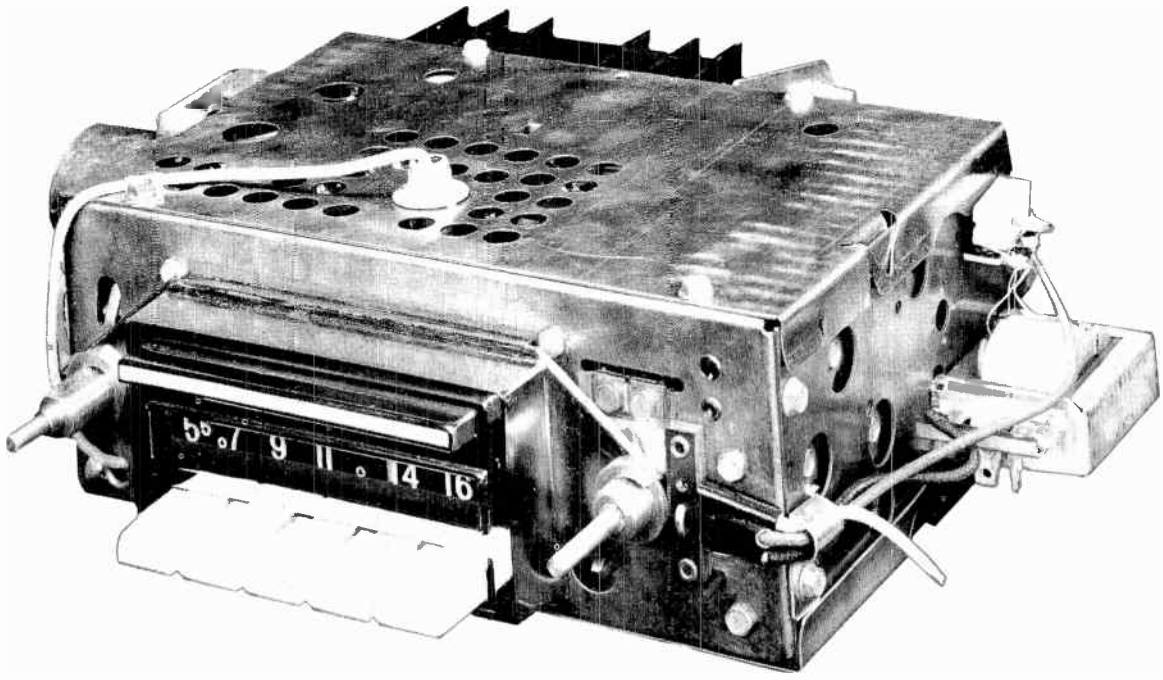
CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

NAME	PART NO.	DESCRIPTION
Knob	7271845	Control
Knob	589555	Dummy
Knob	7271847	Tone
Pushbutton	1221190	5 Used, Includes Front Bearing Plate and Slides
Pointer Ass'y.	7272127	

WIRING DATA

General-use Unshielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors
Shielded Hook-up Wire ..... Use BELDEN No. 8885
Bonding Strap ..... Use BELDEN No. 8861



TRADE NAME	Studebaker-Packard Model AC-2907 (For 1958 Studebaker & Packard Automobiles)
MANUFACTURER	Delco Radio Div., G. M. Corp., Kokomo, Indiana
TYPE SET	Battery Operated Custom Built AM Automobile Receiver with Transistorized Output
TUBES (Five)	Types 12DZ6 RF Amplifier, 12AD6 Converter, 12EA6 IF Amplifier, 12DV8 Det.-AVC-AF Amp. 12AL8 Trigger
POWER SUPPLY	12Volt Storage Battery — RATING 2.5 Amp. @12.6 Volts DC
TUNING RANGE—BROADCAST	540-1600KC

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING 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.
Set sensitivity control at position 1.
Set tone control to treble (Maximum clockwise).
To tune to high frequency, put a .070 inch feeler gauge in slot against the high frequency stop. Turn manual control to allow the treadle bar arm to run against the feeler gauge.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.1mfd	High side to pin 7 (grid) of 12AD6 (V2) Low side to chassis.	262KC (400v Mod)	High frequency stop.	Across voice coil.	A1, A2, A3, A4,	Adjust for maximum output.
	Check setting of oscillator coil core (L5). Rear of core should be 1 5/8" from mounting end of coil form.						
2.	68mmf	High side to antenna receptacle. Low side to chassis.	1615KC	High frequency stop.	Across voice coil.	A5, A6. A7	Adjust for maximum output.
3.	"	"	600KC	Tune to 600KC signal.	"	A8, A9	"
4.	"	"	1400KC	Tune to 1400KC signal.	"	A6, A7	"
5.	With radio installed in car and antenna fully extended, tune in a weak station near 1000KC and adjust A7 for maximum output.						

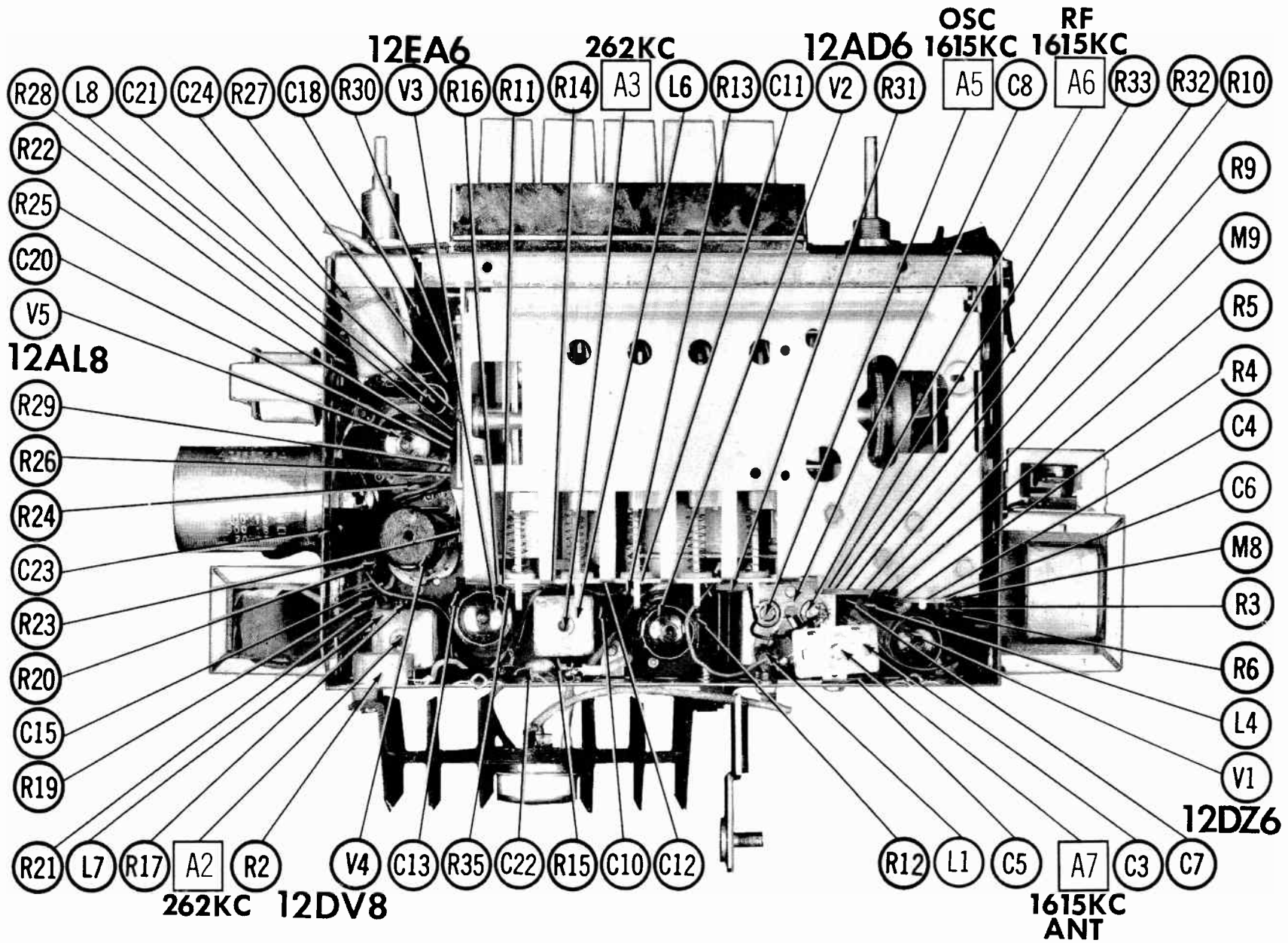
POINTER ADJUSTMENT

With radio tuned to a 1100KC signal, adjust pointer adjustment so that pointer coincides with 1100KC mark on dial.

PUSHBUTTON ADJUSTMENT

1. Pull button to left and out.
2. Tune manually to desired station.
3. Press button in firmly.
4. Repeat for remaining buttons.

H598



CHASSIS TOP VIEW

PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier	12DZ6	
V2	Converter	12AD6	
V3	IF Amplifier	12EA6	
V4	Det.-AVC-AF Amp.	12DV8	
V5	Trigger	12AL8	

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA				NOTES
			CBS PART No.	RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	2N278	Output					

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	DELCO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	▲1000	16	7269719	AFH3-00-97		WP300			R2424*
B	■500	16							
C	▲20	16							
C2	1000	1	7271557	PRS6V1000	BBR1000-6	TC310	TD-1000-6	MTH-06100	TVA-1104

* Non-Catalog Item

FIXED CAPACITORS

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

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT	DELCO PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
C3A	7-73		7268558						
B	42								
C4	.022	200	6611	P288N-022	DD-203	CUB2S22	GEM-4122	2TM-S22	
C5	68		6369	BPD-000068	DD-680	L10Q68	UC-5468	5GA-Q68	
C6	.1	200	6690	P288N-1	DF-104	CUB2P1	GEM-201	2TM-P1	
C7	39		6366	DI-000039	DD-390	L10Q39	UC-5439	5GA-Q39	
C8A			7268828						
B									
C									
D									
C9	200		7270129	1469-0002		5R5T2	MCE237	MS-32	5%
C10	2000		6352	BPD-002	DD-202	BYA10D2	DC522	5HK-D2	
C11	.1	200	6690	P288N-1	DF-104	CUB2P1	GEM-201	2TM-P1	
C12	.1	200	6690	P288N-1	DF-104	CUB2P1	GEM-201	2TM-P1	
C13	100		1219498	1469-0001		5R5T1	MCE-230	MS-31	5%
C14	100		1219498	1469-0001		5R5T1	MCE-230	MS-31	5%
C15	47		6367	1468-000047	DD-470	1W5Q47	UC-5447	1FM-447	

PARTS LIST AND DESCRIPTIONS (Continued)

CAPACITORS (cont)

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT	DELCO PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
C16	.005	100	6631	P288N-005	D6-502	CUB6D5	GEM-625	6TM-D5	
C17	470		6379	BPD-00047	DD-471	BYA10T47	UC-5347	5GA-T47	
C18	39		6366	DI-000039	DD-390	L10Q39	UC-5439	5GA-Q39	
C19	.22	100	6691	P288N-22		CUB2P22	GEM-2022	2TM-P22	
C20	1000		6350	BPD-001	DD-102	BYA6D1	DC521	5HK-D1	
C21	.022	200	6611	P288N-022	DD-203	CUB2S22	GEM-4122	2TM-S22	
C22A	220		6375	BPD-00022	DD-221	L10T22	UC-5322	5GA-T22	
B	220			BPD-00022	DD-221	L10T22	UC-5322	5GA-T22	
C23			7271769						
C24	.47	50	7269780	P288N-47		CUB2P47	GEM-2047	2TM-P47	

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	DELCO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1A	50K		7271831				■UE3822	Tone
B	5meg							Volume, Tap@1meg
C	Switch							Power On-Off
R2	100Ω	2(WW)	7269637		39-100		FL-150	Transistor Bias

Speaker Fader (Part # 7271859) may be used in some versions.

■ "STA-LOC" Equivalent: FF54A, OS1187, RU56T16, IS1625, US-41

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING		DELCO PART No.	NOTES
	OHMS	WATT		
R3	2.2meg		1239	
R4	1.5meg		1237	
R5	10K		1137	
R6	150K		1225	
R7	33K			Note 1.
R8	1800Ω			Note 1.
R9	1.5meg		1237	
R10	680K		1233	
R11	3.3meg		1241	
R12	33K		1217	
R13	680K		1233	
R14	1.5meg		1237	
R15	220Ω		1117	
R16	1.5meg		1237	
R17	33K 5%		7271461	
R18	33K		1217	Note 2.
R19	18K 5%		7271632	

ITEM No.	RATING		DELCO PART No.	NOTES
	OHMS	WATT		
R20	1meg		1235	
R21	47K		1219	
R22	1.8meg		1238	
R23	18Ω		1104	
R24	1meg		1235	
R25	3.9meg5%		7271627	
R26	4.7meg5%		7271456	
R27	2.2meg		1239	
R28	820Ω 5%		7266231	
R29	2200Ω			Note 3.
R30	4.7meg		1243	
R31	.36Ω Cold	2	7270608	Fuse Type
R32	10Ω		1101	
R33	120Ω	5	7271576	
R34	150Ω	1	1152	
R35	56Ω		1110	

Note 1. Part of M3

Note 2. Not used in some versions.

Note 3. Some versions may use 3900Ω 5% in this application (Part # 7266280)

PARTS LIST AND DESCRIPTIONS (Continued)

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					
		DELCO PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Rom PART No.	NOTES
L1	Ant. Coil	7255738	19-1004	BC-565	4610		6.5microhenries
L2	Ant. Coil	1221138					
L3	RF Choke	7269684					1772 microhenries
L4	RF Coil	1221138					
L5	Osc. Coil	1221151					
L6	Input IF	1220990	16-6756	BC-317	13-PH1		
L7	Output IF	1221124					
L8	Hash Choke	1217846					1.4 microhenry

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA						
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000 ~)	DELCO PART No.	Halldorson PART No.	Merit PART No.	Rom PART No.	Stancor PART No.	Thordorson PART No.	Triod PART No.
L9	.92A	.75Ω	.011HY	7271321						

TRANSFORMER (INTERSTAGE)

ITEM No.	TURNS RATIO		REPLACEMENT DATA							NOTES
	PRI.	SEC.	DELCO PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordorson PART No.	Triod PART No.	
T1	11	:1	1221159							

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE PRI.	REPLACEMENT DATA							NOTES
		DELCO PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordorson PART No.	Triod PART No.	
T2	9Ω Tap@3-4Ω	7271827							

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	DELCO PART No.	QUAM PART No.	
SP1	4" x 8"	PM	3-4Ω	7272368		

PARTS LIST AND DESCRIPTIONS (Continued)

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			DELCO PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1		7½A 32V	455640	153-R				

MISCELLANEOUS

ITEM No.	PART NAME	DELCO PART No.	NOTES
M2	Lamp		#1892
M3	Switch	7271904	Sensitivity
M4	Switch	7268030	Power Solenoid, Treadle Solenoid
M5	Switch	7269872	Station Selector
M6	Switch		Speaker Interlock
M7	Relay	7270545	Tuner Operating
M8	Solenoid	1221161	Treadle, Includes Plunger
M9	Solenoid	1221160	Power, Includes Plunger
	Speaker Ass'y.	Model AC-2908	Complete, For 5" x 7" Rear Seat Speaker Installation
	Printed Board	7271496 REV D	

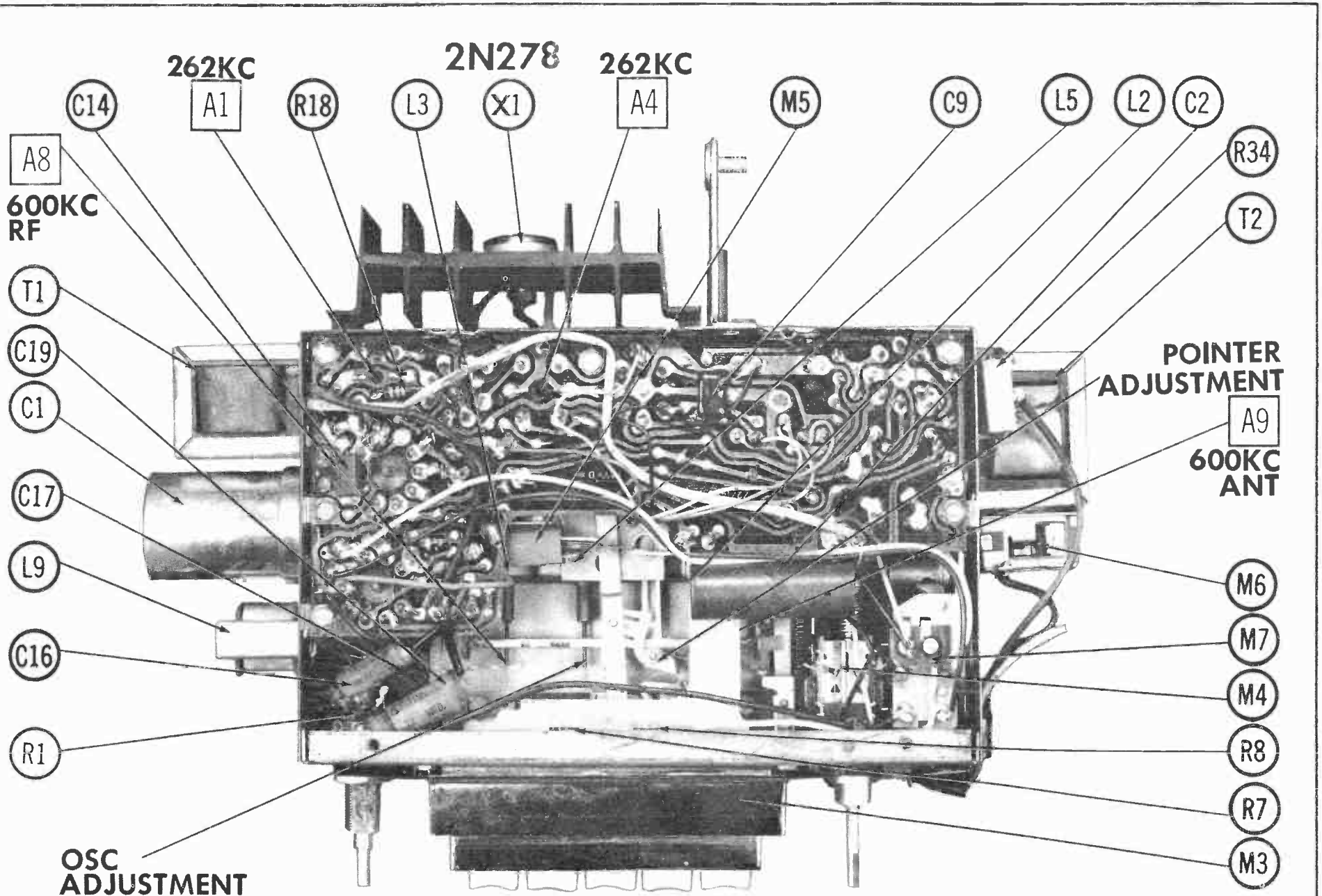
CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

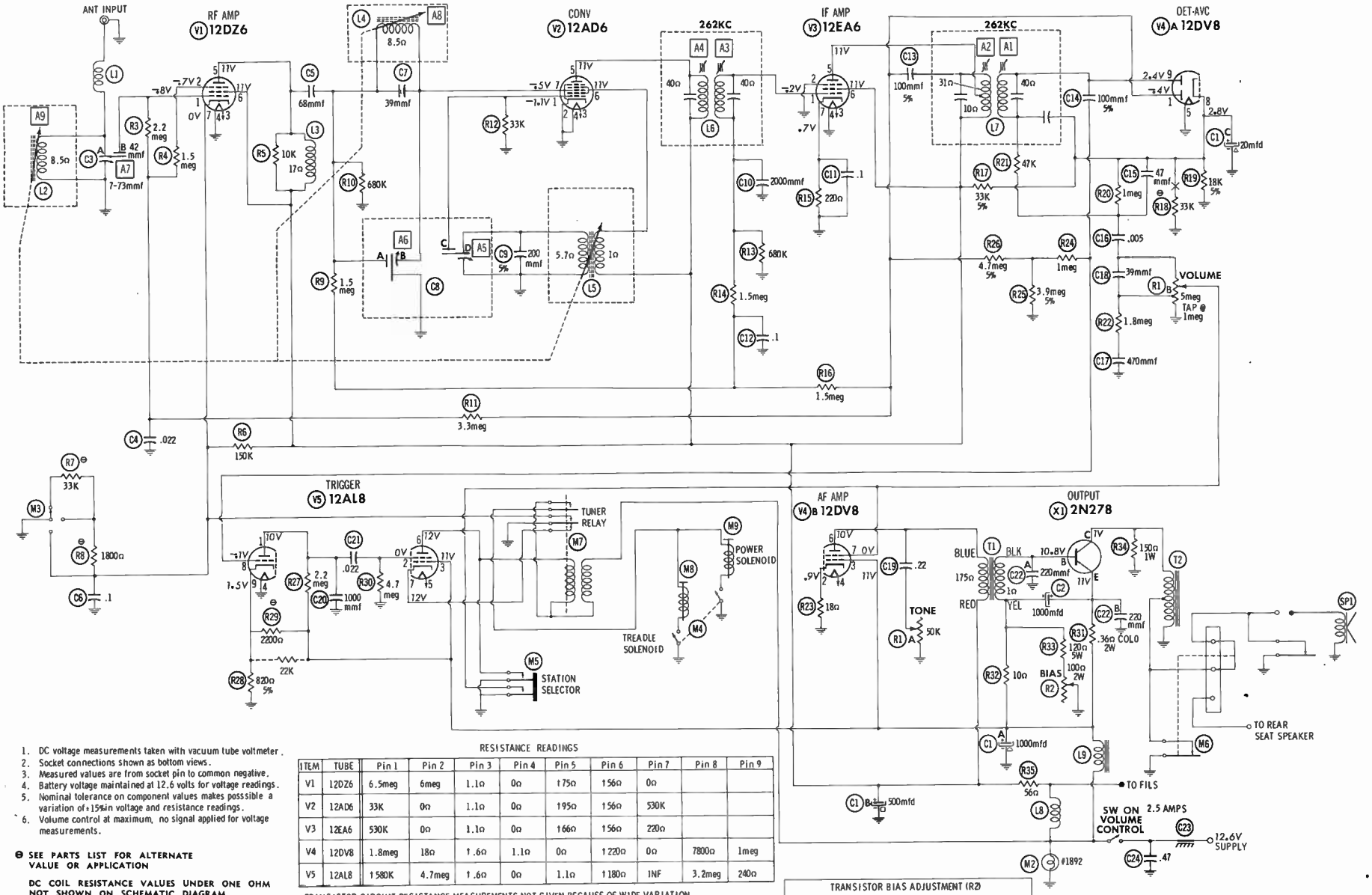
NAME	PART NO.	DESCRIPTION
Knob	7271845	Control
Knob	569555	Dummy
Knob	7271847	Tone
Pushbutton	1221190	Five Used, Includes Front Bearing Plates and Slides
Pointer Ass'y.	7272127	
Backplate	7270468	Pointer

WIRING DATA

General-use Unshielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors
Shielded Hook-up Wire ..... Use BELDEN No. 8885
Bonding Strap ..... Use BELDEN No. 8661



CHASSIS BOTTOM VIEW



1. DC voltage measurements taken with vacuum tube voltmeter.
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

⊖ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12DZ6	6.5meg	6meg	1.1Ω	0Ω	†75Ω	†56Ω	0Ω		
V2	12AD6	33K	0Ω	1.1Ω	0Ω	†95Ω	†56Ω	530K		
V3	12EA6	530K	0Ω	1.1Ω	0Ω	†66Ω	†56Ω	220Ω		
V4	12DV8	1.8meg	18Ω	†.6Ω	1.1Ω	0Ω	†220Ω	0Ω	7800Ω	1meg
V5	12AL8	†580K	4.7meg	†.6Ω	0Ω	1.1Ω	†180Ω	INF	3.2meg	240Ω

TRANSISTOR CIRCUIT RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE

† MEASURED FROM JUNCTION OF L8 AND L9

TRANSISTOR BIAS ADJUSTMENT (R2)

Adjust R2 for a collector voltage of 1.2 volts with 12 volts DC input to radio.

A PHOTOFACT STANDARD NOTATION SCHEMATIC
Howard W. Sams & Co., Inc. 1958

AUTO RADIO MANUAL

VOLUME 8

This manual contains complete PHOTOFACT service literature on 1957-58 auto radios produced under the following trade names:

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