

MODELS 41-841, 41-851, 41-695, RUNS 1 AND 2

SPECIFICATIONS

Model 41-841, Code 121, Runs 1 and 2

Model 41-841, Code 121 is a five (5) tube portable A.C.-D. C. or battery operated superheterodyne radio with a tuning range from 540 to 1600 K. C. In addition this model includes: a Built-in Loop Aerial; Beam Power Pentode Audio Output Stage; Highly Sensitive Permanent Magnet Speaker; PHILCO Super-efficient Loktal Tubes; and an ON-OFF Indicator.

Two types of 2nd Detector, 1st Audio tubes are used in this model. Early production radios use a 1H5G tube and later production sets marked Run 2 contain a 1H5D tube. With the exception of the Second Detector, First Audio tube, the tube complement of Run No. 1 and No. 2 radios are the same.

PHILCO TUBES USED: 1A7G, Oscillator Converter; 1N5G, I. F. Amplifier; *1H5G, (Run No. 1) 2nd Detector, 1st Audio A. V. C.; 35Q5G, Audio Output; 117Z6G, Rectifier; *1L5D, (Run No. 2).

INTERMEDIATE FREQUENCY: 455 K. C.

POWER SUPPLY: 115 volts, A. C.-D. C. and a Philco Combination "A. B." battery type P-841.

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

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

Model 41-851, Code 121, Runs 1 and 2

Model 41-851, Code 121, Runs 1 and 2 is a five (5) tube portable A. C.-D. C. or battery operated superheterodyne radio with two tuning ranges, 540 to 1600 K. C. and 6 to 15 M. C. In addition this model includes: a Built-in Loop Aerial; Beam Power Pentode Audio Output Stage; Highly Sensitive Permanent Magnet Speaker; PHILCO Super-efficient Loktal Tubes and an ON-OFF Indicator.

AERIAL AND GROUND

Under ordinary operating conditions, an outside aerial or ground is not required with Models 41-841 and 41-851. 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 inside the cabinet. Connect the aerial to the white wire and the ground to the black wire.

Additional outside aerial connections (Jacks) are located on the side of the cabinet. These are provided for the PHILCO Auxiliary Plug-in Loop Aerial, Part No. 45-2808. 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.

Model 41-695: To obtain maximum receiving performance from the Model 41-695, the Philco FARM AERIAL Part No. 40-6383 should be used. A good ground connection is also necessary.

ALIGNING R. F. AND I. F. COMPENSATORS

The following procedure covers all three Models:

Equipment Required

- 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.
- INDICATING DEVICE:** To obtain maximum signal strength and accurate adjustment of the padders a vacuum tube voltmeter similar to Audio 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.
- 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.

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

Production Runs 1 and 2 of this model are identical with the exception of the 2nd Detector, 1st Audio tube. The early production (Run 1) radios used a 1H5G tube and the later production radios (Run 2) contained a 1H5D tube.

PHILCO TUBES USED: 1A7G, Oscillator Converter; 1N5G, I. F. Amplifier; *1H5G, (Run No. 1) 2nd Detector, 1st Audio A. V. C.; 35Q5G, Audio Output; 117Z6G, Rectifier; *1L5D, (Run No. 2).

INTERMEDIATE FREQUENCY: 455 K. C.

POWER SUPPLY: 115 volts, A. C.-D. C. and a Philco Combination "A. B." battery type P-841.

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

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

Model 41-695

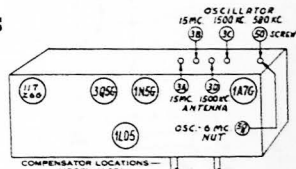
Model 41-695 is a radio-phonograph combination consisting of a five (5) tube super-heterodyne radio, a manually operated, even-speed, spring-wind Phonograph Motor which uses no current and a crystal pickup.

The radio includes: Super-efficient Philco Farm Radio Tubes, designed for low drain, 1 1/2 volt circuit; High Output Permanent Magnet Speaker; Automatic Volume Control; Push-pull Pentode Audio System with screen phase inversion; Automatic "ON-OFF" indicator, and covers a tuning band from 540 to 1720 K. C.

INTERMEDIATE FREQUENCY: 455 K. C.

PHILCO BATTERIES REQUIRED: Type P-60D11L, "A" voltage 115 "B" voltage 90

PHILCO TUBES USED: 1A7G, Oscillator-converter; 1N5G, I. F. Amplifier; 1H5G, 2nd Detector, 1st Audio A. V. C.; two, 1A5G, Push-pull Pentodes Output.



connects to the grid of the first detector oscillator 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.

To align the R. F. padders of the 41-695, connect the signal generator to the aerial through a 225 mufd. condenser.

Models 41-841, 41-695

The Model 41-841 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		
					41-841		41-695
1	See Paragraph on Signal Generator above	455 K. C.	540 K. C.	Vol. Max.	8A, 8B 16A	3A, 3B 4A	Note A
2	Use Loop on Generator as above	1500 K. C.	1500 K. C.	Vol. Max.	1C, 1B	7B, 7A	

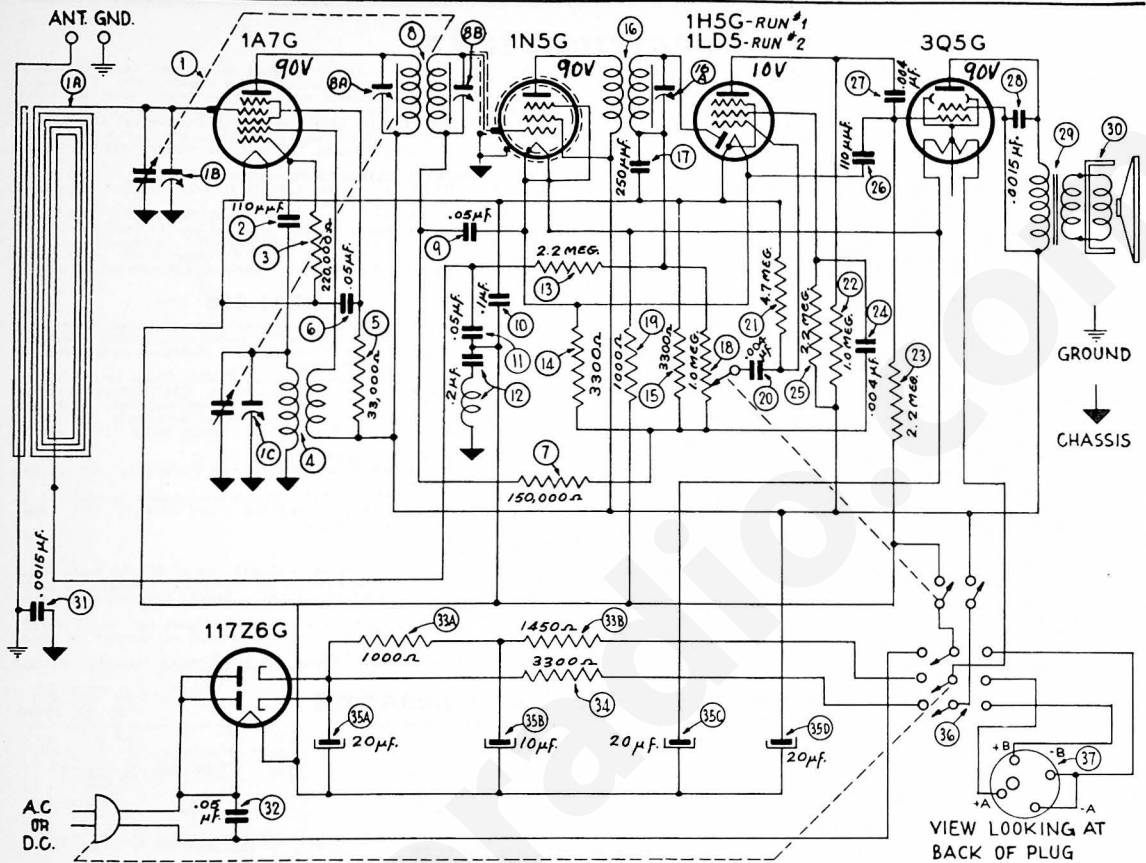
Model 41-851

1	Stator Plate Lug Loop Tuning Condenser	455 K. C.	540 K. C.	Vol. Max.	18A, 18B, 24A		
2	Loop on Generator	1500 K. C.	1500 K. C.	Range Switch "Brdcst" Vol. Max.	3C, 3D		Note A
3	Loop on Generator	580 K. C.	580 K. C.	Range Switch "Brdcst" Vol. Max.	50		
4	Recheck operation No. "2"						
5	Loop on Generator	6 M. C.	6 M. C.	Range Switch "S. W."	50A		
6	Loop on Generator	15 M. C.	15 M. C.	Range Switch "S. W."	3B, 3A		Note B

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 550 K. C.

NOTE B: When adjusting compensator be sure to tune in the fundamental signal (15 M. C.) instead of the image signal. If the compensator is correctly adjusted, the image signal will be found by turning dial 910 K. C. below the fundamental signal, which will be 14,090 M. C.

MODELS 41-841, 41-851, 41-695, RUNS 1 AND 2 (CONTINUED)



Replacement Parts — Model 41-841, Code 121

IN RUN 1 RADIOS WHICH USE A 1H5G IN THE SECOND DETECTOR CIRCUIT, PARTS 24 AND 25 ARE NOT REQUIRED.

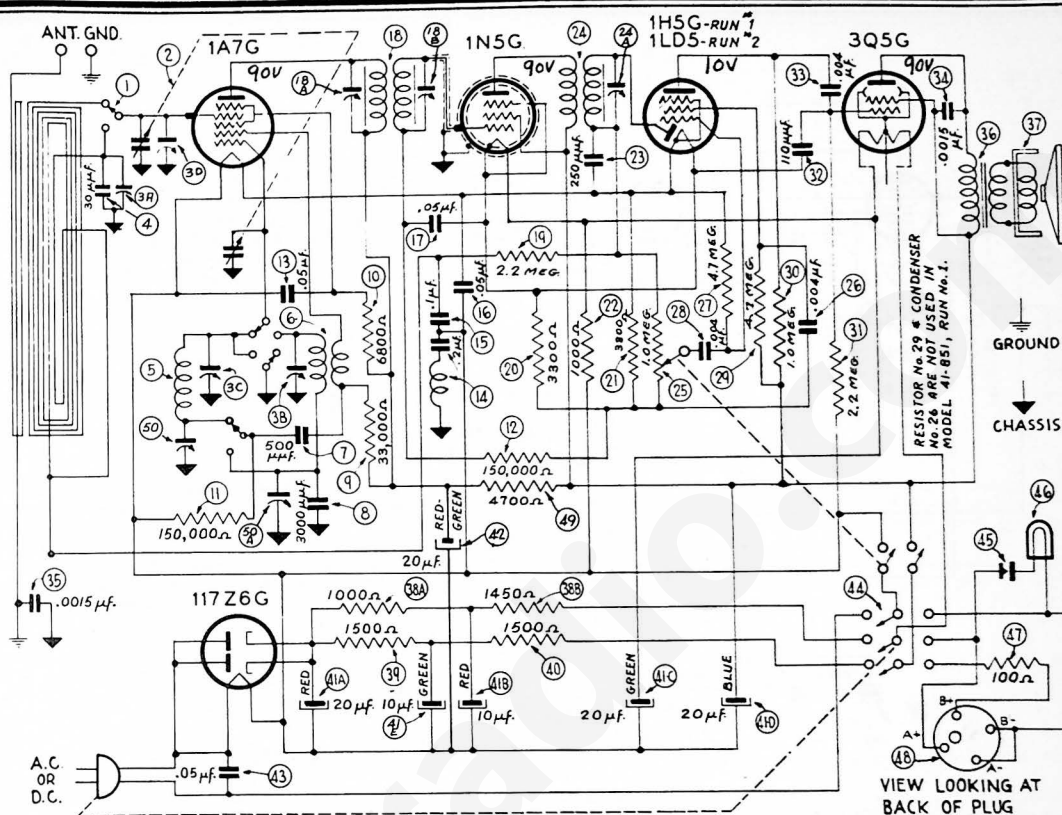
SCHE. No.	DESCRIPTION	PART No.	SCHE. No.	DESCRIPTION	PART No.	SCHE. No.	DESCRIPTION	PART No.
1	Tuning Condenser	31-2509	18	Dial	27-5579	37	Socket (Tubes, 1LD5 Tube, Run 2)	27-6151
2	Tuning Shaft	56-6080	19	Dial Pointer	27-4868	38	Rubber Grommet (Socket 1LD5 Tube)	54-4020
3	"C" Washer	57-0127	20	Knobs	27-4970	39	Rubber Washer (Socket 1LD5 Tube)	27-4112
4	Drive Cord	31-2380	21	Speaker	26-1526	40	Eyebolt (Socket 1LD5 Tube)	W-752
5	Spring	26-4882	22	Socket (Tubes, R. F., I. F., Audio)	27-6133	41	Screw (Chassis Mounting)	W-2030
6	Loop Aerial (Part of Cabinet 10473A)		23	Socket (Tubes, Rectifier)	27-6137	42	Washer (Chassis Mounting)	W-410
7	Comp. (Aerial Adjustment, Part of 31)							
8	Comp. (Oscillator Adjustment, Part of 31)							
9	Mica Condenser (.110 mfd.)	60-110157						
10	Resistor (220,000 ohms, 1/2 watt)	33-422339						
11	Oscillator Transformer	32-3424						
12	Resistor (33,000 ohms, 1/2 watt)	33-333339						
13	Condenser (.05 mfd., 400 volts)	30-4444						
14	Resistor (150,000 ohms, 1/2 watt)	33-45139						
15	1st I. F. Transformer	32-3583						
16	Condenser (.05 mfd., 200 volts)	30-4519						
17	Condenser (.1 mfd., 400 volts)	30-4455						
18	Condenser (.05 mfd., 200 volts)	30-4519						
19	Condenser and R. F. Choke (2 mfd.)	74-1024						
20	Resistor (2.2 megohms)	33-522339						
21	Resistor (3300 ohms, 1/2 watt)	33-233339						
22	Resistor (3300 ohms, 1/2 watt)	33-233339						
23	2nd I. F. Transformer	30-4519						
24	Mica Condenser (250 mfd.)	60-125157						
25	Volume Control	33-5360						
26	Pinnut	W-2157						
27	Resistor (1000 ohms, 1/2 watt)	33-210339						
28	Condenser (.004 mfd., 400 volts)	30-4578						
29	Resistor (.47 megohms)	33-547339						
30	Resistor (1 megohm)	33-4578						
31	Resistor (2.2 megohms)	33-522339						
32	Condenser (.004 mfd., 400 volts)	30-4426						
33	Resistor (2.2 megohms)	33-522339						
34	Mica Condenser (.110 mfd.)	60-110157						
35	Condenser (.004 mfd., 400 volts)	30-4426						
36	Output Transformer	30-4555						
37	Cone Assem. (For Speaker 26-1526-3)	36-4175						
38	Condenser (.0015 mfd., 200 volts)	30-4555						
39	Condenser (.05 mfd., 400 volts)	30-4519						
40	Resistor (1000 ohms)	33-3400						
41	Resistor (3300 ohms, 1/2 watt)	33-233339						
42	Electrolytic Condenser (20 mfd.)	30-2492						
35A	Electrolytic Cond. (10 mfd.) Part of 35A							
35B	Elec. Cond. (20 mfd. 25 v.) Part of 35A							
35C	Electrolytic Cond. (20 mfd.) Part of 35A							
35D	Automatic Power Changerover Switch	42-1853						
36	Battery Cable	41-392						

MISCELLANEOUS PARTS

Cord (Power)	L-3189
Clip (Oscillating Coil Mounting)	26-5002
Cabinet	10473A

PART LOCATIONS — UNDERSIDE OF CHASSIS MODEL 41-841, CODE 121, RUNS 1 AND 2

MODELS 41-841, 41-851, 41-695, RUNS 1 AND 2 (CONTINUED)



SCHEMATIC DIAGRAM MODEL 41-851, RUNS 1 AND 2

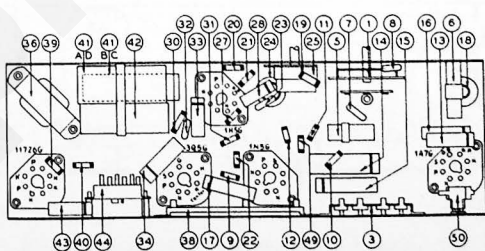
Replacement Parts — Model 41-851, Runs 1 and 2

PARTS 26 AND 29 ARE NOT USED IN EARLY PRODUCTION RUN 1 RADIOS.

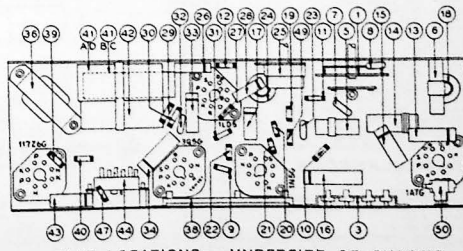
SCHE. No.	DESCRIPTION	PART No.	SCHE. No.	DESCRIPTION	PART No.	SCHE. No.	DESCRIPTION	PART No.
1	Band Switch	42-1870	23	Mica Condenser (250 mfd.)	60-125157	49	Resistor (4700 ohms)	33-247339
1A	Loop Aerial (Run Two)	76-1175	24	2nd I. F. Transformer	32-3266	50	Compensator	31-6100
2	Loop Aerial (Run One)	76-1156	25	Volume Control	33-5390		Compensator (Part of 50)	
3	Tuning Condenser	31-2459	26	Condenser (.004 mfd., 400 volts)	30-4578			
4	Drive Cond.	31-2380	27	Resistor (4.7 megohms)	33-547339			
5	Tuning Shaft	56-6080	28	Resistor (.004 mfd., 400 volts)	33-522339			
6	"C" Washer	57-0127	29	Resistor (2.2 megohms)	33-522339			
7	Compensator (Short Wave Aerial)	31-6347	30	Resistor (1 megohm)	33-522339			
8	Compensator (S. W. Oscillator) Part of 3A		31	Resistor (2.2 megohms)	33-522339			
9	Comp. (Broad. Oscillator) Part of 3A		32	Mica Condenser (110 mfd.)	60-111157			
10	Compensator (Broad. Aerial) Part of 3A		33	Condenser (.01 mfd., 400 volts)	30-4572			
11	Mica Condenser (50 mfd., Mounted on Loop, Run 2)	60-050127	34	Condenser (.0015 mfd., 200 volts)	30-4555			
12	Oscillator Transformer (Broadcast)	32-3431	35	Output Transformer	32-8139			
13	Oscillator Transformer (Short Wave)	32-3577	36	Cone Assembly (For Speaker 36-1506-1)	36-4138			
14	Mica Condenser (500 mfd.)	60-150137	37	Resistor (Wirewound, 1000 ohms)	33-3387			
15	Mica Condenser (3000 mfd.)	60-230334	38	Resis. (Wirewound, 450 ohms) Pt. of 38A	33-215339			
16	Mica Condenser (500 mfd.)	60-150137	39	Resistor (1500 ohms)	30-2452			
17	Resistor (32,000 ohms)	33-268339	40	Resistor (1500 ohms)	30-2453			
18	Resistor (3,000 ohms)	33-413339	41A	Electrolytic Cond. (20 mfd., 150 volts)	30-2382			
19	Resistor (6800 ohms)	33-415339	41B	Electrolytic Cond. (20 mfd., 150 volts)	30-2382			
20	Resistor (150,000 ohms)	30-4518	41C	Elec. Cond. (20 mfd., 25 v.) Part of 41B	30-1587			
21	Condenser (.05 mfd., 400 volts)	30-4518	41D	Elec. Cond. (10 mfd., 50 v.) Part of 41A	30-1587			
22	Condenser (.05 mfd., 400 volts)	30-4518	41E	Elec. Cond. (10 mfd., 150 v.) Part of 41A	30-2382			
23	Condenser (.05 mfd., 400 volts)	30-4518	42	Electrolytic Condenser (20 mfd.)	30-1587			
24	Condenser (.05 mfd., 200 volts)	30-4519	43	Condenser (.05 mfd., 400 volts)	32-1353			
25	1st I. F. Transformer	32-3583	44	Automatic Power Switch	56-1487			
26	Resistor (2.2 megohms)	33-522339	45	Pilot Lamp Switch	36-2031			
27	Resistor (3300 ohms, 1/2 watt)	33-233339	46	Pilot Lamp	33-110339			
28	Resistor (1000 ohms, 1/2 watt)	33-233339	47	Resistor (100 ohms, 1/2 watt)	33-110339			
29	Resistor (3300 ohms, 1/2 watt)	33-233339	48	Battery Cable	41-3592			

MISCELLANEOUS PARTS

DESCRIPTION	PART No.
Cord (Power)	L-3189
Cabinet	104738
Clip (Coil Mounting)	28-5002
Dial	318-2055
Dial Pointer	27-4868
Indicator Arm Assembly	318-2099
Spring	28-8947
Cam and Nut Assembly	36-9861
Knob (Tuning Mounting)	27-4874
Push-button (Pilot Lamp)	27-4844
Screw (Chassis Mounting)	W-2030
Shield (Tube)	56-1568
Shield (Chassis Tube)	56-1568
Shield Clip	56-1567
Socket (Loop Terminal)	27-6141
Socket (1A5 Tube, Run 2)	27-6151
Rubber Grommet	34-4020
Rubber Washer	27-6174
Eyelet	W-792
Socket Assembly (Pilot Lamp)	27-6174
Socket (Tube)	27-8133
Socket (Rectifier)	27-6137
Snap Fastener (Pilot Lamp)	28-4342
Terminal Panel (Loop)	27-6141
Washer (Chassis Mounting)	W-410

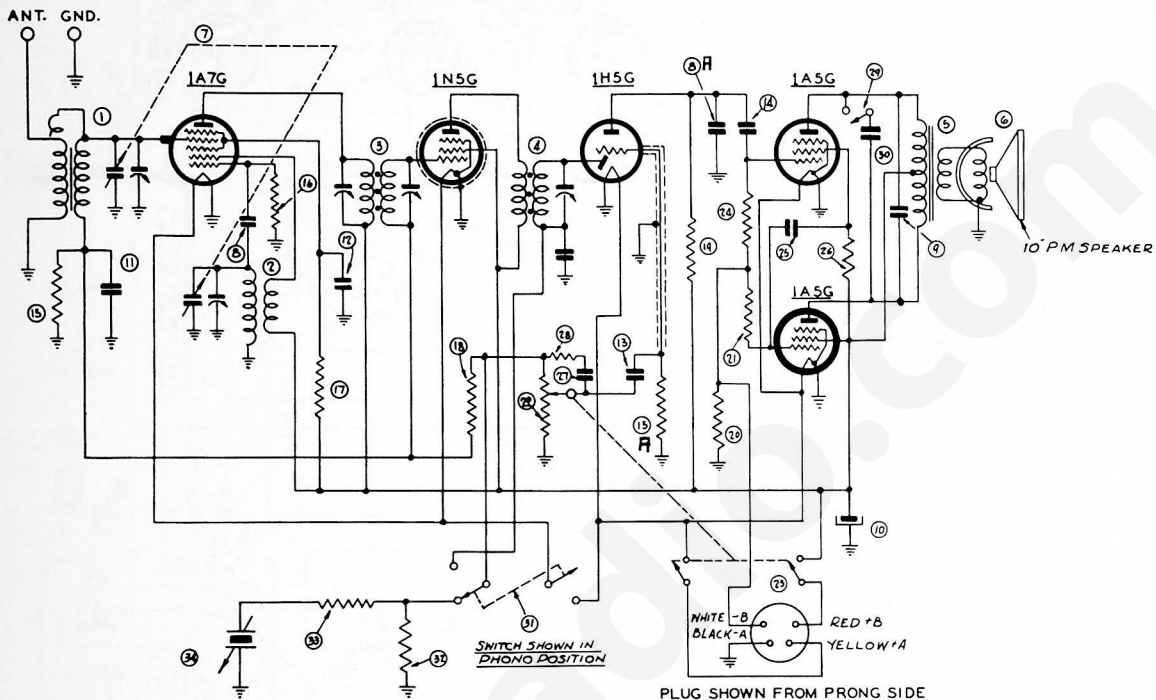


PART LOCATIONS — UNDERSIDE OF CHASSIS MODEL 41-851, RUN 1



PART LOCATIONS — UNDERSIDE OF CHASSIS MODEL 41-851, RUN 2

MODELS 41-841, 41-851, 41-695, RUNS 1 AND 2 (CONTINUED)



HAND WIND PHONO-MOTOR USED.

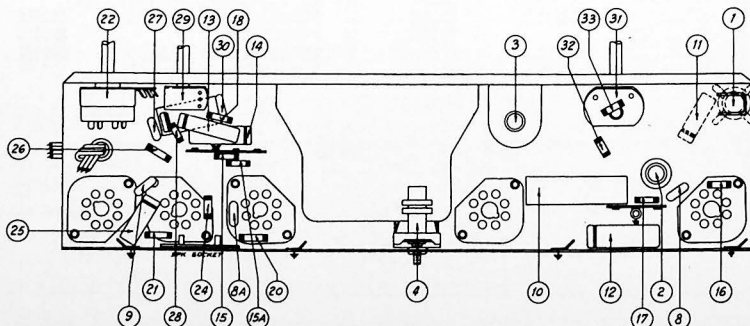
SCHEMATIC DIAGRAM MODEL 41-695

Replacement Parts — Model 41-695

SCHE. No.	DESCRIPTION	PART No.	SCHE. No.	DESCRIPTION	PART No.	SCHE. No.	DESCRIPTION	PART No.
1	Aerial Transformer	32-3183	Indicator	76-1122	Shield (Tube)	56-1566		
2	Oscillator Transformer	32-3184	Lever (Indicator)	76-1049	Shield (Tube)	56-1567		
3	1st I. F. Transformer	32-3198	Cam Assembly	38-9861	Screw (Bracket Mounting)	W-647		
4	2nd I. F. Transformer	32-3199	Knob	37-4332	Screw (Motor Mounting)	W-2002		
5	Output Transformer	32-8107	Motor (Phono.)	35-1238	Screw (Chassis Mounting)	W-2030		
6	Speaker Cone (For Speaker 36-1522-4)	36-4171	Tunable Coupling	35-2074	Socket (6 prong)	27-6133		
7	Tuning Condenser	31-2457	Crank	38-2206	Socket (Speaker)	27-6115		
8	Drive Cord (Indicator Drive)	31-2504	Spindle	56-6110	Spindle (Motor)	56-6110		
9	Drive Drum	31-2465	Washer (Coupling)	56-1972	Washer (Chassis Mounting)	W-410		
10	Electrolytic Condenser (40 mfd.)	30-2396						
11	Condenser (.05 mfd., 400 volts)	30-4519						
12	Condenser (.25 mfd., 100 volts)	61-0112						
13	Condenser (.004 mfd., 400 volts)	30-4578						
14	Condenser (.01 mfd., 400 volts)	30-4572						
15	Resistor (4.7 megohms)	33-547339						
16	Resistor (220,000 ohms)	33-422339						
17	Resistor (68,000 ohms)	33-368339						
18	Resistor (10 megohms)	33-610339						
19	Resistor (1 megohm)	33-510339						
20	Resistor (560 ohms)	33-156326						
21	Resistor (2.2 megohms)	33-522339						
22	Volume Control	33-5413						
23	Battery Cable	41-3505						
24	Resistor (2.2 megohms)	33-522339						
25	Condenser (.01 mfd., 400 volts)	30-4572						
26	Resistor (10,000 ohms)	33-510339						
27	Condenser (50 mmfd.)	60-050157						
28	Resistor (100,000 ohms)	33-103339						
29	Tone Control Switch	42-1810						
30	Condenser (.002 mfd., 400 volts)	33-103339						
31	Radio-Phono Switch	42-1609						
32	Resistor (10,000 ohms)	33-103339						
33	Resistor (47,000 ohms)	33-522339						
34	Crystal Pickup and Tone Arm Complete	36-2205						

MISCELLANEOUS PARTS

Bezel	27-4975
Glass (Bezel)	27-9610
Speed Clips (Glass Mounting)	56-1876
Speed Clips (Bezel Mounting)	56-1827
Cable (Pickup)	41-3557
Cable (Speaker)	41-3451
Clip (Aerial Transformer)	28-5022
Cabinet	10817A
Clamp (Crank)	36-1861
Dial	27-9611
Pointer	56-1856



PART LOCATIONS — UNDERSIDE OF CHASSIS MODEL 41-695