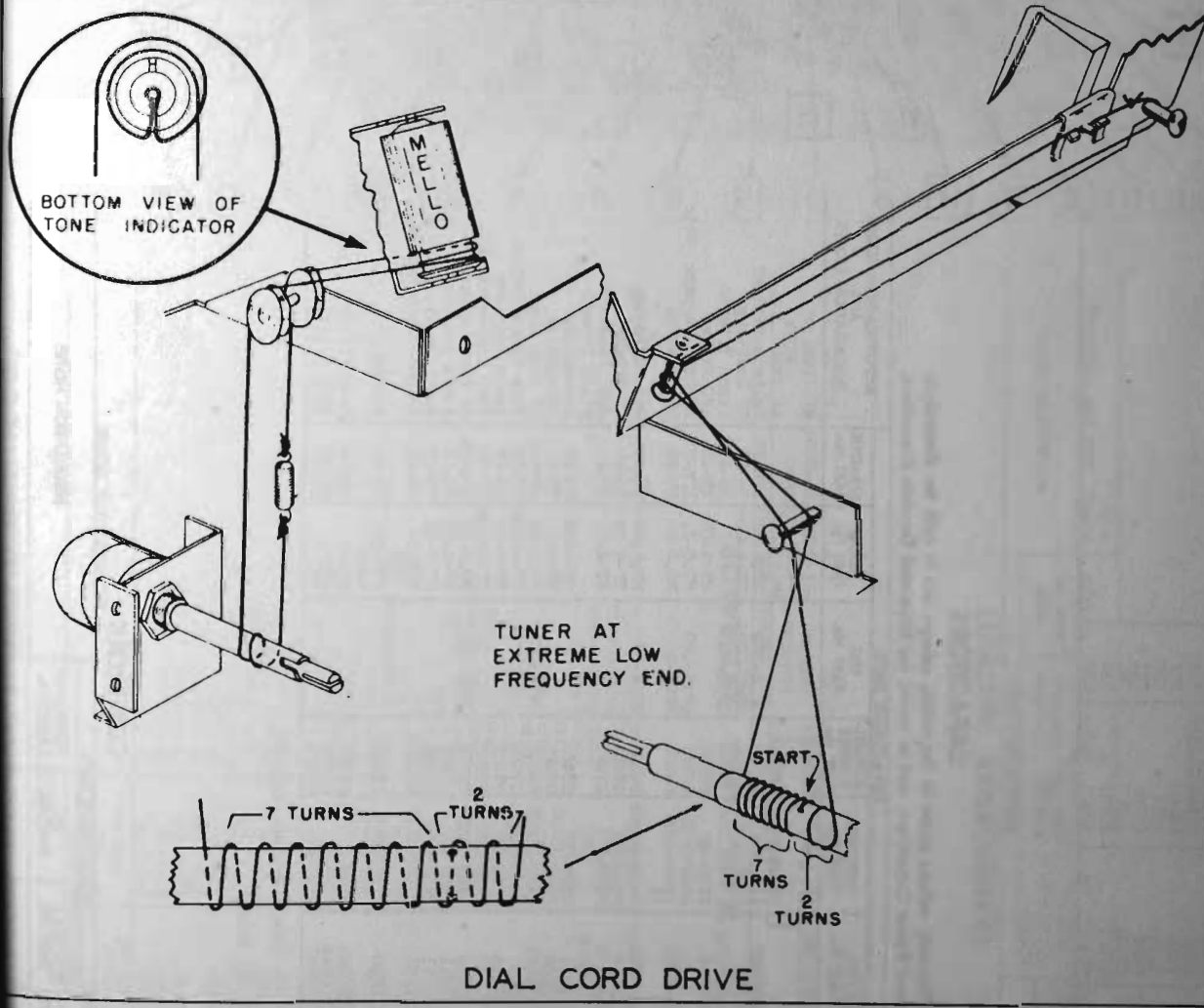


MOPAR MODEL 804

TRADE NAME	Mopar, Model 804
SUPPLIER	Chrysler Corp., Detroit 31, Michigan.
TYPE SET	Battery Operated Custom Built Automotive Superheterodyne Receiver.
TUBES (EIGHT)	Types 6BA6 RF Amp., 6BE6 Converter, 6BA6 IF Amp., 6AT6 DET-AVC-AF, 6AT6 Phase Inverter. (2) 6V6GT Power Output, 6X4 Rectifier.
POWER SUPPLY	6 Volt Storage Battery
TUNING RANGE—BROADCAST	535-1605KC
	RATING 9.4 Amp. @ 6 Volts DC



MOPAR MODEL 804
(MOTOROLA 804)

HOWARD W. SAMS & CO., INC. • Indianapolis 7, Indiana

The listing of any available replacement part herein does not constitute in any way a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of the particular type of replacement part listed. Reproduction or use, without express permission, of editorial or pictorial con-

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PARTS LIST AND DESCRIPTIONS

TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA		RMA BASE TYPE	INSTALLATION NOTES
		HOPAR-MOTOROLA PART No.	STANDARD REPLACEMENT		
V1	RF Amp.	6BAG	6BAG	7BK	
V2	Converter	6BAG	6BAG	7CH	
V3	IF Amp.	6BAG	6BAG	7EK	
V4	DET-AVC-AF	6AT6	6AT6	7ET	
V5	Phase Inverter	6AT6	6AT6	7BT	
V6	Power Output	6V6GT	6V6GT	7AC	
V7	Power Output	6V6GT	6V6GT	7AC	
V8	Rectifier	6X4	6X4	5B8	

CAPACITORS

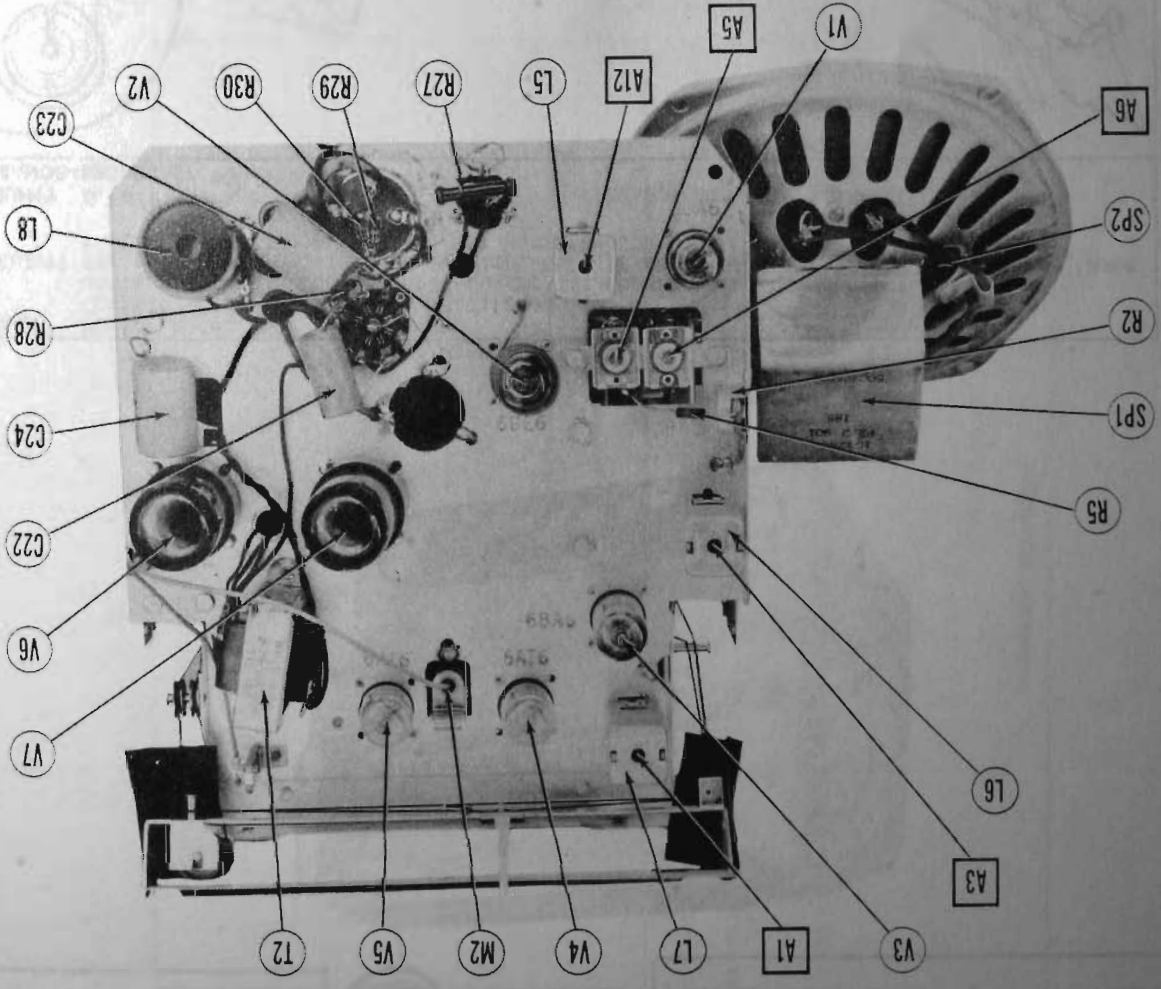
Capacity values given in the rating column are in mfd. for Electrolytic and Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING CAP. VOLT	REPLACEMENT DATA		CORNELL-DUBILIER PART No.	ERIE PART No.	SOLAR PART No.	SPRAGUE PART No.	IDENTIFICATION AND INSTALLATION NOTES
		HOPAR-MOTOROLA PART No.	ARROYO PART No.					
C1A	30 400	23A475570	AP44J*	UP2245*		DV-2x20-450*	EL-3235	Filter
B	20 350	21B77862	PRS450/70	BRI045		M-10-450	1PM-31	AF Filter Voltage Divider
C2	100 100	8C4329	1468-0001	5MST1		M0-5-31	TM-28	RF Coupling
C3	0.006 100	21K890179	1468-0006	G18D6		ST-6-006	MS-415	Fixed Trimmer
C4	15 100	8K13514	P288-05	G12S5		ST-4-05	TM-15	AVC Filter
C5	0.05 100	8K13514	1468-0001	5MST1		M0-5-31	1PM-31	RF Cahn. Bypass Note
C6	100 100	21K70720	1468-0000	5MST5		M0-5-55	MS-55	RF Coupling
C7	5 5	21K74661	1468-0005	5MST5		M0-5-45	1PM-45	Osc. Grid Cap
C8	50 100	8K13514	P288-05	G12S5		ST-4-05	TM-15	RF Bypass
C9	0.05 100	8K485370	P288-1	G12P1		ST-2-1	TM-1	Osc. Feedback
C10	115 200	21K680275	P488-05	G174S5		ST-4-05	TM-15	Decoupling
C11	115 200	8K14791	P488-1	G174P1		ST-4-1	TM-1	Decoupling
C12	0.05 400	8K13161	1468-0005	5MST5		M0-5-45	1PM-45	IF Coupling
C13	1 400	21K74661	P488-0005	G174S5		ST-6-006	TM-26	Tone Compensation
C14	50 400	8C4529	P288-05	G12S5		ST-4-05	TM-15	Audio Coupling
C15	0.006 100	8K13514	P488-006	G174S5		ST-6-006	TM-26	Tone Compensation
C16	0.05 100	8K71910	1468-0005	5MST5		ST-6-006	TM-26	AF Plate Bypass
C17	0.006 400	21B6638	P488-03	G174S5		ST-6-03	TM-15	Audio Coupling
C18	500 500	8K71911	P488-03	G174S5		ST-6-03	TM-15	Audio Coupling
C19	0.03 400	8K71911	P1088-003	G174S5		ST-6-03	TM-15	Audio Coupling
C20	0.03 400	8K13165	P1688-006	G174S5		ST-6-03	TM-15	Audio Coupling
C21	0.003 1000	8K12940	P288-5	G12P5		ST-16	MP-23	Output Plate Bypass
C22	0.006 1600	8C580845	P288-5	G12P5		ST-16	MP-26	Buffer
C23	5 100	8C580845	P288-5	G12P5		SHH-1	66P20	Hasht Filter
C24	5 100	8C580845	P288-5	G12P5		SHH-1	66P20	Hasht Filter
C25	5 100	8C580845	P288-5	G12P5		SHH-1	66P20	Hasht Filter

*Parallel Sections To Obtain Desired Capacity.
 †Omit Bypass Section.
 Note. Not Used In All Models.

CONTROLS

ITEM No.	RATING RESIST. ANGE	REPLACEMENT DATA		INSTALLATION NOTES
		HOPAR-MOTOROLA PART No.	ARC PART No.	
R1A	500K	18A485319		Volume control (Dual Concentric)
R2	700K	18K77552		Sensitivity control



PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS

ITEM No.	RATING		REPLACEMENT DATA		IDENTIFICATION CODES
	RESISTANCE	WATTS	MOPAR-MOTOROLA PART No.	IRC PART No.	
R3	470KΩ	1/4	6R6032	BTS-470K	RF Grid
R4	82Ω	1/4	6R2035	BW-1-82	RF Cathode
R5	150Ω	1/4	6R3992	BW-1-150	RF Cathode
R6	150KΩ	1/4		BTS-150K	RF Coupling
R7	12KΩ	1/4		BTA-12K	RF Plate
R8	100KΩ	1/4	6R5656	BTS-100K	Conv. Grid
R9	330Ω	1/4	6R6022	BW-1-330	Conv. Decoupling
R10	10KΩ	1/4	6R6106	BTA-10K	Screen Dropping
R11	47KΩ	1/4	6R6056	BTS-47K	Osc. Grid
R12	220Ω	1/4	6R6270	BW-1-220	IF Cathode
R13	68KΩ	1/4	6R6001	BTS-68K	Voltage Divider
R14	47KΩ	1/4	6R6056	BTS-47K	Diode Filter
R15	1 Meg.	1/4	6R6004	BTS-1 Meg.	AVC Network
R16	1 Meg.	1/4	6R6004	BTS-1 Meg.	Diode Load
R17	22KΩ	1/4	6R6028	BTS-22K	Tone Compensation
R18	1500Ω	1/4	6R6161	BTS-1500	AF Cathode
R19	3.3 Meg.	1/4	6R2118	BTS-3.3 Meg.	AF Grid
R20	220KΩ	1/4	6R6015	BTS-220K	AF Plate
R21	10KΩ	1/4	6R6320	BTS-10K	Phase Inv. Grid
R22	2200Ω	1/4	6R6069	BTS-2200	Phase Inv. Cathode
R23	220KΩ	1/4	6R6015	BTS-220K	Phase Inv. Plate
R24	220KΩ	1/4	6R6407	BTS-220K	Output Grid
R25	220KΩ	1/4	6R6015	BTS-220K	Output Grid
R26	220Ω	1/4	6R6339	BW-1-220	Output Cathode
R27	2200Ω	1/4	6R6006	BW-1-2200	Filter
R28	10KΩ	1/4	6R6054	BTS-10K	Series Buffer
R29	56Ω	1/4	6R5614	BW-1-56	Hash Suppression
R30	56Ω	1/4	6R5614	BW-1-56	Hash Suppression
R31	470Ω	1/4	6R5614	BTS-470	RF Cathode

TRANSFORMER (VIBRATOR)

ITEM No.	RATING			REPLACEMENT DATA		
	PRI.	SEC. 1	SEC. 2	MOPAR-MOTOROLA PART No.	STANCOR PART No.	CHICAGO PART No.
T1	6VDC @ 5.9A DC	580VCT .057A DC		24C580066	P-4052	VT-3
						MERIT PART No. P-4071

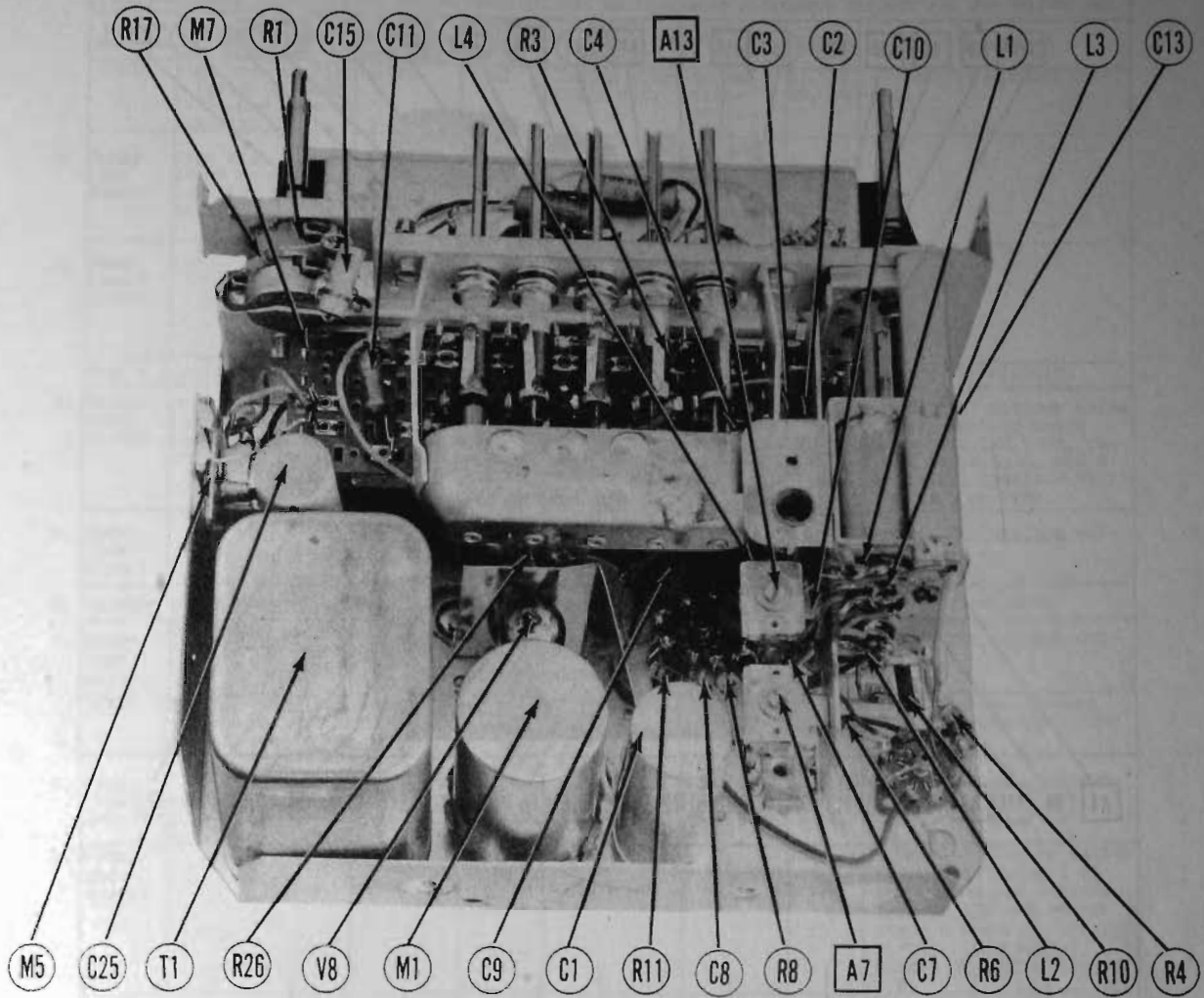
TRANSFORMER (OUTPUT)

ITEM No.	RATING		REPLACEMENT DATA		INSTALLATION NOTES
	IMPEDANCE	DC RES.	MOPAR-MOTOROLA PART No.	STANCOR PART No.	
T2	9800Ω CT	3.5Ω CT	24E472558	A-3850	#Drill One New Mounting Hole.
				RO-110† A-2936†	

SPEAKER

ITEM No.	RATINGS		REPLACEMENT DATA		INSTALLATION NOTES
	FIELD	V.C. IMP.	MOPAR-MOTOROLA PART No.	JENSEN PART No.	
SP1A B C		3.5Ω	50C485637 50B580169 50C580829	ST-907 MOD.P7-T 7431	Alternate Alternate
SP2	8-7/8"	V.C. DIA.			

CHASSIS—BOTTOM VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

R F COILS

ITEM No.	USE	DC RES.		REPLACEMENT DATA	
		PRI.	SEC.	MOPAR-MOTOROLA PART No.	MEISSNER PART No.
L1	Ant. Coil	11Ω		24E71881	
L2	RF Coil	11Ω		24E71881	
L3	Osc. Coil	2.8Ω		24E71879	
L4	Osc. Shunt	3Ω		24B485386	
L5	IF Trap	85Ω		24B580274	
L6	Input IF	17Ω	17Ω	24B485553	16-6668
L7	Output IF	17Ω	17Ω	24K485555	
L8	Hash Choke	0Ω		24A473954	

VIBRATOR

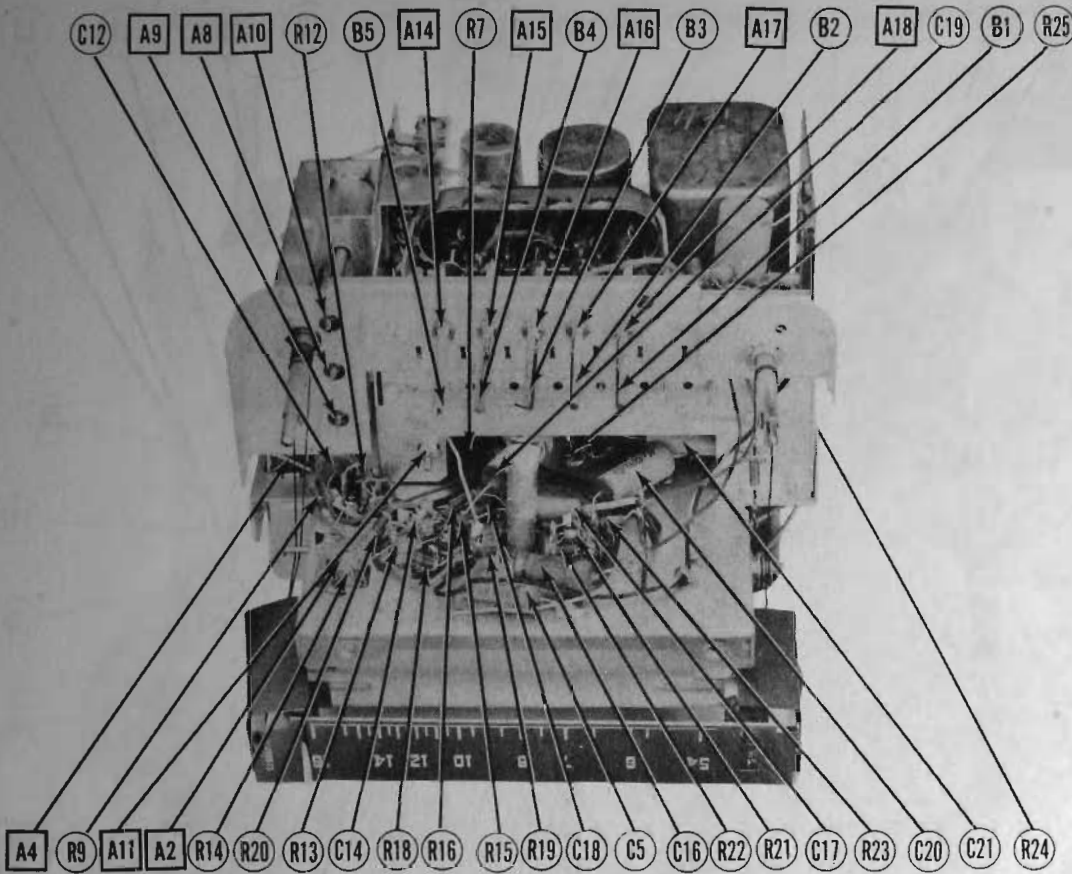
ITEM No.	TYPE	INPUT VOLTS	FREQ. QUENCY	REPLACEMENT DATA		INSTALLATION NOTES
				MOPAR-MOTOROLA PART No.	CORNELL DUBILIER PART No.	
M1	Int.	6V	115V	48B3333	C42M	5342M

DIAL LIGHTS

ITEM No.	BASE TYPE	VOLTS	AMPS.	READ COLOR	REPLACEMENT DATA		NOTES
					MOPAR-MOTOROLA PART No.	MOTOROLA PART No.	
M2	Bayonet	6-8V	0.25A	Blue	55X10867		Type #44
M3	Bayonet	6-8V	0.4A	White	55X12855		Type #55
M4	Bayonet	6-8V	0.4A	White	55X12855		Type #55

MISCELLANEOUS

ITEM No.	PART NAME	MOPAR-MOTOROLA PART No.	NOTES
M5	Spark Plate	1B580195	
M6	Fuse	65X12894	14 Amp.
M7	Tuning Assembly	1X489270	
M8	Dual Trimmer	20A580174	Osc. Adj. RF Adj.
M9	Trimmer	20K472613	Ant. Adj.
M10	Trimmer	20K472613	PB Adj.
M11	Dial Crystal	61K485208	
M12	Dial Pointer	1X580340	
M13	Knob	1X580252	Tuning/Volume
M14	Knob	36K580590	Tone



ALIGNMENT INSTRUCTIONS--READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

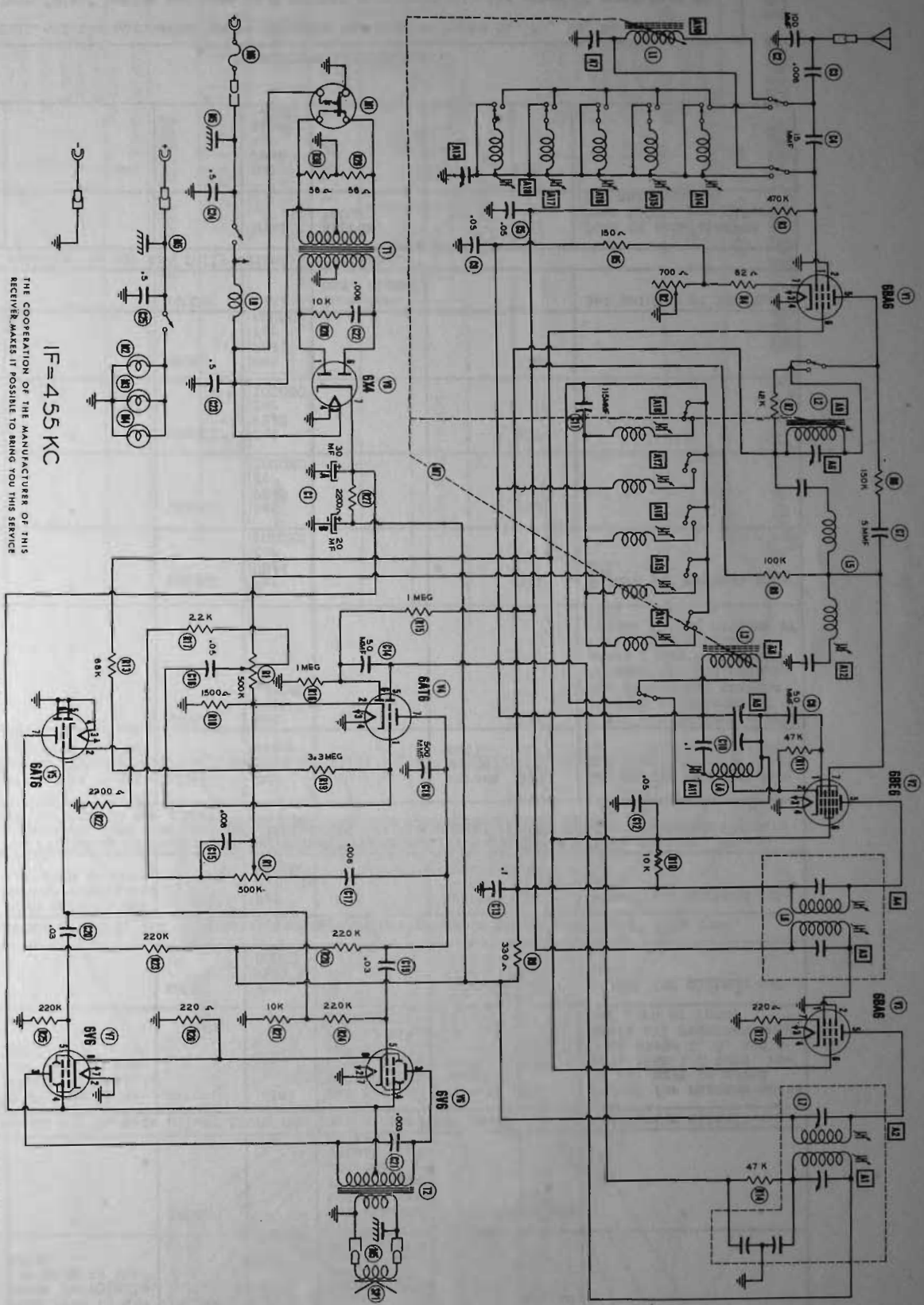
The dummy antenna used is a 40MMF capacitor in series with the high side of the signal generator and the antenna receptacle of the receiver. Connect another 40MMF capacitor from the antenna receptacle to chassis.

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	DEPRESS PUSH BUTTON	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1. .1MF	High side to Pin 7 (grid) of 6BE6 (V2). Low side to chassis.	455KC	Dial	Tuning slugs fully out.	Across voice coil.	A1, A2 A3, A4	Adjust for maximum output.
2. Dummy (See Above)	High side to antenna receptacle. Low side to chassis.	1605KC	"	"	"	A5, A6 A7	"
3. Dummy (See Above)	"	1425KC	"	Set spacing between carriage plate and coil shield plate to 1-5/64".	"	A8, A9 A10	"
Step 4 should not be made unless there has been a component change in the oscillator circuit.							
4. Dummy (See Above)	High side to antenna receptacle. Low side to chassis.	OFF	Dial	Set spacing between carriage plate and coil shield plate to 7/32"	Across voice coil.	A11	Adjust for maximum noise If A11 must be moved more than 1/2 turn, repeat steps 2, 3, and 4 until A11 requires only 1/2 turn or less.
5. Dummy (See Above)	"	455KC	Set PB#1 to 600KC		"	A12	Adjust for <u>minimum</u> output.
6. Repeats steps 2 and 3, but eliminate procedure of moving cores to project 1-1/8" from cans.							
7. Dummy (See Above)	High side to antenna receptacle. Low side to chassis.	1400KC	Set PB#5 to 1400KC		Across voice coil	A13	Adjust for maximum output.
NOTE: The following pushbutton tracking nut adjustments have been made at the factory. Unless components have been changed in the pushbutton assembly circuit, these adjustments should not be made in the field.							
8. Dummy (See Above)	High side to antenna receptacle. Low side to chassis.	1605KC	Set PB#5 to 1605KC		Across voice coil	A13	Adjust for maximum output.
9. Dummy (See Above)	"	1425KC	Set PB#5 to 1425KC		"	A14	Adjust for maximum output. Recheck adjustment of the pushbutton antenna trimmer A13 and repeat steps 8 and 9 if sensitivity rises with a change in the setting of A13.
10. Dummy (See Above)	"	1020KC	Set PB#4 for 1020KC		"	A15	Adjust for maximum output.
11. Dummy (See Above)	"	1020KC	Set PB#3 for 1020KC		"	A16	"
12. Dummy (See Above)	"	1020KC	Set PB#2 for 1020KC		"	A17	"
13. Dummy (See Above)	"	600KC	Set PB#1 for 600KC		"	A18	"
14. Dummy (See Above)	"	1400KC	Dial	Tune for max. signal.	"		Set pointer at 1400KC
15. Install receiver in car and fully extend the antenna.							
16.			Dial	Approx. 1400KC		A7	Tune in weak station near 1400KC and adjust for max. volume.
17.			Set PB#5 to approx. 1400KC			A13	"

PUSHBUTTON ADJUSTMENTS

1. Pull off the pushbutton knobs exposing the knurled knobs B1, B2, B3, B4 and B5.
 2. Push "Dial" button and tune in a desired station within the range of pushbutton #1.
 3. Push in PB#1 and turn B1 to the left or right and tune in station obtained in step 2.
 4. Repeat the procedure for the remaining pushbuttons, keeping in mind to tune in stations only within the range of the individual pushbuttons. These ranges are listed below.
- PB#1 - 535 to 1020KC PB#2 - 610 to 1200KC PB#3 - 700 to 1410KC
PB#4 - 740 to 1480KC PB#5 - 840 to 1600KC



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

IF = 455 KC

- 1 - DC Voltage measurements are at 20,000 ohms per volt; AC Voltages measured at 1000 ohms per volt.
- 2 - Socket connections are shown as bottom views.
- 3 - Measured values are from socket pin to common negative.
- 4 - Battery voltage maintained at 6 volts for voltage readings.
- 5 - Nominal tolerance on component values makes possible a variation of $\pm 15\%$ in voltage and resistance readings.
- 6 - Volume control at maximum, no signal applied for voltage measurements.

VOLTAGE READINGS

Pin	Value	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
V 1	6BA6	OV	8.37DC	OV	8.37DC	OV	8.37DC	OV	8.37DC
V 2	6BE6	1.47DC	1.7DC	6.37DC	OV	8.37DC	OV	8.37DC	2.91DC
V 3	6BA6	OV	OV	6.37DC	OV	8.37DC	OV	8.37DC	2.91DC
V 4	6AT6	1.17DC	2.57DC	9.37DC	OV	7.77DC	OV	8.07DC	OV
V 5	6AT6	OV	1.17DC	6.37DC	OV	1.17DC	1.17DC	8.07DC	OV
V 6	6X4	OV	6.37DC	8.37DC	OV	8.37DC	OV	8.37DC	OV
V 7	6X4	OV	6.37DC	8.37DC	OV	8.37DC	OV	8.37DC	OV
V 8	6X4	OV	6.37DC	8.37DC	OV	8.37DC	OV	8.37DC	OV

RESISTANCE READINGS

Item	Value	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
V 1	6BA6	2.5 Meg.	OV	.12	OV	12.2K	11.2K	270K	OV
V 2	6BE6	4.7K	250K	.12	OV	12.2K	11.2K	2.4 Meg.	OV
V 3	6BA6	2.7 Meg.	OV	.12	OV	12.2K	11.2K	250K	OV
V 4	6AT6	2.3 Meg.	1.5K	.12	OV	550K	1.7 Meg.	1220K	OV
V 5	6AT6	1.0K	2.2K	.12	OV	2.2K	2.2K	1220K	OV
V 6	6X4	Inf.	.12	11.2K	10K	250K	Inf.	OV	220K
V 7	6X4	Inf.	.12	11.2K	10K	250K	Inf.	OV	220K
V 8	6X4	200K	1.0K	.12	OV	250K	1.0K	400K	OV

A PHOTOFACT STANDARD NOTATION SCHEMATIC