MODELS 41-842, 41-843 AND 41-844

SPECIFICATIONS

Models 41-842, 41-843, and 41-844 are seven (7) tube portable super-heterodyne radios operated by batteries or A.C.—D.C. current. These models are similar with the exception of the cabinets and tuning scale design.

Features included in each model are: The Philco built-in low impedance loop aerial; tuning band from 540 to 1600 K.C. two I. F. amplifier stages, beam power pentode audio output stage; Philco Loktal tubes, and a highly sensitive permanent magnet speaker.

PHILCO TUBES USED: 1LE3, converter; 1LE3, oscillator; two, 1LN5, I. F. amplifiers; 1LH4, 2nd detector, 1st audio, A. V. C.; 1LB4, audio output, and a 117Z6G rectifier.

INTERMEDIATE FREQUENCY: 455 K.C.

POWER SUPPLY: 115 volts, A.C. or D.C. or two Philco "A" batteries type P-100, and two Philco "B" batteries type P-200.

For portable battery operation wrap the power line cord around its holder clamp on the back of the cabinet and insert the plug end into the socket provided on the chassis.

To operate on 115 volts A.C.—D.C., remove the power line cord plug from the socket on the chassis and insert into a power receptacle.

CABINET DIMENSIONS:	Height	Width	Depth
Model 41-842	10 - 9/16	13 - 3/8	6 - 1/4
Model 41-843	10 - 9/16	13 - 3/8	7
Model 41-844	11 - 11/16	13 - 7/8	7 - 1/4

OUTSIDE AERIAL AND GROUND

Under ordinary operating conditions, an outside aerial or ground is not required with these models. In some locations, however, such as steel reinforced buildings, remote camps and other shielded areas where signal strength is weak, an additional aerial should be used. To connect a regular outside aerial connections are provided on the side of the cabinet for inserting a special aerial coupler, part No. 76-1230.

The PHILCO Auxiliary Plug-in Loop Aerial, Part No. 45-2878 may be also plugged into the outside aerial connections. This type of aerial is ideal for portable use (on trains and in hotels) or semi-permanent installations. Instructions are supplied with the auxiliary aerial for installation.

ALIGNING R. F. AND I. F. COMPENSATORS

The following procedure covers all Models in this Bulletin.

EQUIPMENT REQUIRED

1. SIGNAL GENERATOR, such as Philco Model 077 A.C. operated or Model 177 battery operated. These signal generators cover a frequency range from 115 to 36,000 K.C.
2. INDICATING DEVICE: To obtain maximum signal strength and accurate adjustment of the padders a vacuum tube voltmeter similar to Philco Models 027 and 028 is recommended. These instruments also contain an audio output meter which may be used as an indicating device. The method of connecting either of these instruments is listed below.
3. ALIGNING TOOLS: Fiber handle screwdriver, Philco Part No. 45-2610.

CONNECTING ALIGNING METERS

AUDIO OUTPUT METER: If an audio output meter is used, connect it across the plate and screen terminals of the output tubes. Adjust the meters to use the 0 to 10 scale. Terminal No. 1 on the rear of the chassis which connects to the speaker is also provided for connecting the audio output meter. If this terminal is used, the lowest scale of the meter should be used when aligning.

VACUUM TUBE VOLTMETER: If a vacuum tube voltmeter is used as an aligning indicator, the negative (—) terminal is connected to the A. V. C. circuit of the receiver through a 2 megohm resistor. The positive (+) terminal is connected to the chassis or ground.

SIGNAL GENERATOR: When adjusting the "I. F." padders the high side of the signal generator is connected through a .1 mfd. condenser to the loop tuning condenser stator lug which connects to the grid of the first detector tube. The ground or low side of the signal generator is connected to the chassis of the receiver.

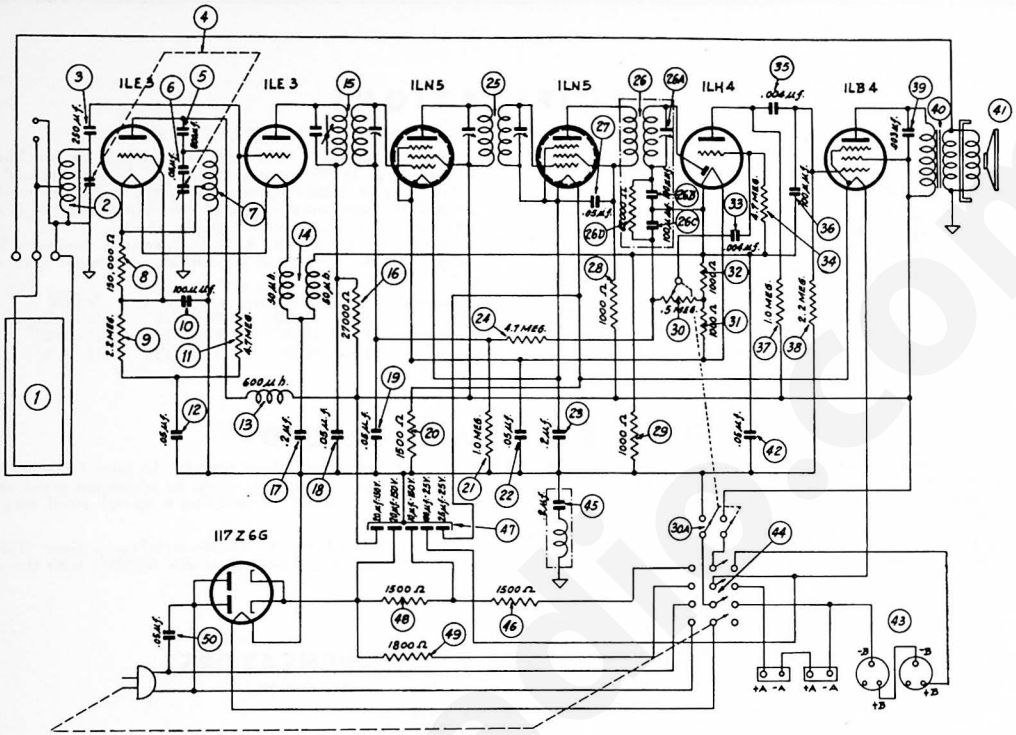
When aligning the R. F. padders of the portable models a loop aerial is made from a few turns of wire and connected to the signal generator output terminals. The signal generator is then placed a few feet from the set. The loop aerial of the receiver should be assembled in the cabinet together with the battery when adjusting the R. F. padders.

MODELS 41-842, 41-843, 41-844

These models may be adjusted when operated by battery or 115 volts A.C.-D.C. power.

Operations in Order	SIGNAL GENERATOR		RECEIVER			SPECIAL INSTRUCTIONS
	Output Connections to Receiver	Dial Setting	Dial Setting	Control Setting	Adjust Compensators	
1	See Paragraph on Signal Generator above	455 K.C.	540 K.C.	Vol. Max.	26A, 25A, 25B, 15A, 15B	Note A
2	Use Loop on Generator as above	1500 K.C.	1500 K.C.	Vol. Max.	4B, 4A	

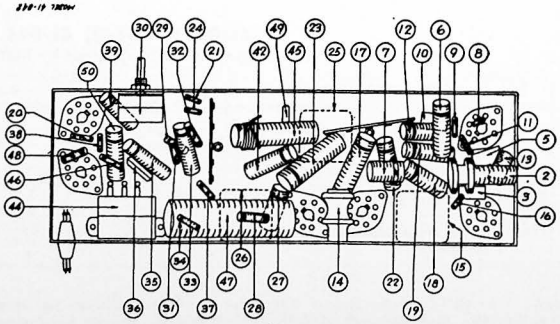
NOTE A: DIAL CALIBRATION—Before adjusting the R. F. padders the dial must be aligned to track properly with the tuning condenser. To adjust the dial proceed as follows: With the tuning condenser in the closed position (maximum capacity), set the dial pointer on the small dot below 540 K.C.



SCHEMATIC DIAGRAM — MODELS 41-842, 41-843, 41-844

Replacement Parts — Models 41-842, 41-843, 41-844

SCHEM. No.	DESCRIPTION	PART No.
①	Loop Aerial	76-1216
	Screw (Loop Mtg.)	W-2129
②	Aerial Transformer	32-3622
	Clip	28-5002
③	Mica Condenser (250 mmfd.)	60-125157
④	Tuning Condenser	31-2530
	Rubber Grommet (Mtg.)	27-4596
	Spacers (Mtg.)	28-5665
	Spring (Drive Cord)	28-8882
	Tuning Shaft	56-6132
	"C" Washer	57-0127
	Drive Cord	31-2380
⑤	Mica Condenser (800 mmfd.)	60-180137
⑥	Condenser (.05 mfd., 200 volts)	30-4519
⑦	Oscillator Transformer	32-3633
⑧	Resistor (150,000 ohms)	33-415339
⑨	Resistor (2.2 megohm)	33-522339
⑩	Mica Condenser (100 mmfd.)	60-110157
⑪	Resistor (4.7 megohm)	33-547339
⑫	Condenser (.05 mfd., 200 volts)	30-4519
⑬	Oscillator Choke	32-3615
⑭	Filament Choke	32-3632
⑮	1st I. F. Transformer	32-3620
	Palmut (Mtg.)	W-1949
⑯	Resistor (27,000 ohms)	33-327339
⑰	Condenser (.2 mfd.)	30-4587
⑱	Condenser (.05 mfd., 200 volts)	30-4519
⑲	Condenser (.05 mfd., 200 volts)	30-4519
⑳	Resistor (1500 ohms)	33-215339
㉑	Resistor (1 megohm)	33-510339
㉒	Condenser (.05 mfd., 200 volts)	30-4519
㉓	Condenser (.2 mfd.)	30-4587
㉔	Resistor (4.7 megohm)	33-547339
㉕	2nd I. F. Transformer	32-3621
	Palmut (Mtg.)	W-1949
㉖	3rd I. F. Transformer	32-3631
	Palmut (Mtg.)	W-1949
㉗	Condenser (.05 mfd., 200 volts)	30-4519
㉘	Resistor (1000 ohms)	33-210339
㉙	Resistor (1000 ohms)	33-210339
㉚	Volume Control	33-5436
	Palmut (Mtg.)	W-2157
㉚a	Switch	Part of ㉚
㉛	Resistor (1000 ohms)	33-210339
㉜	Resistor (1000 ohms)	33-210339
㉝	Condenser (.004 mfd., 400 volts)	30-4578
㉞	Resistor (4.7 megohm)	33-547339
㉟	Condenser (.004 mfd., 400 volts)	30-4578
㊱	Mica Condenser (100 mmfd.)	60-110157
㊲	Resistor (1 megohm)	33-510339
㊳	Resistor (2.2 megohm)	33-522339
㊴	Condenser (.003 mfd., 1000 volts)	30-4469
㊵	Output Transformer	32-8169
㊶	Cone Assembly (For Speaker 36-1540)	36-4201
㊷	Condenser (.05 mfd., 200 volts)	30-4519
㊸	Battery Plug and Cable	41-3570
㊹	Automatic Power Change Over Switch	42-1650
㊺	Condenser (.2 mfd.) and Choke Assembly	76-1227
㊻	Resistor (1500 ohms)	33-215339
㊼	Electrolytic Condenser	30-2498
	Clamp	56-1452
㊽	Resistor (1500 ohms)	33-215339
㊾	Resistor (1800 ohms)	33-218339
㊿	Condenser (.05 mfd., 200 volts)	30-4519
	Cabinet (41-842)	10533A
	Cabinet (41-843)	10537A
	Cabinet (41-844)	10538A
	Cable (Power)	L-3199
	Dial Scale (41-844)	27-5699
	Dial Pointer	27-4868
	Dial Scale (41-842, 41-843)	27-5579
	Dial Pointer (41-842, 41-843)	54-4868
	Knob	27-4970
	Speaker	36-1540
	Socket (Tubes)	27-6151
	Socket	27-6174
	Grommet (Mtg. Socket)	54-4065
	Adapter Plate	56-2112
	Screw (Chassis Mtg.)	W-2030
	Washer (Chassis Mtg.)	W-410



LOCATION OF PARTS — UNDERSIDE OF CHASSIS