

# MODEL S-1824 CUSTOM AUTO RADIO

## MODEL S-1824 ADJUSTMENTS

All padding adjustments are carefully made at the factory and ordinarily no readjustments are necessary. However, when readjustments are required, the procedure given below must be followed in detail.

**EQUIPMENT**—Fully charged heavy duty storage battery or 6 volt power pack, 077 or 177 Philco Signal generator, 027 Philco Vacuum tube voltmeter and set tester or audio output meter 45-2610 Padding screw driver.

**GENERAL—VACUUM TUBE VOLTMETER.** The model 027 Vacuum tube voltmeter is an extremely sensitive and accurate test instrument and is recommended for use when aligning and adjusting auto radios. Connect the negative (—) terminal of the Vacuum Tube Voltmeter to the high side (ungrounded side) of the volume control. Connect the positive (+) terminal to the radio housing. Connect the "AC" cord to a 110 volt AC socket. Press the VTVM button and the 10 volt button. Turn the "Set Zero Ohms—VTVM" control clockwise until a click is heard. Allow the tubes to heat up for a few minutes. Short the 150 meg. VTVM terminals and adjust the "Set Zero Ohms—VTVM" control until the meter reads zero on the 0-10 range scale (green scale). The needle will deflect from right to left.

**AUDIO OUTPUT METER.** If an audio output meter is used, connect the leads across the voice coil of the speaker. Use the 0-30 volt scale.

With the Radio and signal generator set up for operation at the prescribed frequency, turn the Radio volume control on full and set the signal generator attenuator so that a half scale reading is obtained on the meter. The signal in the speaker should be audible but not loud.

The shielding on the generator output lead must be connected to the Radio housing.

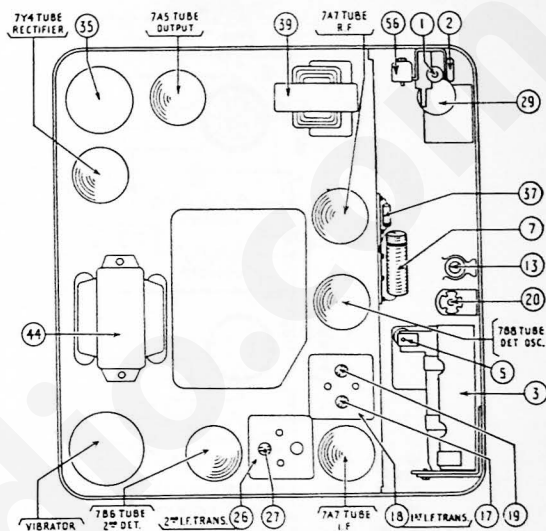


FIGURE 1

OPERATION	SIGNAL GENERATOR		DUMMY CAPACITY	SPECIAL INSTRUCTIONS	ADJUST PADDER
	FREQUENCY	CONNECTION			
1	455 K.C.	To Aerial Receptacle on Radio	See Note 1	Note 2	27 19 17 27 19 17
2	1360 K.C.	To Aerial Receptacle on Radio	See Note 1	Set Tuning Control at 1360 K.C.	36
3	590 K.C.	To Aerial Receptacle on Radio	See Note 1	Set Tuning Control at 590 K.C.	20 Note 3
4	1360 K.C.	To Aerial Receptacle on Radio	See Note 1	Set Tuning Control at 1360 K.C.	24
5	1200 to 1400 K.C.	Note 5	Note 5	Note 5	24 Note 4

Make all adjustments for maximum reading on the meter.

**NOTE 1**—Connect the aerial lead, Part No. 95-0111, to the aerial receptacle in the radio. Connect a 35 Mmfd. Condenser in series between the signal generator and the aerial lead.

**NOTE 2**—Turn the tuning control clockwise as far as it will go.

**NOTE 3**—Rock the tuning control while adjusting the low frequency screw. Tune the control to the signal and adjust the screw for maximum output. Rotate the tuning control back and forth slightly for maximum output. Then readjust the screw for

maximum output. Repeat this procedure until no further improvement is noticed.

**NOTE 4**—When the aerial stage adjustment is made with the Radio installed in the car, the Radio aerial lead must be connected to the car aerial in the usual manner. Connect the signal generator output lead to a wire placed near the car aerial but not connected to it.

**NOTE 5**—When installing the radio in the car, follow the installation instructions carefully. Tune in a weak broadcast signal between 1200 and 1400 Kilocycles on the control scale. Remove the plug button on the end of the radio and adjust the aerial compensator (24) (see Figure 1) for maximum signal.

# MODEL S-1824 CUSTOM AUTO RADIO (CONTINUED)

I.F. = 455KC

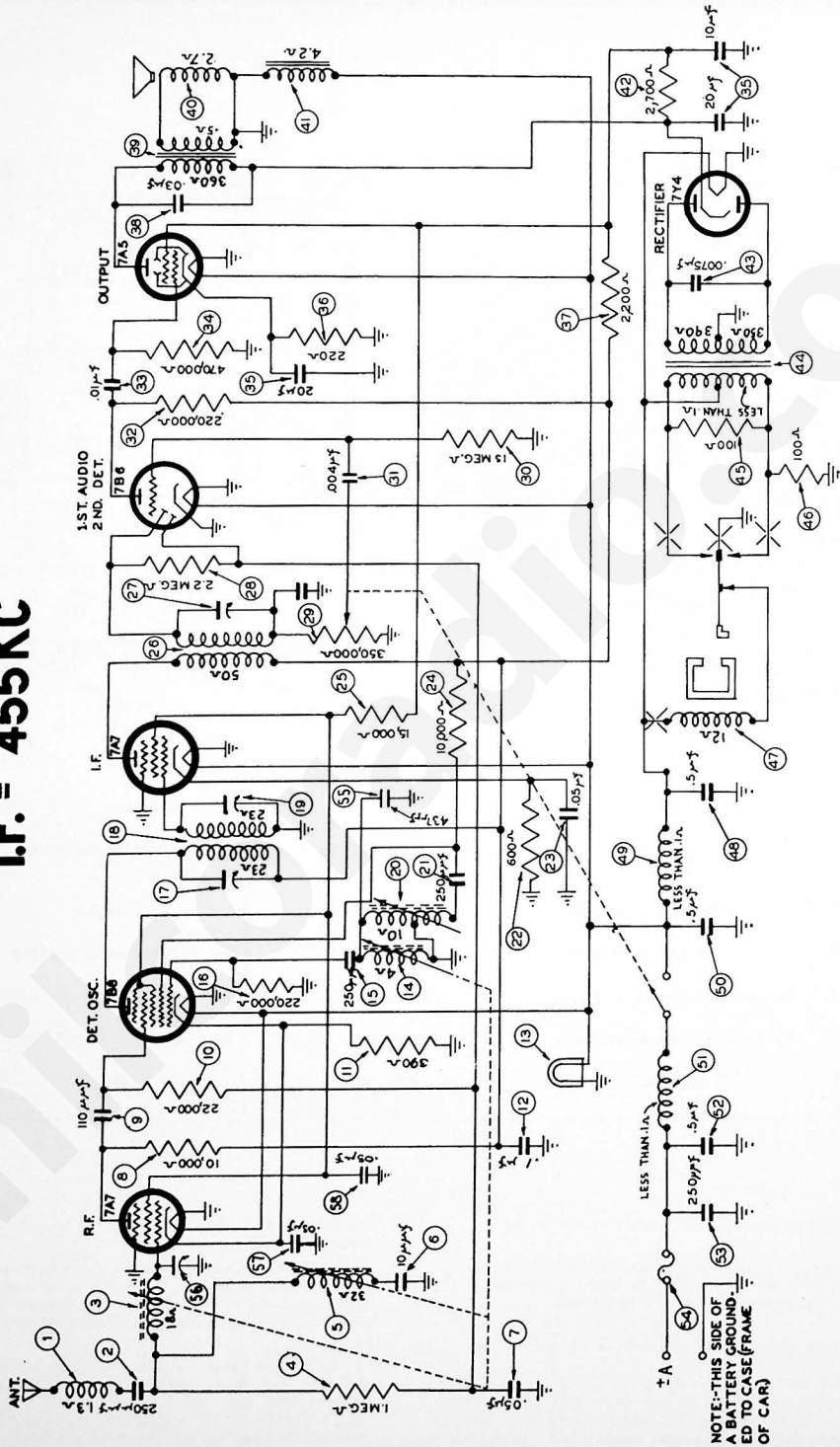


FIGURE 2

# MODEL S-1824 CUSTOM AUTO RADIO (CONTINUED)

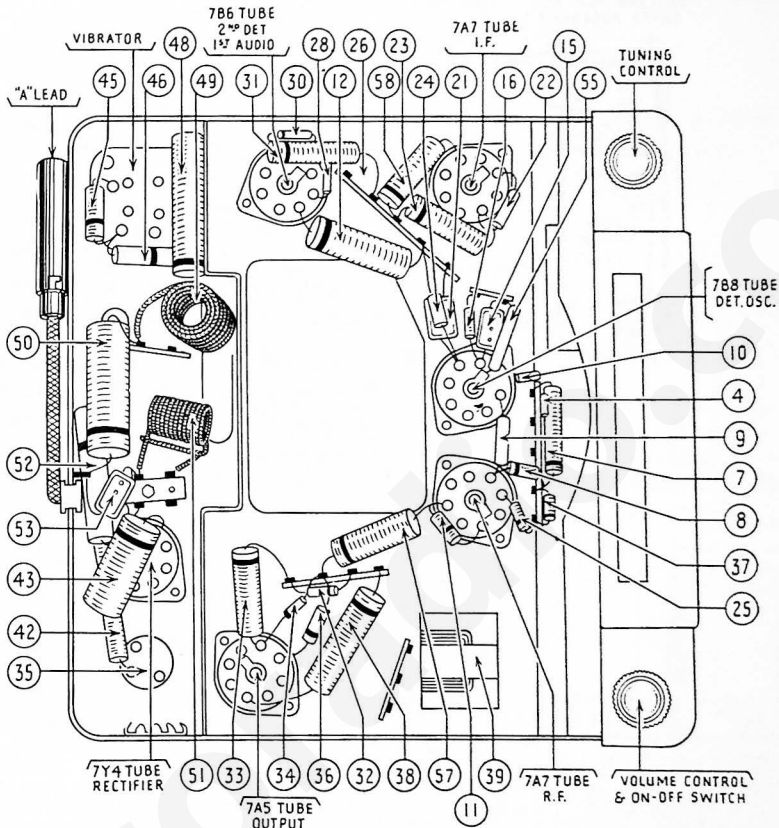
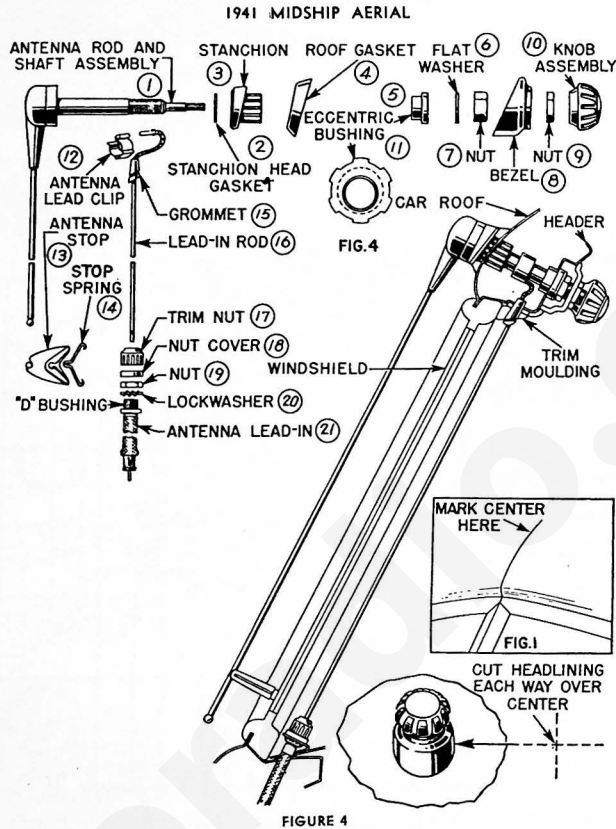


FIGURE 3

## PARTS LIST — S-1824

No.	Description	Part No.	No.	Description	Part No.	No.	Description	Part No.
①	Antenna Choke	65-0378	②	Ladder (Sec. 2nd I. F. Trans.)	65-0151	⑦	Vibrator Choke	65-0151
②	Condenser (250 Mmfd.)	60-125157	③	Resistor	61-0106	⑧	Condenser (.5 Mfd.)	61-0106
③	Inductive Tuning Unit	77-0709	④	(2,200,000 ohms)	33-522154	⑨	"A" Choke	32-1644
④	Resistor	61-0106	⑤	Volume Control (350,000 ohms)	61-0137	⑩	Condenser (.5 Mfd.)	61-0137
⑤	(1,000,000 ohms)	33-510154	⑥	& On-Off Switch	67-0037	⑪	Condenser (250 Mmfd.)	60-125157
⑥	Image Trap Coil	Part of ②	⑦	Resistor	61-0129	⑫	Fuse	45-2539
⑦	Condenser (10 Mmfd.)	Part of ②	⑧	(15,000,000 ohms)	33-615154	⑬	Silver Mica Condenser	437 Mmfd.)
⑧	Condenser (.05 Mfd.)	61-0111	⑨	Condenser (4,000 Mmfd.)	61-0129	⑭	Aerial Ladder	63-0071
⑨	Resistor (10,000 ohms)	33-310334	⑩	Resistor (220,000 ohms)	33-122334	⑮	Condenser (.05 Mfd.)	61-0101
⑩	Condenser (.110 Mmfd.)	60-110157	⑪	Condenser (.01 Mfd.)	61-0176	⑯	Condenser (.05 Mfd.)	61-0111
⑪	Resistor (22,000 ohms)	33-322154	⑫	Resistor (470,000 ohms)	33-447154	⑰	Housing	77-0690FC4
⑫	Resistor (390 ohms)	33-139336	⑬	Filter Condenser		⑱	Tube Side Cover	57-1547FC4
⑬	Condenser (.1 Mfd.)	61-0104	⑭	(10-20-20 Mfd.)	61-0072	⑲	Speaker Cover	57-1348FC4
⑭	Pilot Lamp	34-2064	⑮	Resistor (220 ohms)	33-122336	⑳	Vibrator Socket	27-6133
⑮	Oscillator Coil	Part of ②	⑯	Resistor (2,200 ohms)	33-22334	㉑	Lokalt Socket	27-6151
⑯	Condenser (250 Mmfd.)	60-125157	⑰	Condenser (.03 Mfd.)	61-0119	㉒	Volume Control Cable	95-0154
⑰	Resistor (220,000 ohms)	33-322154	⑱	Output Transformer	65-0395	㉓	Speaker Cable	95-0161
⑱	Ladder (Pri. 1st I. F. Trans.)	65-0399	㉑	Replacement Cone	(For 73-0054-2)	㉔	"A" Switch Cable	95-0155
⑲	Prst I. F. Transformer	65-0399	㉒	Field Coil	Not Replaceable	㉕	"A" Lead	77-0638
⑳	Oscillator Tracking Coil	65-0401	㉓	Resistor (2,700 ohms)	33-227434	㉖	Fuse Lead	77-0052
㉑	Condenser (250 Mmfd.)	60-125157	㉔	Condenser (.7,500 Mmfd.)	61-0127	㉗	Volume Control Nut	W68FA3
㉒	Resistor (600 ohms)	33-160336	㉕	Power Transformer	65-0104	㉘	Speaker Unit	73-0054
㉓	Condenser (.05 Mfd.)	61-0111	㉖	Resistor (100 ohms)	33-110434	㉙	Speaker Gasket	55-1045
㉔	Resistor (10,000 ohms)	33-310334	㉗	Resistor (100 ohms)	33-110434	㉚	Nuts (Speaker Mtg.)	W124FA3
㉕	Resistor (15,000 ohms)	33-315334	㉘	Vibrator	63-0026	㉛	Bolts (Speaker Mtg.)	W138FA26
㉖	Second I. F. Transformer	65-0400	㉙	Condenser (.5 Mfd.)	61-0137			

# MODEL S-1824 CUSTOM AUTO RADIO (CONTINUED)



TYPE No. 1

(2 Section) Part No. 91-0162 (\$7.00)

No.	Description	Part No.	List Price	No.	Description	Part No.	List Price	No.	Description	Part No.	List Price
①	Antenna Rod & Shaft Assy. (For Push On Knob)	91-0169	\$4.25	⑫	Antenna Stop	55-1060	.10		Head Cover Screw (per 100)		
②	Stanchion Head Gasket	91-0206	4.50	⑬	Antenna Stop Spring	57-1024	.05	W207FA8			.20
③	Stanchion	55-1068	.02	⑭	Grommet	55-1057	.04	Reel Assy.	77-0627		.20
④	Roof Gasket	55-1052	.10	⑮	Lead-In Rod Assy.	77-0618	.60	Latch Reel Lock	57-1608		.05
⑤	Eccentric Bushing	55-1055	.10	⑯	Trim Nut	55-1058	.10	Latch Reel Spring (per 100)	57-1609		.75
⑥	Flat Washer (per 100)	W1860FA3	2.00	⑰	Nut Cover	28-5602FA8	.10	Antenna Rod & Tape Assy. (For Push On Knob)	77-0628		1.25
⑦	Nut	97-0177	.05	⑱	Nut	97-0131FA3	.04	(Late Type)	77-0834		1.00
⑧	Bezel	55-1059	.15	⑲	Lockwasher (per 100)	97-0140FA3	1.75	Stanchion Tube Assy. (Early Type)	77-0620		.85
⑨	Nut (Push On)	97-0178FA3	.05	⑳	Antenna Lead	95-0157	1.10	(Late Type)	77-0773		1.00
⑩	Knob	77-0617	.20	㉑	Template	57-1642	.05	"C" Washer (per 100)	4042FA3		2.00
⑪	Antenna Lead Clip	57-1611	.05		Set Screw Wrench	28-4696	.10	Knob Shaft (Late Type)	77-0776		1.00
					Spacer (Between Bezel & Nut)						
					Round Grommet	55-1144	.02				
						55-1189	.03				
					Head Cover	57-1599FA8	.50				

TYPE No. 2

(3 Section) Part No. 91-0189 (\$8.50)

No.	Description	Part No.	List Price	No.	Description	Part No.	List Price	No.	Description	Part No.	List Price
①	Antenna Rod & Shaft Assy.	91-0195	\$5.00	⑫	Grommet	55-1057	.04		Head Cover Screw (per 100)		
②	Stanchion Lead Gasket	55-1068	.02	⑬	Lead-In Rod Assy.	77-0618	.60	W207FA8			.20
③	Stanchion	55-1206	.15	⑭	Trim Nut	55-1058	.10	Reel Assy.	77-0816		.20
④	Roof Gasket	55-1055	.10	⑮	Nut	28-5602FA8	.10	Washer	97-0188		.02
⑤	Eccentric Bushing	55-1054	.10	⑯	Nut	97-0131FA3	.04	Reel Ring	57-1966		.10
⑥	Flat Washer (per 100)	W1860FA3	2.00	⑰	Lockwasher (per 100)	97-0140FA3	1.75	Type Backing Spring	57-1965FA3		.02
⑦	Nut	97-0177	.05	⑱	Antenna Lead	95-0157	1.10	Latch Reel Lock	57-1608		.05
⑧	Bezel	55-1059	.15	㉑	Template	57-1642	.05	Latch Reel Spring (per 100)	57-1609		.75
⑨	Nut	97-0178FA3	.05		Set Screw Wrench	28-4696	.10	Antenna Rod & Tape Assy.	77-0774		1.50
⑩	Knob	77-0616	.45		Spacer (Between Bezel & Nut)			Stanchion Tube Assy.	77-0773		1.00
⑪	Antenna Lead Clip	57-1611	.05		Round Grommet	55-1144	.02	"C" Washer (per 100)	4042FA3		2.00
⑫	Antenna Stop	55-1060	.10		Head Cover	57-1599FA8	.50	Knob Shaft	77-0776		1.00
⑬	Antenna Stop Spring	57-1024	.05								