



TRADE NAME Motorola Models 6M (6 Volt), 6M-12 (12 Volt)
 MANUFACTURER Motorola Inc., 4545 W. Augusta Blvd., Chicago 51, Illinois
 TYPE SET Battery Operated Universal Type AM Superheterodyne Automobile Receiver
 TUBES (Six) Types 12BD6 RF Amplifier, 12BE6 Converter, 12BD6 IF Amplifier, 12CR6 Det.-AVC-AF Amp.,
 12AQ5 Output, 12X4 Rectifier (Equivalent 6 Volt Tubes used in Model 6M)

POWER SUPPLY 12 Volt Storage Battery (Model 6M-12)
 TUNING RANGE—BROADCAST 540KC-1600KC

RATING 2.8 Amp. @ 12.6 Volts DC

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.

* Not necessary, except in case of tampering or replacement of tuning cores or components.

	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.	455KC	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	"
*3.	"	"	"	"	"	"	Using alignment tool (Fig. 2) back A8, A9, A10 (tuning cores) out of coils, but not out of coil forms. Adjust A5, A6, A7 for maximum output.
*4.	"	"	1400KC	Adjust 13/64" from high freq. end stop.	"	A8, A9, A10	Using alignment tool (Fig. 2) adjust A8, A9, A10 for maximum output.
*5.	"	"	1610KC	High freq. end stop.	"	A5, A6, A7	Retouch for maximum output.

With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A7 for maximum volume.

POINTER REPLACEMENT OR ADJUSTMENT

Set tuner to high frequency end stop. Place pointer to coincide with dot at extreme right end of dial. Cement pointer in place.

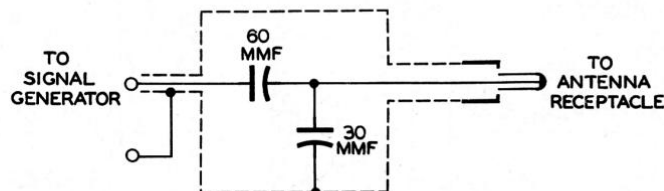


FIG. 1

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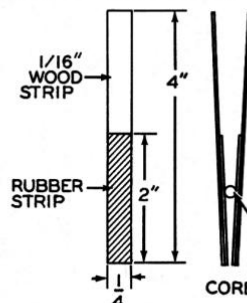


FIG. 2

"The listing of any available replacement part herein does not constitute in any case 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."
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PARTS LIST AND DESCRIPTIONS TUBES (GENERAL ELECTRIC, SYLVANIA)

MOTOROLA
MODEL 6M

CHASSIS—TOP VIEW

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier	12BD6	Note 1
V2	Converter	12BE6	Note 1
V3	IF Amplifier	12BD6	Note 1
V4	Det.-AFC-AF Amplifier	12CR6	Note 1
V5	Output	12AQ5	Note 1
V6	Rectifier	12X4	Note 1

Note 1. Equivalent 6 volt tubes used in Model 6M.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING	MOTOROLA PART No.	AEROVOX PART No.	CORNEILL-DUBIER PART No.	MALLORY PART No.	SPRAGUE PART No.
C1A	15	23A485677	AFH3-104	C077	FP328	T-455
C1B	10					
C1C	20					
C1D	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	MOTOROLA PART No.	AEROVOX PART No.	CORNEILL-DUBIER PART No.	REPLACEMENT DATA	NOTES
C2	90	21K533453	BPD-00015	DD-151	G046	5GA-T15
C3	150	21R410112	NPD-014.7	TCN-47	N750K-470	5TCCB-V47
C4	4.7	21R15955	N750-1047	DF-503	CUB455	5TCU-Q47
C5	47	21R15953	BPD-05	DF-503	CUB455	4TM-55
C6	.05	8R121597	BPD-05	DF-503	CUB455	2TM-55
C7	.05	8R121595	BPD-01	DF-503	K082	5HK-S1
C8	10000	21R422726	BPD-01	DF-503	K082	4TM-P1
C9	.1	8R121006	P468N-1	DF-104	CUB471	5TM-S2
C10	.002	8R121598	BPD-002	DF-503	CUB482	4TM-S1
C11	.02	8R121003	BPD-02	DF-503	CUB481	5GA-T47
C12	.01	21R410121	BPD-01	DF-503	K080	6TM-D4
C13	.01	21R410121	BPD-00047	DF-471	K080	
C14	.004	8R121000	BPD-004	DF-402	CUB6D4	
C15A	300	21A522033	P1088N-04	CUB6S4	ST2P5	
C15B	100	8A121549	VHC36	ST2P5	ST2P5	
C16	.04	8K122075	VHC36	ST2P5	ST2P5	
C17	.5	8K122075	VHC36	ST2P5	ST2P5	
C18	.5	8K122075	VHC36	ST2P5	ST2P5	

Note 1. Model 6M uses .02MFD in this application (part #6R121004).

CONTROLS

ITEM No.	RATING	MOTOROLA PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	INSTALLATION NOTES
R1A	1Meg	18K533457	F1-55	R4-37	*QJ-800A	Tone (Panel) Volume (Rear) @ 125K Attach to RUB
R1B	200K					
R1C	Switch	KB-4				

* Concentric Kit Equivalent: K-6 Kit, Base Elements & Shafts: B11-137 & P17-129 (Panel) B13-130X & R9-214 (Rear) 70-1 Switch

RESISTORS

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

ITEM No.	RATING	MOTOROLA PART No.	IRC PART No.	REPLACEMENT DATA	NOTES
R2	100K	6R6075	BTS-100K		
R3	1Meg	6R6004	BTS-1Meg		
R4	220K	6R6004	BTS-220		
R5	100K	6R6075	BTS-100K		Note 1
R6	47K	6R6056	BTS-47K		
R7	6800K	6R5690	BTB-6800		
R8	150K	6R6573	BTS-150		Note 2
R9	3.3Meg	6R2118	BTS-3.3Meg		
R10	15K	6R2119	BTS-15K		

Note 1. Some versions use 150K in this application. (part #6R6373).

Note 2. Some versions use 390K in this application. (part #6R5554).

Note 3. The 6 volt models use 56K 1W in this application (part #6R2037).

PARTS LIST AND DESCRIPTIONS (Continued) **TRANSFORMER (VIBRATOR)**

ITEM No.	RATING			REPLACEMENT DATA			
	PRI.	SEC. 1	SEC. 2	MOTOROLA PART No.	Merit PART No.	Stancor PART No.	Triad PART No.
T1	12.6VCT 470VCT ① L1-4A ② 053A			25C534978A ①			

① Part #25C534978 used in Model 6M.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE			REPLACEMENT DATA			
	PRI.	SEC.		MOTOROLA PART No.	Merit PART No.	Stancor PART No.	Triad PART No.
T2	5.2KΩ	3-4Ω	25B7071-P	21107	A-2830	A-3877	24851

SPEAKER

ITEM No.	RATINGS			REPLACEMENT DATA			
	SIZE	FIELD	V. C. IMP.	MOTOROLA PART No.	QUAM PART No.	RCA TYPE No.	NOTES
SP1	6"x 9"	PM	3-4Ω	50C533088	69A3	23851	

COILS (RF-IF)

ITEM No.	USE	DC RES.		MOTOROLA PART No.	REPLACEMENT DATA		NOTES
		PRI.	SEC.		MEISSNER PART No.	MILLER PART No.	
L1	Ant. Coil	13Ω					
L2	RF Coil	13Ω					
L3	Osc. Coil	.5Ω					
L4	Input IF	18Ω					
L5	Output IF	18Ω					
L6	FL. Choke	0Ω					
L7	Vib. Choke	0Ω					

Note 1. Part #1K36807 used in tuner #77D536804 (MT-177).

Note 2. Part #24B536819 used in tuner #77D536817 (MT-178).

Note 3. Part #1K36806 used in tuner #77D536804 (MT-177).

Note 4. Part #1K36805 used in tuner #77D536804 (MT-177).

Note 5. Part #24B536854 used in tuner #77D536817 (MT-178).

Note 6. Alternate part #24A532093 used in Model 6M.

VIBRATOR

ITEM No.	TYPE	INPUT VOLTS-FREQUENCY	REPLACEMENT DATA				NOTES
			MOTOROLA PART No.	CORNELL-DUBIER PART No.	MALLORY PART No.	RADIART PART No.	
M1	Interrupter	12.6V	48B522000	6301	G859	6301	
M2	Interrupter	6V	48B3333	5342	903M	5342	

FUSES

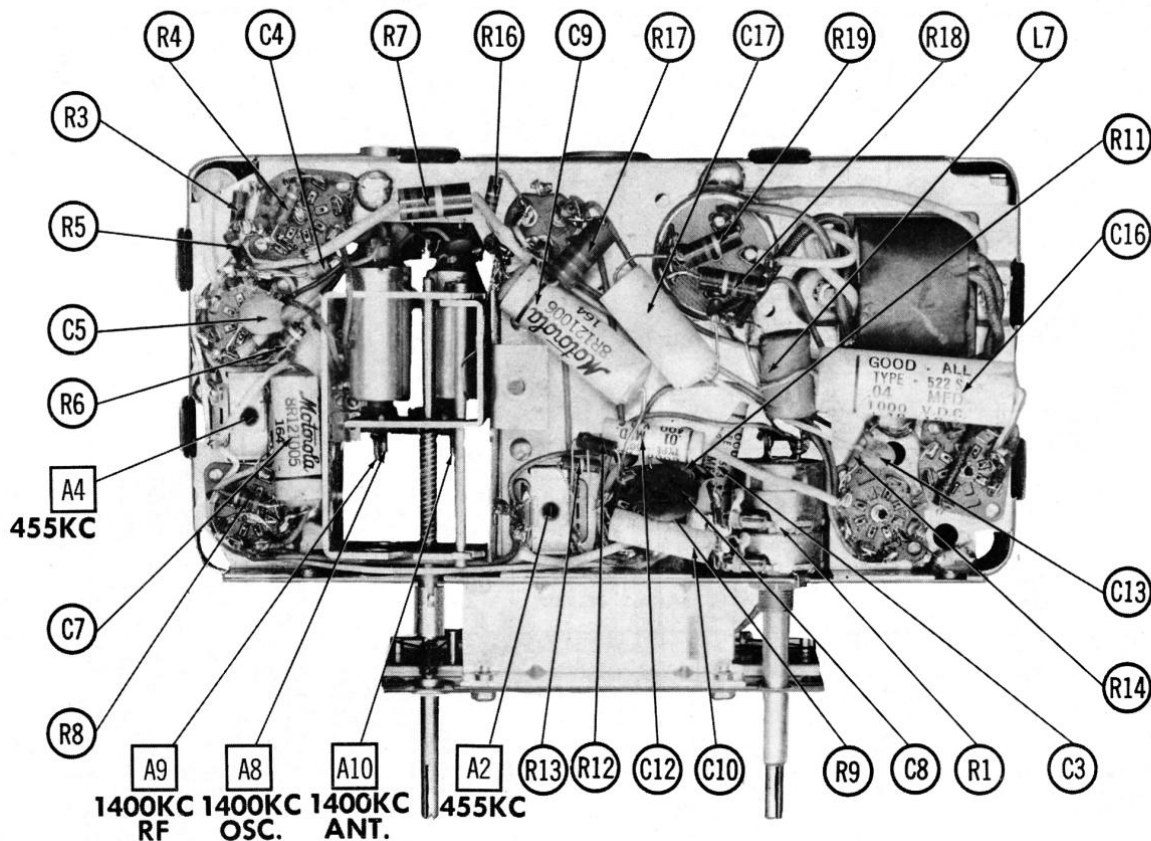
ITEM No.	RATING	REPLACEMENT DATA				NOTES
		MOTOROLA PART No.	LITTELFUSE PART No.	HOLDER	FUSE	
M2	5A	① 6SR122345	9C536545	301005	(DAG 5A)	
M2	9A	② 6SR16248	9K536617	307009	(SFE9)	

MISCELLANEOUS

ITEM No.	PART NAME	MOTOROLA PART No.	REPLACEMENT DATA				NOTES
			MOTOROLA PART No.	FUSE	HOLDER	BUSS PART No.	
M3	Dial Light	65T533821					
M4	Dial Light	65X10867					
M5	Tuner	77D536804 *					
A5	Trimmer Cap.	20A485708					
A6	Trimmer Cap.	20A485126					
A7	Trimmer Cap.	20A502338					

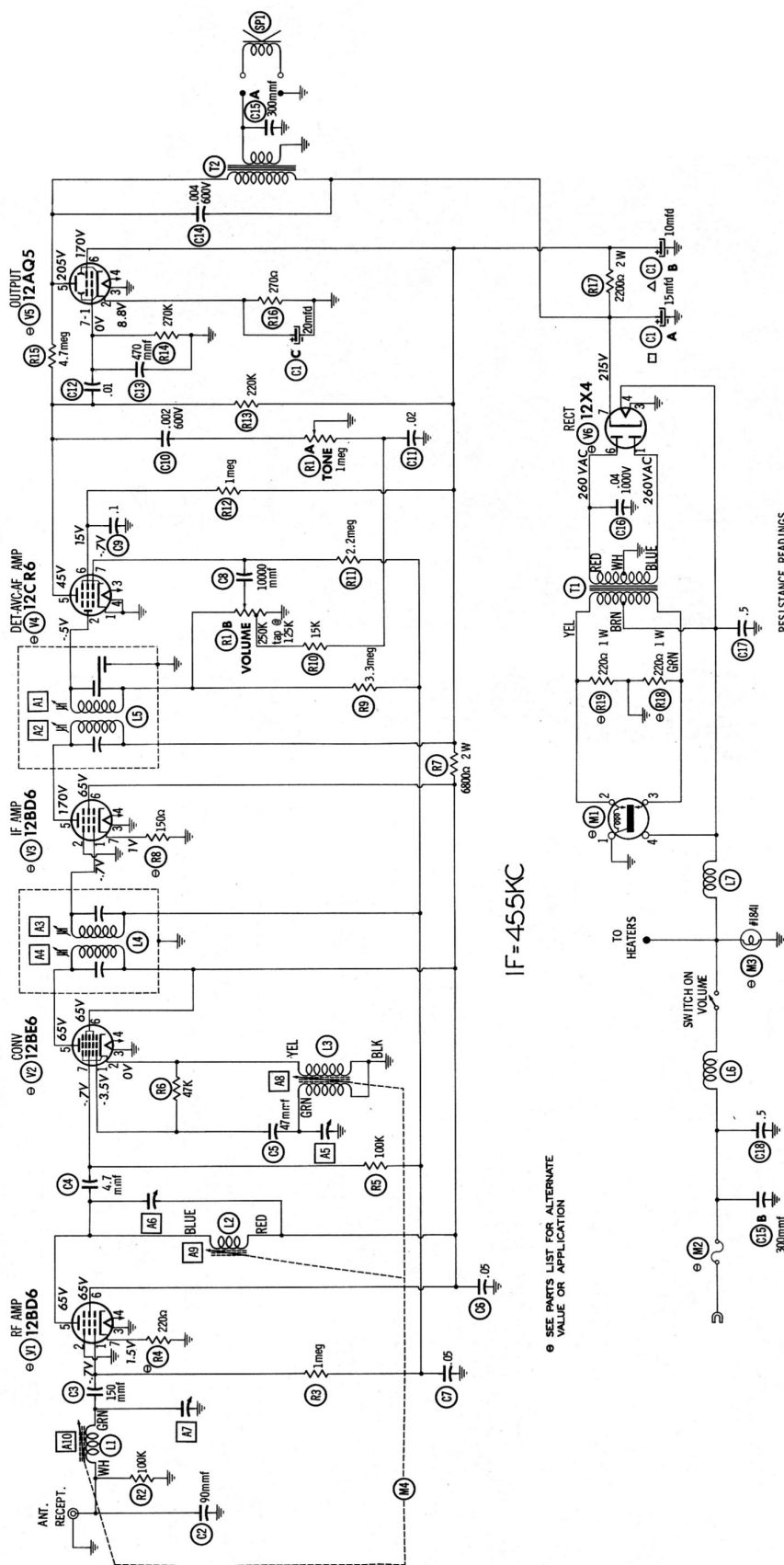
* Alternate tuner, part #77D536817 (MT-178).

CHASSIS—BOTTOM VIEW



MOTOROLA
MODEL 6M

MOTOROLA
V7000000



IF = 455KC

SEE PARTS LIST FOR ALTERNATE
VALUE OR APPLICATION

RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7
V1	12BD6	4.5Meg	0a	0a	1.4a	1.4a	1.4a	220a
V2	12BE6	47K	.5a	0a	1.4a	1.4a	1.4a	3.5Meg
V3	12BD6	3.5Meg	0a	0a	1.4a	1.4a	1.4a	150a
V4	12CR6	0a	250K	1.4a	0a	1.4a	1.4a	5.7Meg
V5	12AQ5	270K	270a	0a	1.4a	1.4a	1.4a	270K
V6	12AX	280a	0a	0a	1.4a	1.4a	1.4a	33K

NC NO CONNECTION
† MEASURED FROM PIN 7 OF V6.

1. DC voltage measurements taken with vacuum tube voltmeter; 100,000 ohm input impedance.
2. Socket connections are 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. Resistance readings are taken with ohmmeter; resistance variation of $\pm 1\%$ in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

A PHOTOFACT STANDARD NOTATION SCHEMATIC
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