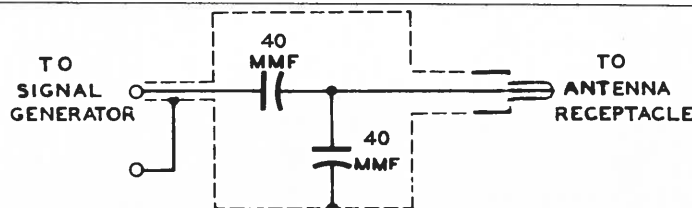


MOPAR MODEL 824

TRADE NAME	Mopar Models 819 (Plymouth), 820 (Dodge), 824(Chrysler)(1953 Automobile).					
MANUFACTURER	Philco Corp., Tioga & "C" Sts., Philadelphia, Pennsylvania					
TYPE SET	Battery Operated AM Automobile Superheterodyne Receiver					
TUBES (Eight)	Types 6BA6 RF Amp., 6BE6 Conv., 6BA6 IF Amp., 6AV6 Det-AVC-AF Amp., 6C4 Phase Inverter, (2) 6AQ5 Audio Output, 6X4 Rectifier.					
POWER SUPPLY	6 Volt Storage Battery			RATING	7.1 Amp @ 6.3 Volts AC	
TUNING RANGE—BROADCAST	535-1605KC					
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.						
Turn tuning control maximum counter clockwise and set pointer to last reference mark at low frequency end of dial.						
During Step 1 remove dial to gain access to bottom slugs of IF Transformers, then replace dial.						
Housing must be in place during Steps 3 thru 8.						
Set tone control to MUSIC position.						
DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
.05MFD	High side to pin 7 (grid) of 6BE6 (V2). Low side to chassis.	455KC (400Mod)	Low frequency end of dial.	Across voice coil.	A1, A2, A3, A4	Depress any station selector button. Adjust for maximum output.
Fig. 1	High side to antenna receptacle. Low side to chassis.	455KC	Any	"	A5	Depress any station selector button. Adjust for MINIMUM output.
"	"	1605KC	1605	"	A6	Depress a manual push button. Tune pointer to 1605. Adjust for maximum output.
"	"	1400KC	1400	"	A7, A8	Tune to 1400. Adjust for maximum output.
"	"	580KC	Tune to 580KC signal.	"	A9	Adjust for maximum output while rocking tuning control.
Repeat steps 3 and 4.						
If considerable adjustment was necessary in step 6 repeat steps 5, 3 and 4 in that order.						
Fig.1	High side to antenna receptacle. Low side to chassis.	1200KC	Depress push button #6.	Across voice coil.	A10	Set push button #6 for 1200KC reception (See push button adjustments). Adjust A10 for maximum output.
With radio installed in car and antenna extended tune manually to a weak signal near 1400KC and adjust A8 for maximum output.						
With radio installed in car and antenna extended set push button #6 for a station near 1200KC and adjust A10 for maximum output.						

FIG. 1
HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana

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PARTS LIST AND DESCRIPTIONS TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA		RTMA BASE TYPE	NOTES
		PHILCO PART No.	STANDARD REPLACEMENT		
V1	RF Amplifier	6BA6	6BA6	7BK	
V2	Converter	6BE6	6BE6	7CH	
V3	IF Amplifier	6BA6	6BA6	7BK	
V4	Det.-AVC-AF Amp	6AV6	6AV6	7BT	
V5	Phase Inverter	6C4	6C4	6BG	
V6	Audio Output	6AQ5	6AQ5	6BZ	
V7	Audio Output	6AQ5	6AQ5	7BZ	
V8	Rectifier	6X4	6X4	7BS	

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				NOTE
		PHILCO PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	
C1A	20	61-0086	AFH3-106		CO78	
C1B	10					
C1C	25					
C2	.047		P488-047	DF-503	PT64S47	
C3	500		1469-00004		5R5Q4	
C4	500		60-00565417			
C5	.047		45-3505-28	DF-503	P12S5	
C6	10		60-00105407		5R5Q1	
C7	.047		45-3505-28	DF-503	P12S5	
C8	.0047		30-1224-87			
C9	.0047		45-3505-36	D6-472	PT6ED47	
C10	100		60-1005407	D6-101	5W3T1	
C11	.01		45-3505-41	D6-103	PT64S1	
C12	.1		45-3505-30	DF-104	PT64S1	
C13	.25		61-0125		MP2P25	
C14	.0047		45-3505-56	D6-472	PT6ED47	
C15	.01		45-3505-41	D6-103	PT64S1	
C16	.01		45-3505-41	D6-103	PT64S1	
C17	.0068		1008-0068		PT6ED68	
C18	.0068		1668-0068		PT6ED68	
C19	330		62-133001001	D6-331	MP2P5	
C20	.5		61-0137		MP2P5	
C21	.5					

Note 1. Some Models use .0047MFD in this application (Part #30-4661-D).

Note 2. Not used in all Models.

RESISTORS

ITEM No.	RATING OHMS WATT	REPLACEMENT DATA		NOTES
		PHILCO PART No.	IRC PART No.	
R3	120K	66-1128340	BTS-120	
R4	330K	66-1338340	BTS-330	
R5	10K	66-3108340	BTS-10K	
R6	68K	66-3688340	BTS-68K	
R7	22K	66-3228340	BTS-22K	
R8	1 Meg	66-5108340	BTS-1 Meg	
R9	330K	66-1338340	BTS-330	
R10	27K	66-3274340	BTA-27K	
R11	22K	66-3228340	BTS-22K	
R12	180K	66-1188340	BTS-180	
R13	1.5 Meg	66-6158340	BTS-15Meg	

CONTROLS

ITEM No.	RATING RESIST-ANCE	REPLACEMENT DATA		INSTALLATION NOTES
		PHILCO PART No.	CLAROSTAT PART No.	
R1A	350K	33-5557-13		
R2	15K	33-5568-1		

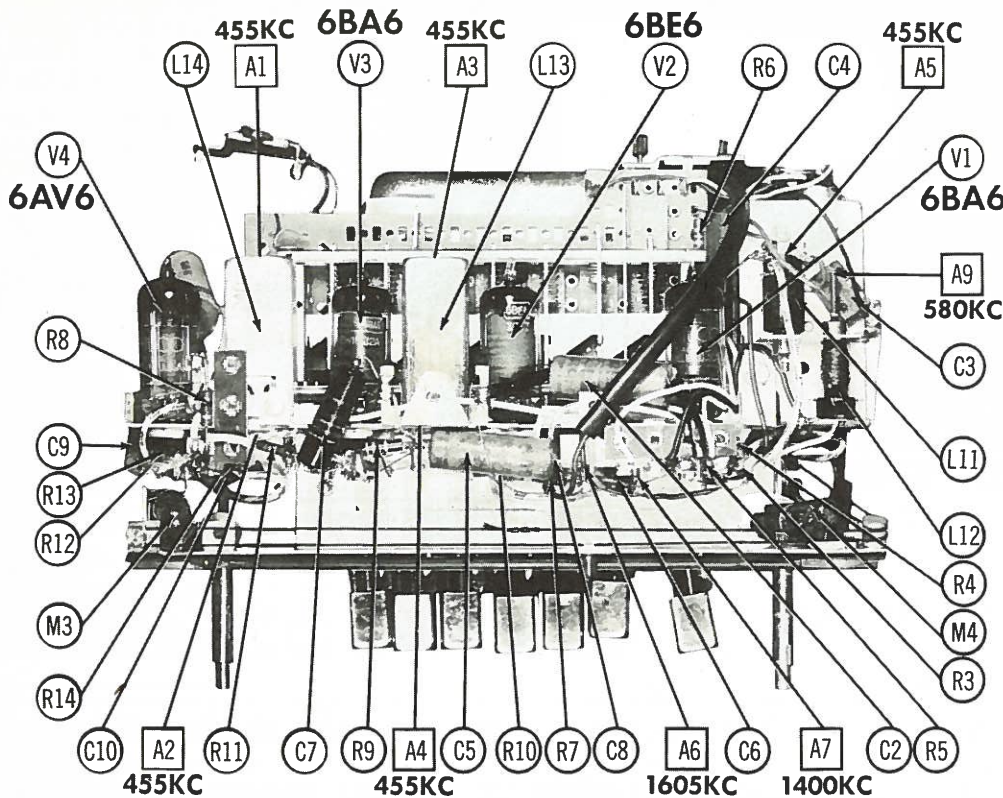
* This control open in center-2 Meg each side of center.

Note 1. Model No. 819 uses alternate control part No. 33-5557-11. Model No. 820 uses alternate control part No. 33-5557-12.

Note 2. Model No. 819 uses alternate control part No. 33-5568-2. Model No. 820 uses alternate control part No. 33-5568-3.

† CONCENTRIK EQUIVALENT-KIT K-2, BASE ELEMENTS & SHAFTS B12-141 & P1-229 (Panel) B10-132X & R1-308 (Rear).

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (VIBRATOR)

ITEM No.	RATING			REPLACEMENT DATA			
	PRI.	SEC. 1	SEC. 2	PHILCO PART No.	STANCOR PART No.	MERT PART No.	CHICAGO PART No.
T1	6.3VCT @ 4.1A	560VCT .057ADC		32-8318-2	P-6412 ①	P-3068 ①	V-18X

① Fabricate mounting.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	RATING			REPLACEMENT DATA			
	IMPEDANCE	DC RES.	PHILCO PART No.	STANCOR PART No.	MERT PART No.	CHICAGO PART No.	TRIAD PART No.
T2	560KΩ 3.2Ω CT	440Ω .34Ω CT	32-8316-7		A-2900 ①		S-7X ①

① Drill one new mounting hole.

SPEAKER

ITEM No.	RATINGS			REPLACEMENT DATA			NOTES
	SIZE	FIELD	V. C. IMP.	PHILCO PART No.	JENSEN PART No.	QUAM PART No.	
SP1	6 X 9	PM	3.2Ω	36-1631-2	ST-810	69A2	

COILS (RF-IF)

ITEM No.	USE	DC RES.		REPLACEMENT DATA				NOTES
		PRI.	SEC.	PHILCO PART No.	MILLER PART No.	MEISSNER PART No.	IRC PART No.	
L1	RF Choke	4Ω		32-4422-24	4610		CI-1	5, 6 Microphenetics Manual Tuning Manual Tuning Push button tuning Push button tuning Push button tuning Push button tuning Push button tuning Push button tuning Part of L11A Tap ② . 8Ω
L2	Ant. Coil	11.5Ω		312-5129-1				
L3	RF Coil	128Ω		312-5129-1				
L4	Osc. Coil	2.9Ω		312-5131				
L5	Ant. Coil			76-4602-1				
L6	Osc. Coil	4.2Ω		32-4179-5				
L7	Osc. Coil	3Ω		32-4179-6				
L8	Osc. Coil	2.6Ω		32-4179-7				
L9	Osc. Coil	1.6Ω		32-4179-8				
L10	Osc. Coil	1.6Ω		32-4179-9				
L11 A	RF Coil	18.5Ω		32-4510				
L11 B	IF Trap	29Ω						
L12	Osc. Shunt			32-4110-5				
L13	Coil	5Ω		32-4160A				
L14	Input IF	12Ω		32-4240A				
L15	Output IF	14.5Ω						
L16	Choke	0Ω		32-1644				
	Vibrator Hash	.15Ω		32-4170-4				

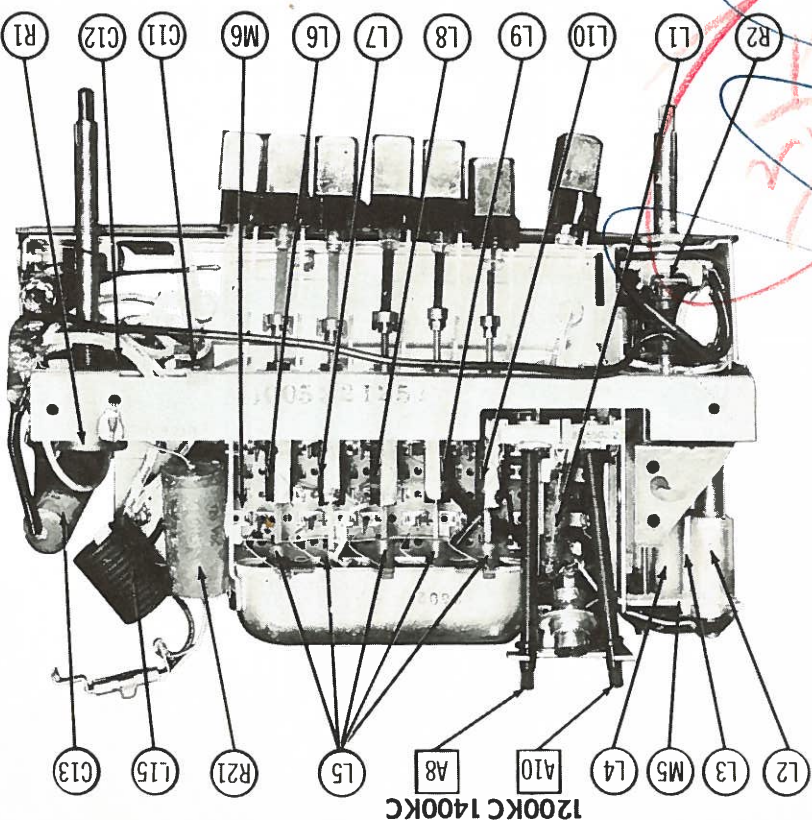
VIBRATOR

ITEM No.	TYPE	INPUT VOLTAGE	FREQUENCY	REPLACEMENT DATA			NOTES
				PHILCO PART No.	CORNEL-DUBILIER PART No.	MALLOY PART No.	
M1	Int.	6.3V	115	45-6711	5326	859	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA			
			PHILCO PART No.	PHILCO PART No.	BUSS PART No.	BUSS PART No.
M2	SFE	14A 32V	FUSE 45-2659	HOLDER 307014 (SFE-14A)	FUSE 157014	HOLDER SFE-14 HD1

CHASSIS—BOTTOM VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

DIAL LIGHTS

ITEM No.	BASE TYPE	VOLTS	AMPS.	BEAD COLOR	REPLACEMENT DATA		NOTES
					PHILCO PART No.		
M3	Bayonet	6-8	.25	Blue	34-2064		Type #44
M4	Bayonet	6-8	.25	Blue	34-2064		Type #44

MISCELLANEOUS

ITEM No.	PART NAME	PHILCO PART No.	NOTES
M5A	Tuning Unit Assy.	76-6634-1	Model C-5209
B	Tuning Unit Assy.	76-6634-2	Model D-5207
C	Switch Assy.	76-6634-3	Includes I2, I3 and I4
M6	Capacitor Assembly	42-1956	Model P-5206
M7	Housing Assembly	31-6522-2	Station Selector
	Housing Assembly	76-8164	Control Unit, Model P-5206
	Housing Assembly	76-8164FA3	Control Unit, Model D-5207
	Bezel	76-6880	Control Unit, Model C-5209 (Includes bracket and rivet assy.)
	Bezel	76-7895	Model P-5206 (Includes bushing assy.)
	Bezel	76-7914	Model D-5207 (Includes bushing assy.)
	Frame	56-8934	Model C-5209
	Excitation Scale (Dial)	56-9056	Push Button Assy, Model P-5206
	Scale	54-5157	Push Button, Model C-5209
	Scale	54-5158	Model P-5206
	Background Plate	76-6636-3	Model C-5209 (Includes background and plate).
	Background Plate	56-9838	Model P-5206
	Pointer	56-8906	Model D-5207
	Pointer	56-8906-1	Model P-5206
	Pointer	56-8935	Model D-5207
	Window	54-8774	Model C-5209 (Glass)
	Window	54-8370	Model P-5206 (Plastic)
	Bezel Overlay	54-8769	Model D-5207
	Knob Assembly	27-4687-19	(2) Volume and Tuning, Models P-5206 and D-5207
	Knob Assembly	27-4687-9	(2) Volume and Tuning, Models C-5209
	Knob Assembly	57-1682-1FA3	(2) Tone and Dimmer, Model P-5206
	Knob Assembly	57-1682-4FA8	(2) Tone and Dimmer, Model D-5207
	Knob Assembly	57-1682-7FA8	(2) Tone and Dimmer, Model C-5209

PUSH BUTTON ADJUSTMENTS

Tuning Range of Buttons

PB2	-	530-1020KC
PB3	-	610-1200KC
PB4	-	700-1410KC
PB5	-	740-1480KC
PB6	-	840-1055KC

Tuning adjustment of the push button is accessible by pulling off the metal covering of the button, exposing a knurled plastic thumb screw.

Select a station within tuning range of the button, depress the button and turn thumb screw until station is correctly tuned.

Repeat procedure with the 4 remaining buttons.

If desired, buttons may be set using a signal from a generator fed through dummy antenna to the receiver antenna receptacle.

