

MOPAR MODELS  
841, 842, 843

TRADE NAME Mopar Models 841 (For P28, P29 Plymouth), 842, 842HR (For D62, D63 Dodge), 843 (For S23, S24 Desoto)

MANUFACTURER Motorola Inc., 4545 W. Augusta Blvd., Chicago 51, Illinois

TYPE SET Battery Operated Custom Built AM Automobile Receiver

TUBES (Eight) Types 12BA6 RF Amplifier, 12BE6 Converter, 12AU6 IF Amplifier, 12AV6 Det.-AVC-AF Amp., 12BF6 Phase Inverter, (2) 12AB5 Output, 12X4 Rectifier

POWER SUPPLY 12 Volt Storage Battery

TUNING RANGE—BROADCAST 540KC-1610KC

RATING 3.8 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.

Tone control to mid-range.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
.1MF	High side to pin 7 (grid) of 12BE6 (V2). Low side to chassis.	262KC (400Mod)	High freq. end of dial	Across voice coil	A1, A2, A3, A4	Adjust for maximum output.
Fig. 1	Thru dummy antenna to antenna receptacle	1615KC	"	"	A5, A6, A7	"
The following steps are unnecessary unless tuner has been tampered with or in case of component replacement.						
Fig. 1	Thru dummy antenna to antenna receptacle	1615KC	High freq. end of dial	Across voice coil	A5, A6, A7	Back tuning cores (A8, A9, A10) approximately 1" out of coil forms. Adjust for maximum output.
Fig. 1	"	1000KC	Back tuning core carriage 25/32" from high freq. end stop.	"	A8, A9, A10	Adjust for maximum output. (Use Motorola alignment tool #66A76278).

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

POINTER CALIBRATION

Tune receiver to a 1000KC signal and adjust pointer adjusting cam so that pointer coincides with 1000KC on dial.

PUSHBUTTON ADJUSTMENT

- Turn on receiver and allow a fifteen minute warm-up period. Fully extend antenna.
- Pull pushbutton to the left and out.
- Accurately tune in a station manually.
- Lock pushbutton by pressing in firmly.
- Repeat above procedure for remaining pushbuttons.

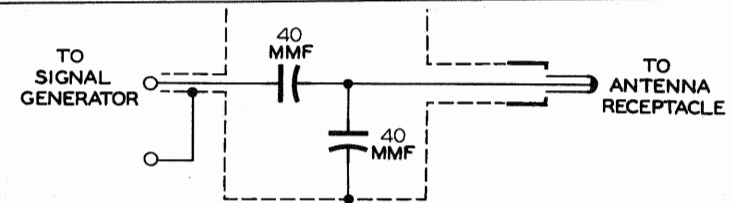


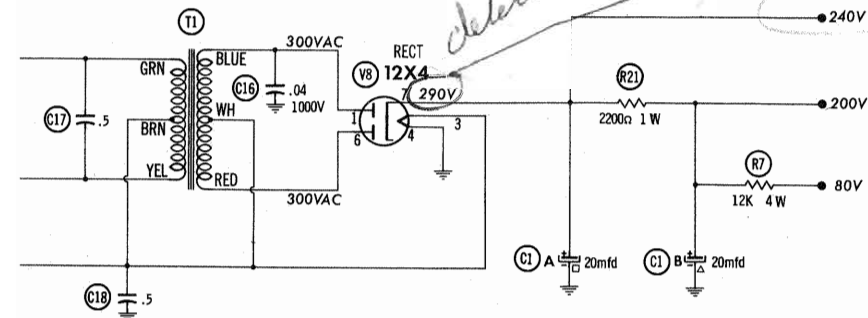
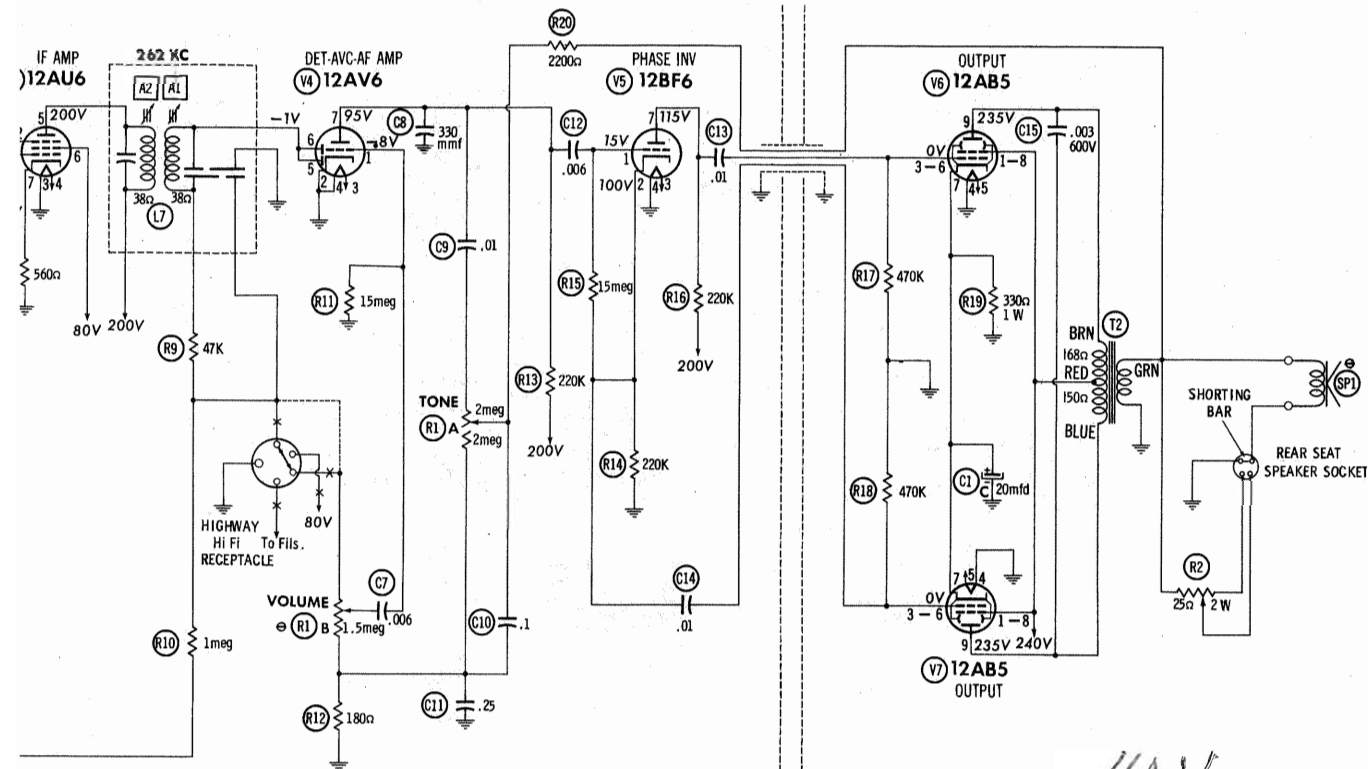
FIG. 1

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

"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."

"Reproduction or use, without express permission, of editorial or pictorial content, in any manner, is prohibited. No patent liability is assumed with respect to the use of the information contained herein. Copyright 1957 by Howard W. Sams & Co., Inc., Indianapolis 5, Indiana, U. S. of America. Copyright under international Copyright Union. All rights reserved under Inter-American Copyright Union (1910) by Howard W. Sams & Co., Inc." Printed in U. S. of America

G721



RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12BA6	3Meg	0n	0n	1.2n	†12K	†14K	0n		
V2	12BE6	47K	.9n	1.2n	0n	†14K	†14K	2.8Meg		
V3	12AU6	38n	0n	0n	1.2n	†2200n	†14K	560n		
V4	12AV6	15Meg	0n	1.2n	0n	1.5Meg	1.5Meg	†220K		
V5	12BF6	1.5Meg	220K	1.2n	0n	0n	0n	†220K		
V6	12AB5	†0n	NC	470K	0n	1.2n	470K	330n	†0n	†168n
V7	12AB5	†0n	NC	470K	0n	1.2n	470K	330n	†0n	†150n
V8	12X4	260n	NC	1.2n	0n	NC	280n	10K		

† MEASURED FROM PIN 7 OF V8.  
NC NO CONNECTION.  
TP TIE POINT

MOPAR MODELS  
841, 842, 843

TRADE NAME  
MANUFACTURER  
TYPE SET  
TUBES (Eight)

POWER SUPPLY  
TUNING RANGE

Volume control to  
an output reading  
Tone control to

DUMMY ANTENNA	GL C
1. .1MFD	High si (grid) o Low si
2. Fig. 1	Thru d to ante

The following st

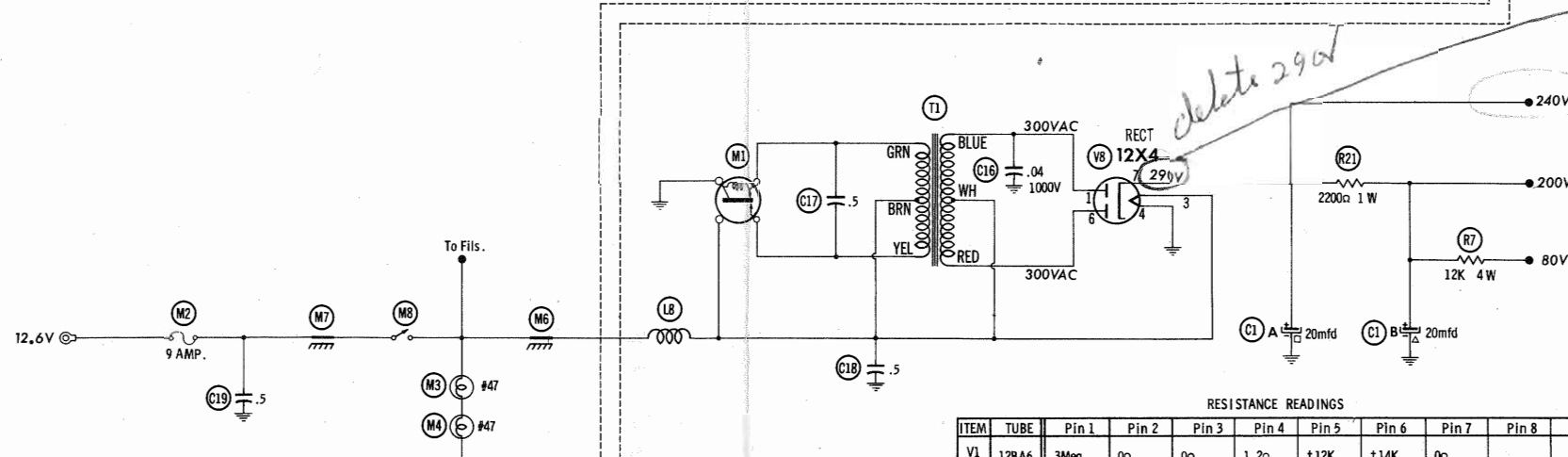
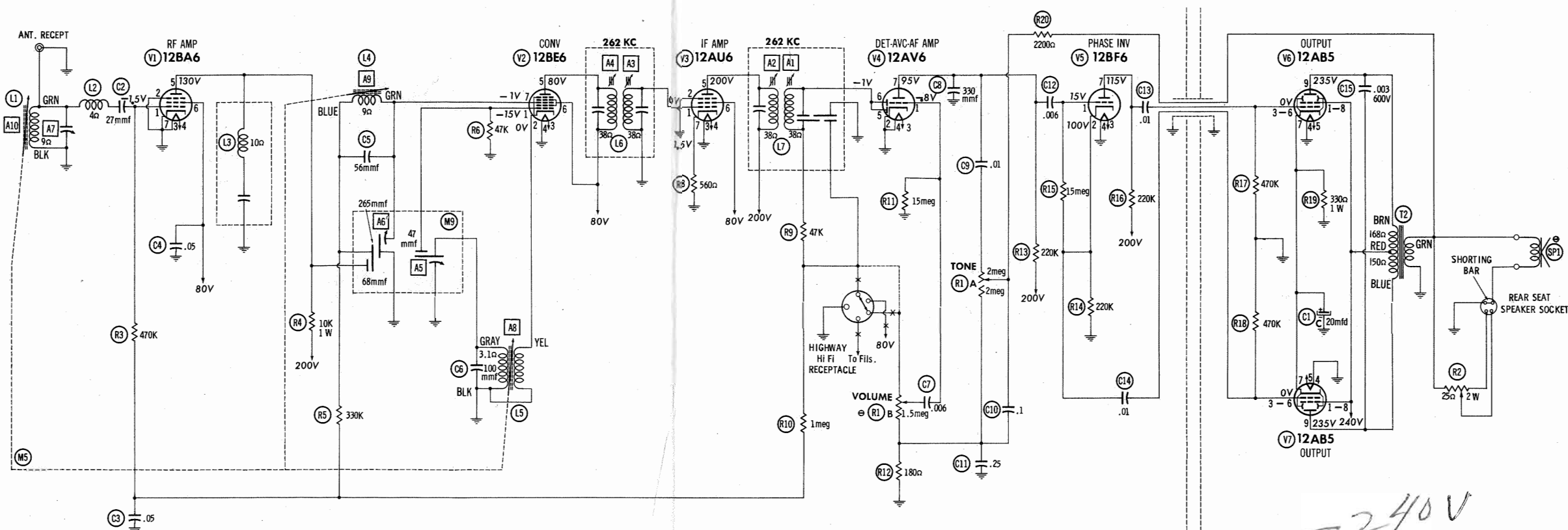
3. Fig. 1	Thru d to ante
-----------	-------------------

4. Fig. 1	
-----------	--

With radio insta  
maximum volum

Tune receiver to

1. Turn on rece  
period. Fully e  
2. Pull pushbut



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

SEE PARTS LIST FOR ALTERNATE  
VALUES 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
V1	12BA6	3Meg	0 $\Omega$	0 $\Omega$	1.2 $\Omega$	$\pm 12K$	$\pm 14K$	0 $\Omega$	
V2	12BE6	47K	.9 $\Omega$	1.2 $\Omega$	0 $\Omega$	$\pm 14K$	$\pm 14K$	2.8Meg	
V3	12AU6	38 $\Omega$	0 $\Omega$	0 $\Omega$	1.2 $\Omega$	$\pm 2200\Omega$	$\pm 14K$	560 $\Omega$	
V4	12AV6	15Meg	0 $\Omega$	1.2 $\Omega$	0 $\Omega$	1.5Meg	1.5Meg	$\pm 220K$	
V5	12BF6	1.5Meg	220K	1.2 $\Omega$	0 $\Omega$	0 $\Omega$	0 $\Omega$	$\pm 220K$	
V6	12AB5	$\pm 0\Omega$	NC	470K	0 $\Omega$	1.2 $\Omega$	470K	330 $\Omega$	$\pm 0\Omega$
V7	12AB5	$\pm 0\Omega$	NC	470K	0 $\Omega$	1.2 $\Omega$	470K	330 $\Omega$	$\pm 0\Omega$
V8	12X4	260 $\Omega$	NC	1.2 $\Omega$	0 $\Omega$	NC	280 $\Omega$	10K	

$\dagger$  MEASURED FROM PIN 7 OF V8.  
NC NO CONNECTION.  
TP TIE POINT

**PARTS LIST AND DESCRIPTIONS**  
**TUBES (GENERAL ELECTRIC, SYLVANIA)**

ITEM No.	USE	TYPE	NOTES
V1	RF Amplifier Converter	12BA6	
V2	IF Amplifier	12BE6	
V3	IF Amplifier	12AU6	
V4	Det. -AVC-AF Amplifier	12AV6	

ITEM No.	USE	TYPE	NOTES
V5	Phase Inverter	12BF6	
V6	Output	12AB5	
V7	Output	12AB5	
V8	Rectifier	12X4	

**ELECTROLYTIC CAPACITORS**

ITEM No.	RATING CAP.	VOLT.	REPLACEMENT DATA			
			MOTOROLA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	SPRAGUE PART No.
C1A	#20	350	25A532094	AFH3-107	CO800	FP329.5
C2	20	25				TMT-92
C3						T-470
C4						TVL-3635

**FIXED CAPACITORS**

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

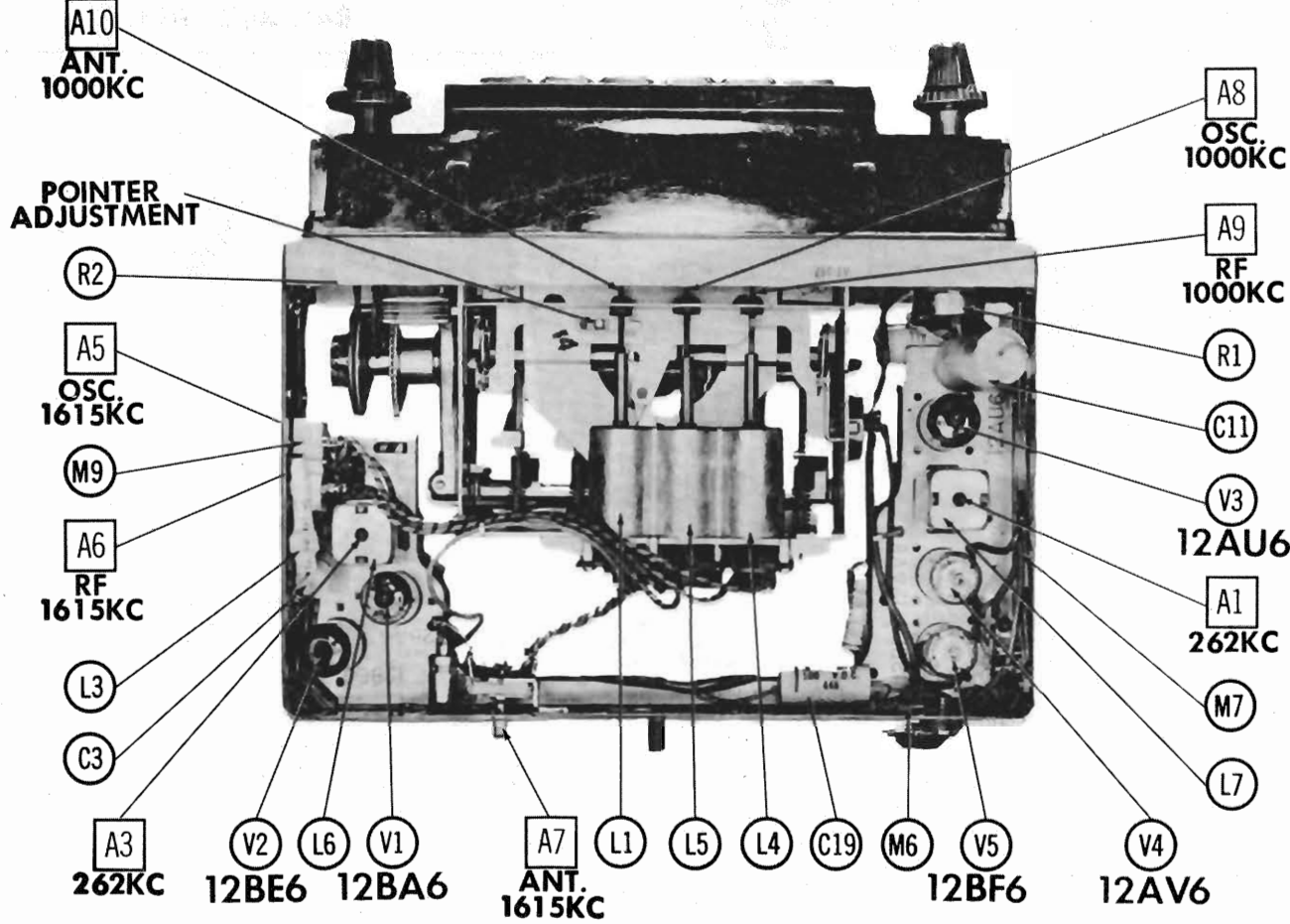
ITEM No.	RATING CAP.	VOLT.	REPLACEMENT DATA				NOTES
			MOTOROLA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	
C2	27	200	2R120587	N750-SI 25	TCN-27	TC7-27	5TCU-Q25
C3	.05	400	8R120005	BPD-05	DF-503	GEM-415	2TM-S5
C4	.05	400	8R120567	BPD-05	CUB235	GEM-415	4TM-S5
C5	.05	400	2R120552	SI 8000	CUB485		
C6	.008	400	8R120001	BPD-00033	CUB606	GEM-626	6TM-D6
C7	.008	400	2R120018	BPD-01	G058	UC-5333	5GA-T33
C8	.01	400	8R120002	P288N-1	CUB481	GEM-411	4TM-SI
C9	.01	200	8R120573	P288N-25	CUB22P1	GEM-201	2TM-P1
C10	.01	200	8R122045	SI 8000	CUB22P25	GEM-2025	2TM-P25
C11	.008	400	8R120001	BPD-01	CUB606	GEM-626	6TM-D6
C12	.01	400	8R120002	BPD-01	CUB481	GEM-411	4TM-SI
C13	.01	400	8R120002	BPD-01	CUB481	GEM-411	4TM-SI
C14	.01	400	8R120002	BPD-01	CUB481	GEM-411	4TM-SI
C15	.003	600	8R120569	P088N-04	CUB603	GEM-623	6TM-D3
C16	.04	1000	8A120549	VHC36	CUB684	GEM-1014	MB-S4
C17	.5	100	8K122076	VHC36	ST2P5	RF480	68P20
C18	.5	100	8K122076	VHC36	ST2P5	RF480	68P20
C19	.5	100	8K122076	VHC36	ST2P5	RF480	68P20

**CONTROLS**

ITEM No.	RATING RESISTANCE	WATTS	REPLACEMENT DATA				INSTALLATION NOTES
			MOTOROLA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	MALLORY PART No.	
R1A	4Meg	*	19K536710				Tone - Note 1 Volume Rear Seat Speaker (W. W.) Note 2
R2	25K		19B532919		RTV-609C		

\* Element open in center - 2Meg each half.  
Note 1. Part #18K536709 used in Model 843.  
Note 2. Part #18K536153 used in Model 841.

**CHASSIS—TOP VIEW**



**PARTS LIST AND DESCRIPTIONS (Continued)**  
**RESISTORS**

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

ITEM No.	RATING		REPLACEMENT DATA		REPLACEMENT DATA		NOTES
	OHMS	WATT	MOTOROLA PART No.	IRC PART No.	MOTOROLA PART No.	IRC PART No.	
R3	470K		6R6032	BTS-470K	6R6015	BTS-220K	
R4	10K	1	6R6430	BTA-10K	6R6407	BTS-220K	
R5	330K		6R6014	BTS-330K	6R488264	BTS-15Meg	
R6	47K		6R6056	BTS-47K	6R6407	BTS-220K	
R7	12K	4	17K137688	1 3/4A-10-12K Note 1	6R6377	BTS-470K	
R8	560K		6R6291	BTS-560	6R6377	BTS-470K	
R9	47K		6R6056	BTS-47K	6R6254	BTA-330	
R10	1Meg		6R6004	BTS-1Meg	6R6089	BTS-2200	
R11	15Meg		6R488264	BTS-15Meg	6A533220	BTA-2200	
R12	180K		6R5660	BTS-180			

Note 1. Model 841 uses 12K, 1W in this application (Part #6K533221).

**TRANSFORMER (VIBRATOR)**

ITEM No.	RATING			REPLACEMENT DATA			
	PRI.	SEC. 1	SEC. 2	SEC. 3	MOTOROLA PART No.	Merit PART No.	Thordarson PART No.
T1	12-6VCT @ 2.1A	540VCT @ 2.1A			25C535794		22R52 ①

① Fabricate mounting.

**TRANSFORMER (AUDIO OUTPUT)**

ITEM No.	IMPEDANCE	REPLACEMENT DATA			NOTES
		MOTOROLA PART No.	Merit PART No.	Thordarson PART No.	
T2	6400Ω 3-4Ω	25B533038	Z1004 ①	A-2800 ①	① S-51X ① ② Fabricate mounting.

**SPEAKER**

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MOTOROLA PART No.	QUAM PART No.	
SPI	6" x 9" PM	50K533875 ①	69A3	① Used in Models 842 and 843 ② Alternate speaker for Models 842 and 843 ③ Used in Model 841 ④ Alternate speaker for Model 841
	6" x 9" PM	50C533214 ②	69A3	
	7" PM	50C533876 ③	7A31	
	7" PM	50B533217 ④		

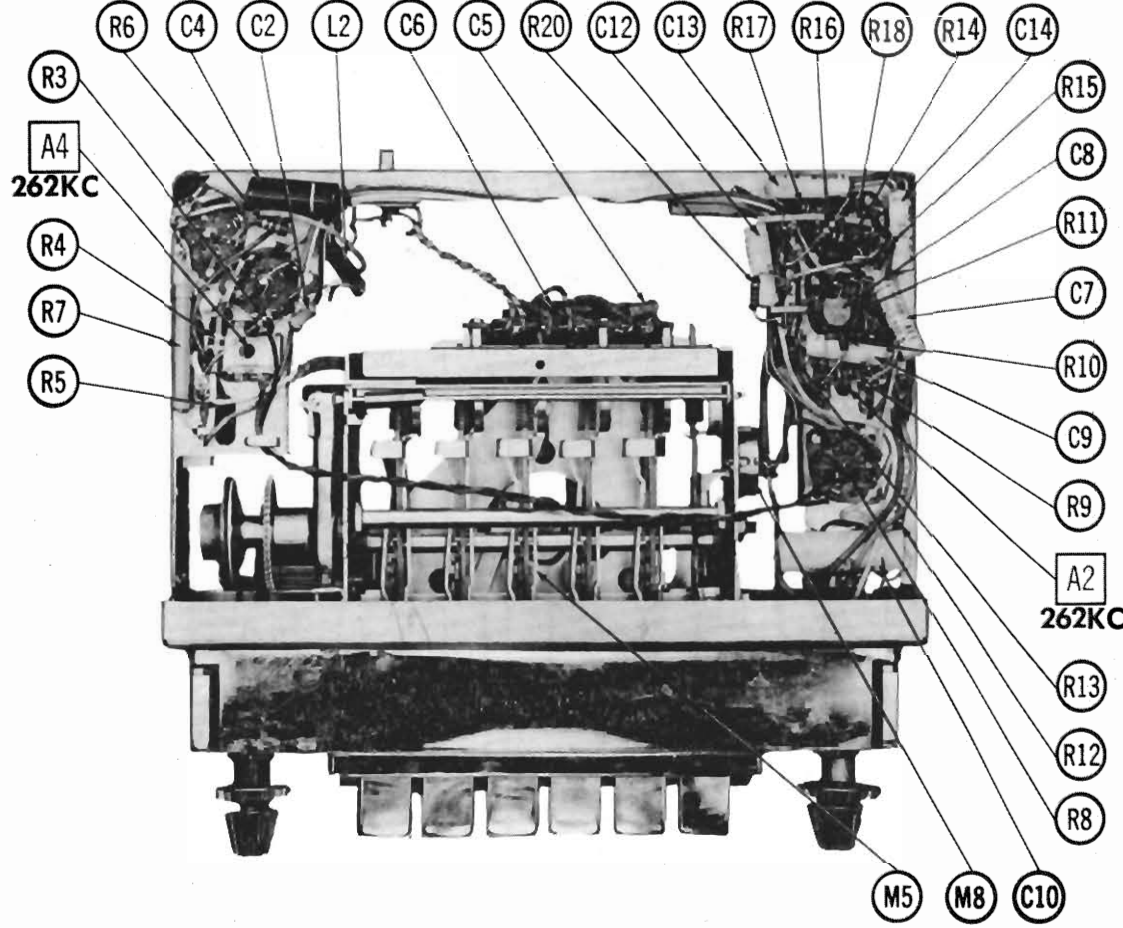
**COILS (RF-IF)**

ITEM No.	USE	REPLACEMENT DATA			NOTES
		MOTOROLA PART No.	MEISSNER PART No.	MILLER PART No.	
L1	Ant. Coil	18534760	19-6033	6154	Core part #76K534719 31 Microhenries 207 Microhenries Core part #76K534719 Core part #76K534719
L2	Ant. Loading Coil	24A532148	19-4201		
L3	IF Trap	24B532879			
L4	RF Coil	18534760			
L5	Osc. Coil	18535476			
L6	Input IF	24B580193	18-6752	12-HI	
L7	Output IF	24K581287	18-6754	12-HI	
L8	Vib. Hash Choke	24A534494			

**VIBRATOR**

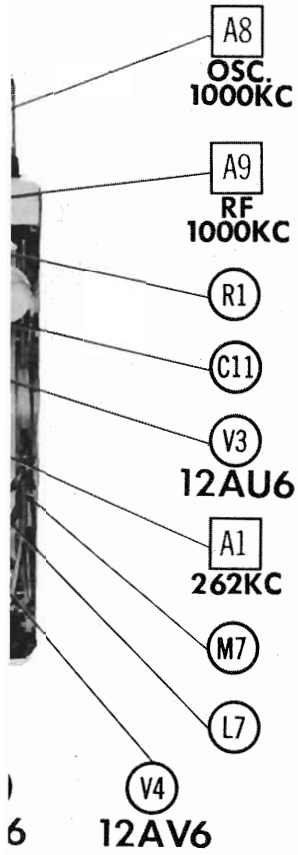
ITEM No.	TYPE	INPUT VOLTAGE	REPLACEMENT DATA			NOTES
			MOTOROLA PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	
M1	Interrupter	12.6V 115*	48B522000	0301	0359	0301

**CHASSIS—BOTTOM VIEW**





ITEM No.	ANCE	WATTS	PART No.	PART No.	PART No.	Notes
R1A	4Meg *	18K536710		RTV-608C		Tone - Note 1 Volume Rear Seat Speaker (W. W.) Note 2
R2	250	18B532919				



## PARTS LIST AND DESCRIPTIONS (Continued)

### RESISTORS

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

ITEM No.	RATING		REPLACEMENT DATA		NOTES
	OHMS	WATT	MOTOROLA PART No.	IRC PART No.	
R3	470K	1	6R6032	BTS-470K	
R4	10K		6R6430	BTA-10K	
R5	330K		6R6014	BTS-330K	
R6	47K		6R6056	BTS-47K	
R7	12K	4	17K737688	1 3/4A-10-12R Note 1	
R8	5600		6R6291	BTS-560	
R9	47K		6R6056	BTS-47K	
R10	1Meg		6R6004	BTS-1Meg	
R11	15Meg		6R488264	BTS-15Meg	
R12	1800		6R5660	BTS-180	

Note 1. Model 841 uses 12K, 1W in this application (Part #6K533221).

### TRANSFORMER (VIBRATOR)

ITEM No.	RATING		REPLACEMENT DATA		NOTES
	PRI.	SEC.	MOTOROLA PART No.	Merit Sencor PART No.	
T1	12.6VCT	540VCT	25C535794	25C535794	
	① 2.1A	② .009A			

① Fabricate mounting.

### TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA		NOTES
	PRI.	SEC.	MOTOROLA PART No.	Merit Sencor PART No.	
T2	64000	3-40	25B533038	Z1004 ① A-2900 ② A-3850 ③	① Fabricate mounting.

### SPEAKER

ITEM No.	TYPE		REPLACEMENT DATA		NOTES
	SIZE	FIELD V. C. IMP.	MOTOROLA PART No.	QUAM PART No.	
SP1	6" x 9"	PM 3-40	50K533875 ①	69A3	① Used in Models 842 and 843
	6" x 9"	PM 3-40	50C533214 ②	69A3	② Alternate speaker for Models 842 and 843
	7"	PM 3-40	50C533876 ③	7A31	③ Used in Model 841
	7"	PM 3-40	50B533217 ④		④ Alternate speaker for Model 841

### COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA		NOTES
		MOTOROLA PART No.	MEISSNER PART No.	
L1	Ant. Coil	1B534760		
L2	Ant. Loading Coil	24A532148	19-6033	
L3	IF Trap	24B532979	19-4201	
L4	RF Coil	1B534760		
L5	Osc. Coil	1B535476	19-6752	
L6	Input IF	24B560193	19-6754	
L7	Output IF	24K591287	BC-350	
L8	Vib. Hash Choke	24A534494	BC-354	

### VIBRATOR

ITEM No.	TYPE	INPUT VOLTS-FREQUENCY	REPLACEMENT DATA		NOTES
			MOTOROLA PART No.	CORNEILL-PUBLIER PART No.	
M1	Interrupter	12.6V 115	48B522000	6301	

## PARTS LIST AND DESCRIPTIONS (Continued)

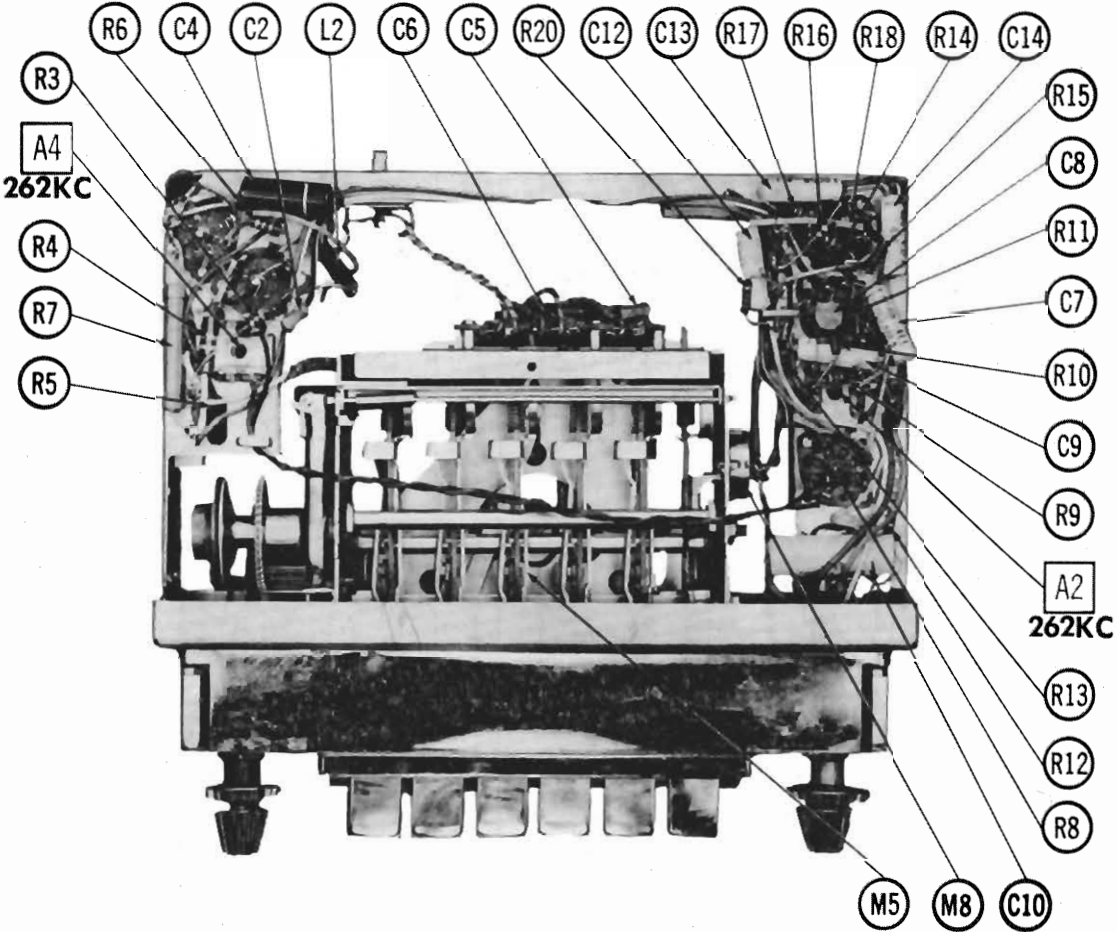
### FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA		NOTES
			MOTOROLA PART No.	UTTELEUSE PART No.	
M2	SFE	9A	65K16248	307009, (SFE 9A)	

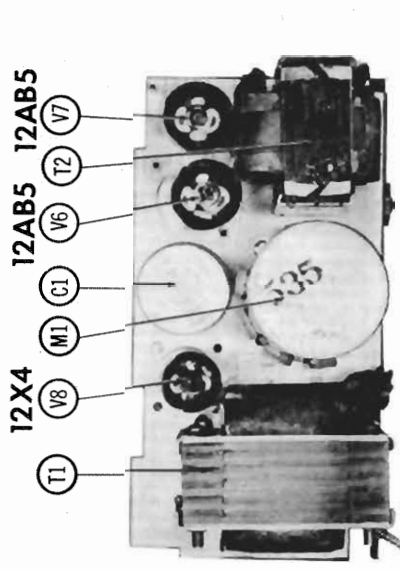
### MISCELLANEOUS

ITEM No.	PART NAME	REPLACEMENT DATA		NOTES
		MOTOROLA PART No.	BUSS PART No.	
M3	Dial Light	65X11854	#47	
M4	Dial Light	65X11854	#47	
M5	Tuner	77K535792		
	Tuner	77K535575		
	Tuner	77K536146		
M6	Spark Plate	64K530177		
M7	Spark Plate	64K530177		
M8	Switch	40B534023		
M9	Trimmer Cap.	20K533409		
A7	Trimmer Cap.	20B532899		
	Knob	36B533005		
	Knob	36B532949		
	Knob	36B535692		
	Knob	1V533308		
	Knob	1V533109		
	Knob	1V532877		
	Pushbutton	38B533284		
	Pushbutton	1K533598		
	Pushbutton	1B533598		
	Pushbutton	38B533285		
	Pushbutton	1K533599		
	Pushbutton	1K533599		
	Dial Scale	34K535019		
	Dial Scale	34K535114		
	Dial Scale	34K535114		
	Dial Crystal	81K532892		
	Dial Crystal	81K532893		

## CHASSIS—BOTTOM VIEW



## POWER CHASSIS - TOP VIEW



## POWER CHASSIS - BOTTOM VIEW

