



## Philco Radio & Television Corp.

	<b>Model:</b> 630	<b>Chassis:</b>	<b>Year:</b> Pre October 1937
	<b>Power:</b>	<b>Circuit:</b>	<b>IF:</b>
	<b>Tubes:</b>		
	<b>Bands:</b>		

### Resources

[Riders 6 \(VI\) PHILCO 6-31](#)

[Riders 6 \(VI\) PHILCO 6-32](#)

[Riders 6 \(VI\) PHILCO 6-33](#)

[Riders 7 \(VII\) PHILCO 7-97](#)

[Riders 7 \(VII\) PHILCO 7-98](#)

[Riders 7 \(VII\) PHILCO 7-149](#)

[Riders 8 \(VIII\) CHANGES 8-2](#)

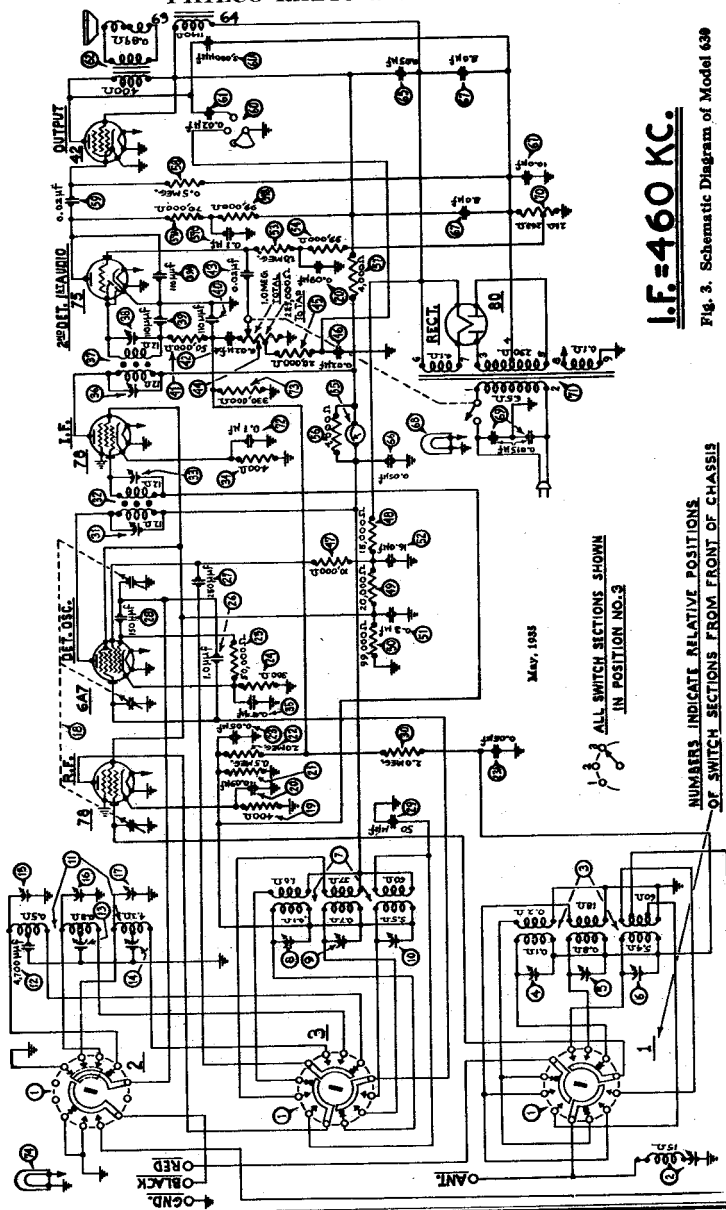
[Riders 11 \(XI\) CHANGES 11-3](#)

**PHILCO RADIO & TELEV. CORP.**

MODEL 630  
Schematic

**Fig. 3. Schematic Diagram of Model 630**

I.F.=460 KC.



SWITCH SECTIONS SHOWN  
IN POSITION NO.3

NUMBERS INDICATE RELATIVE POSITIONS  
OF SWITCH SECTIONS FROM FRONT OF CHASSIS

## MODEL 630

Voltage, Trimmers  
Chassis, Alignment  
Data

## PHILCO RADIO &amp; TELEV. CORP.

Adjustment of High and Low  
Frequency Compensators

1. With the wave-band switch still at Range No. 1 (broadcast band), set the dial at 1700 K.C. Set the signal generator at this frequency and adjust compensators ⑨, ⑩ and ⑪ for maximum output. These are the oscillator, antenna, and R.F. "standard" compensators respectively.

2. Tune the receiver and the signal generator to 600 K.C. and adjust compensator ⑫ (screw) for maximum output. This is the oscillator L.F. standard compensator.

3. Turn the waveband switch to the second (middle) position. Set the dial at 3.6 M.C. at which point the fundamental of the 091 signal will be heard. If the Model 088 Signal Generator is being used, set it at 3.6 M.C. Adjust condensers ⑬, ⑭ and ⑮ in succession. These are the oscillator, antenna and R.F. police band adjustments.

4. Turn the tuning dial to 1.8 M.C., and set the signal generator (Model 026 or Model 088) at 1800 K.C. Adjust condenser ⑯ (Osc. L.F., police) (nut), to maximum signal.

5. Turn the wave-band switch to Band 3 (extreme right) and adjust the station selector to 18.0 megacycles. Set the signal generator at 18 M.C. By means of the Philco wrench, part No. 3164, adjust the oscillator S.W., antenna S.W. and R.F. S.W. compensators for maximum reading in the output meter. These are numbered ①, ② and ③ respectively in figure No. 2.

## Power Transformer Data

Terminals	A.C. Volts	Current	Circuit	Color
1-2	120	.....	Primary	White
3-5	746	78 M.A.	Secondary	Yellow
6-7	5.0	2.0 A.	Fil. Rect.	Blue
8-9	6.3	2.25 A.	Filaments	Black
4	...	.....	Center Tap of 3-5	Yellow, Green Tracer

Tube Socket Voltages  
Measured to Ground

Tube	78 R.F.	6A7 Det. Osc.	78 I.F.	75 2d Det.	42 Output
Point P	245	245	245	188	298
SG	102	102	102	...	311
K	2 7	2.6	2.6	...	...

6A7:  $G_{1,2,3} = 175$ 

Above voltages were obtained by using a PHILCO type 025 Circuit Tester (or 048A All-purpose Tester), using test prods applied to underside of chassis. Volume control at maximum; dial at 55; waveband switch counter-clockwise (band 1). Use Fig. 1 for test points. Line voltage 115 volts.

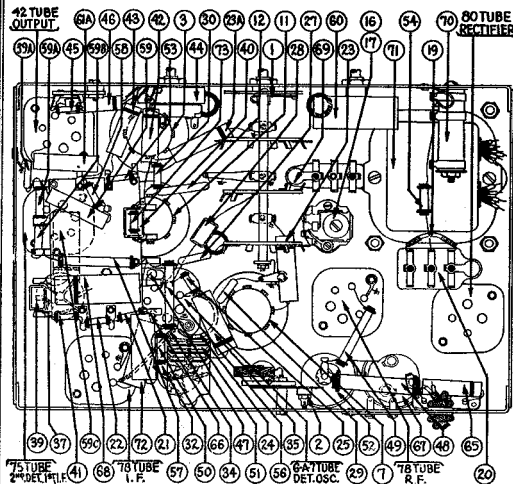


Fig. 4. Bottom View of Chassis

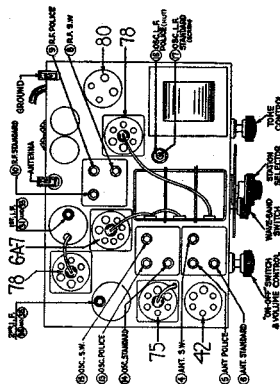


Fig. 2. Location of Compensating Condensers

## PHILCO RADIO &amp; TELEV. CORP.

MODEL 630  
Alignment, Part 2  
Socket, Parts

## Replacement Parts—Model 630

	Description	Part No.	List Price
①	Wave Band Switch.....	42-1107	\$1.75
②	Wavetrap.....	38-6850	1.10
③	Antenna Transformer.....	32-1099	3.00
④	Compensating Condenser (Ant. S.W.).....	Part of ③	
⑤	Compensating Condenser (Ant. Police).....	Part of ③	
⑥	Compensating Condenser (Ant. Standard).....	Part of ③	
⑦	R. F. Transformer.....	32-1635	3.25
⑧	Compensating Condenser (R.F. Short-Wave).....	Part of ⑦	
⑨	Compensating Condenser (R.F. Police).....	Part of ⑦	
⑩	Compensating Condenser (R.F. Standard).....	Part of ⑦	
⑪	Oscillator Transformer.....	32-1637	2.50
⑫	Condenser (.0047 Mfd. Mica).....	30-1052	.60
⑬	Compensating Condenser (Osc. Police).....	Part of ⑪	
⑭	Compensating Condenser (Osc. H. F. Standard).....	Part of ⑪	
⑮	Compensating Condenser (Osc. S. W.).....	Part of ⑪	
⑯	Compensating Condenser (Osc. L.F. Police) Part of ⑪	31-6027	
⑰	Compensating Condenser (Osc. L.F. Standard).....	Part of ⑪	.70
⑱	Tuning Condenser Assembly.....	Part of ⑪	2.75
⑲	Resistor (400 ohms Flexible) (Yellow, Black, Brown).....	33-3016	.20
⑳	Condenser (.09 Mfd. Twin Bakelite Block).....	4989-DG	.40
㉑	Resistor (5 Meg.) (Yellow, White, Yellow).....	6097	.20
㉒	Resistor (2 Megs.) (Red, Black, Green).....	33-1025	.20
㉓	Condenser (.05 Mfd. Tubular).....	30-4020	.35
㉔	Condenser (.05 Mfd. Tubular).....	30-4020	.35
㉕	Resistor (300 ohms Flexible) (Orange, Black, Brown).....	33-3010	.20
㉖	Resistor (50000 ohms) (Green, Brown, Orange).....	6098	.20
㉗	Condenser (1 Mmf.).....	Part of ㉕	
㉘	Condenser (.00025 Mfd. Mica).....	30-1032	.35
㉙	Condenser (.00015 Mfd. Mica).....	30-1033	.35
㉚	Condenser (.00005 Mfd. Mica).....	30-1029	.35
㉛	Resistor (2 Megs.) (Red, Black, Green).....	33-1025	.20
㉜	Compensating Condenser (1st I.F. Primary).....	Part of ㉕	
㉝	1st I.F. Transformer.....	32-1646	\$2.25
㉞	Compensating Condenser (1st I.F. Secondary).....	Part of ㉕	
㉟	Resistor (400 ohms Flexible) (Yellow, Black, Brown).....	33-3016	.20
㊱	Condenser (.1 Mfd. Tubular).....	30-4122	.35
㊲	Compensating Condenser (2nd I.F. Pri.).....	Part of ㉕	
㊳	2nd I.F. Transformer.....	32-1647	2.25
㊴	Compensating Condenser (2nd I.F. Sec.).....	Part of ㉕	
㊵	Condenser (.00011 Mfd. Mica).....	30-1031	.35
㊶	Condenser (.00011 Mfd. Mica).....	30-1031	.35
㊷	Condenser (.00011 Mfd. Mica).....	30-1031	.35
㊸	Resistor (60000 ohms) (Green, Brown, Orange).....	6098	.20
㊹	Condenser (.02 Mfd. Tubular).....	30-4215	.30
㊺	Condenser (.02 Mfd. Tubular).....	30-4215	.30
㊻	Volume Control and On-Off Switch.....	33-5105	1.45
㊼	Resistor (20000 ohms) (Red, Black, Orange).....	33-1178	.20
㊽	Condenser (.02 Mfd. Tubular).....	30-4215	.30
㊾	Resistor (10000 ohms) (Brown, Black, Orange).....	4412	.20
㊿	Resistor (15000 ohms) (Brown, Black, Orange).....	5718	.35
1	Resistor (20000 ohms) (Red, Black, Orange).....	6049*	.20
2	Resistor (99000 ohms) (White, White, Orange).....	6099*	.20
3	Condenser (.4 Mfd. Bakelite Block).....	6287-DG	.40
4	Condenser (.16 Mfd. Electrolytic).....	30-2118	1.65
5	Resistor (1 Meg.) (Brown, Black, Green).....	33-1096	.20
6	Resistor (99000 ohms) (White, White, Orange).....	6099	.20
7	Shadow Tuning Meter.....	45-2086	2.00
8	Resistor (4000 ohms) (Yellow, Black, Red).....	7832	.20
9	Resistor (4000 ohms) (Yellow, Black, Red).....	6097	.20
10	Resistor (5 meg.) (Yellow, White, Yellow).....	30-4113	.30
11	Condenser (.01 Mfd. Tubular).....	30-4113	.30
12	Resistor (70000 ohms) (Violet, Black, Orange).....	5185	.20
13	Resistor (99000 ohms) (White, White, Orange).....	6099	.20
14	Condenser (.1 Mfd. Tubular).....	30-4122	.35
15	Tone Control (3 position).....	30-4332	.75
16	Condenser in Tone Control.....	Part of 15	
17	Condenser (.003 Mfd. Tubular).....	30-4042	.25
18	Output Transformer.....	33-7178	1.60
19	Vacuum Coil & Cone Assembly (K-32).....	36-3159	.80
20	Field Coil & Pot Assembly (K-32).....	36-3498	3.25
21	Condenser (.05 Mfd. Tubular).....	30-4020	.35
22	Condenser (.05 Mfd. Tubular).....	30-4020	.35
23	Condenser (.8 Mfd., 8 Mfd., 10 Mfd. Electrolytic).....	30-2073	2.15
24	Pilot Lamp (Shadow Tuning Meter).....	Part of 15	
25	Condenser (.015 Mfd. Twin Bakelite Block).....	3793-DG	.40
26	Resistor (BC Wirewound—21 ohms, 263 ohms).....	33-3069	.25

27	Power Transformer (115 Volts 60 Cycles).....	32-7384	5.50
	(115 Volts 25 Cycles).....	32-7385	7.75
	(230 Volts 50 Cycles).....	33-7386	5.75
28	Condenser (.1 Mfd. Tubular).....	30-4122	.35
29	Resistor (330,000 ohms) (Orange, Orange, Yellow).....	33-1000	.20
30	Pilot Lamp.....	34-2064	.09

\*After Run 2, this is 10000 ohms. Part 3524.  
 \*After Run 2, this is 20000 ohms. Part 6520.

## Adjusting Compensating Condensers

The adjustment of the compensating condensers in Model 630 requires a signal generator covering the broadcast and police band, and also one capable of producing a signal at certain frequencies in the short wave band. Philco Model 088 All-wave signal generator is ideal for these requirements. Or you can use the Philco Model 024 or 048A instrument for the broadcast frequencies, and the Model 091 crystal controlled short wave signal generator for the "short wave" frequencies. The location of all compensating condensers is shown in Fig. 2. An output meter is also needed, such as in Philco Model 025

## Adjustment of I. F.

1. Remove the antenna connection from the receiver, disconnect the grid clip from the first detector (type 6A7 tube), and connect the "ANT" output terminal of the broadcast signal generator to the grid cap of this tube; connect the "GND" terminal of the signal generator to the "GND" terminal of the receiver.

2. Connect the 0 to 30 volt range of the output meter in the Philco 048A or 025 unit to the plate and cathode of the output tube or to the two bottom prongs of the speaker plug.

3. Adjust the signal generator to a frequency of 460 K.C. Place the receiver in operation with the dial turned to the low frequency end of the standard broadcast band, wave band switch to extreme left (clockwise), and have the volume control adjusted near its maximum setting. Adjust the signal generator attenuator for approximately half-scale reading of the output meter.

4. The I.F. compensating condensers are located at the tops of the I.F. coil shields. The primary is adjusted by turning the screw in front and the secondary by the nut. Adjust condensers ㉕ and ㉖ (2d I.F. primary and secondary) for maximum reading in the output meter, and then condensers ㉗ and ㉘ (1st I.F. primary and secondary).

## Adjustment of Wave-Trap

1. Connect the signal generator leads to the antenna and ground terminals of the receiver. Replace the grid clip on the 6A7 grid cap.

2. With the wave-band switch of the receiver still in the extreme left (standard band), (540-1720 K.C.), turn the station selector to 55.

3. With the signal generator in operation at 460 K.C., adjust the wave-trap (㉙) condenser until a MINIMUM reading is obtained on the output meter. The Philco force wrench, part No. 3164, is used for this adjustment. The wave-trap compensator is reached from rear of chassis.

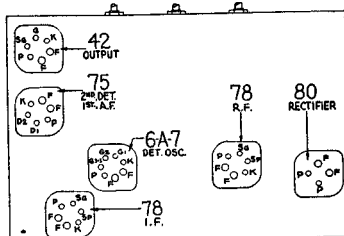


Fig. 1. Tube Sockets as viewed from bottom



## MODELS 630, 630PF

Changes, Parts

## PHILCO RADIO &amp; TELEV. CORP.

## Later 1935 Production Runs

This sheet supplements the regular bulletin No. 219 on the Philco 630 and also covers the Philco Radio-Phonograph 630PF. All circuit and part number changes up to date have been included.

Beginning with run No. 5 the grid bias arrangement for the 78 R.F. and 6A7 1st detector was changed. A fixed bias from the B.C. resistor is fed through the AVC circuit to the grids of these tubes.

## PARTS LIST

Description	Part No.	List Price	Description	Part No.	List Price
① Wave Band Switch.....	42-1152	\$1.75	② Resistor (1 Meg.) (Brown, Black, Green).....	33-1096	\$0.20
① Wavetrap.....	38-6850	1.10	②a Resistor (1 Meg.) (Brown, Black, Green).....	33-1096	.20
① Antenna Transformer.....	32-1699	3.00	② Resistor (9900 ohms) (White, White, Orange).....	6099	.20
① Compensating Condenser (Ant. S.W.).....	Part of ②	.....	② Shadow Tuning Meter.....	45-2086	2.00
① Compensating Condenser (Aut. Police).....	Part of ②	.....	② Condenser (.05 Mf. Twin Bakelite).....	3615-DG	.40
① Compensating Condenser (Ant. Standard).....	Part of ②	.....	② Resistor (4000 ohms) (Yellow, Black, Red).....	33-1031	.20
① R. F. Transformer.....	32-1636	3.25	② Resistor (490,000 ohms) (Yellow, White, Yellow).....	33-1097	.20
① Compensating Condenser (R.F. Short-Wave).....	Part of ②	.....	② Condenser (.02 Mfd. Bakelite).....	8318-SU	.30
① Compensating Condenser (R.F. Police).....	Part of ②	.....	②a Resistor (70000 ohms) (Violet, Black, Orange).....	5385	.20
① Compensating Condenser (R.F. Standard).....	Part of ②	.....	②b Resistor (99000 ohms) (White, White, Orange).....	6099	.20
① Oscillator Transformer.....	32-1637	2.50	②c Condenser (.09 Mf. Bakelite).....	4989-SG	.35
① Condenser (.0047 Mfd. Mica).....	30-1052	.60	② Tone Control (3 position).....	30-4332	.75
① Compensating Condenser (Osc. Police).....	Part of ②	.....	② Condenser in Tone Control.....	Part of ②	.....
① Compensating Condenser (Osc. H.F. Standard).....	Part of ②	.....	②a Condenser (.003 Mfd. Tubular).....	30-4042	.25
① Compensating Condenser (Osc. S.W.).....	Part of ②	.....	② Output Transformer.....	32-7178	1.60
① Compensating Condenser (Osc. L.F. Police).....	Part of ②	.....	② Voice Coil & Cone Assembly (K-32).....	36-3159	.80
② Compensating Condenser (Osc. L.F. Standard).....	31-6027	.70	② Field Coil & Pot Assembly (K-32).....	36-3498	3.25
① Tuning Condenser Assembly.....	31-1741	.....	② Condenser (.05 Mfd. Tubular).....	30-4020	.35
① Condenser (.09 Mfd. Twin Bakelite Block).....	4989-DG	.40	② Condenser (.05 Mfd.).....	Part of ②	.....
① Resistor (1 Meg.) (Brown, Black, Green).....	33-1096	.20	② Condenser (.8 Mfd., 8 Mfd., 10 Mfd. Electrolytic).....	30-2073	2.15
① Condenser (.05 Mfd. Tubular).....	30-4020	.35	② Pilot Lamp (Shadow Tuning Meter).....	Part of ②	.....
②a Condenser (.05 Mfd. Tubular).....	30-4020	.35	② Condenser (.015 Mfd. Twin Bakelite Block).....	3793-DG	.40
① Resistor (50000 ohms) (Green, Brown, Orange).....	6098	.20	② Resistor (BC Wirewound—22 ohms, 25 ohms, 210 ohms).....	33-3222	.20
① Condenser (1 Mfd.).....	Part of ②	.....	② Power Transformer (115 Volts 60 Cycles).....	32-7384	5.50
① Condenser (.00025 Mfd. Mica).....	30-1032	.35	② (115 Volts 25 Cycles).....	32-7385	7.75
① Condenser (.00015 Mfd. Mica).....	30-1033	.35	② (230 Volts 50 Cycles).....	33-7386	5.75
① Condenser (.00005 Mfd. Mica).....	30-1029	.35	② Condenser (.05 Mf.).....	Part of ②	.....
① Resistor (51000 ohms) (Green, Brown, Orange).....	6098	.20	② Resistor (330,000 ohms) (Orange, Orange, Yellow).....	33-1200	.20
① Compensating Condenser (1st I.F. Primary).....	Part of ②	.....	② Pilot Lamp.....	34-2039	.09
① 1st I.F. Transformer.....	32-1646	2.25	② Photo Switch Cable Assy.....	35-3014	1.30
① Compensating Condenser (1st I.F. Secondary).....	Part of ②	.....	② Pickup Head Assy.....	35-2014	7.25
② Resistor (400 ohms Flexible) (Yellow, Black, Brown).....	33-3016	.20	② Hum Bucking Coil Assy.....	32-1940	1.10
① Compensating Condenser (2nd I.F. Pri.).....	Part of ②	.....	② Resistor (51,000 ohms).....	6098	.20
① 2nd I.F. Transformer.....	32-1647	2.25	② Resistor (20,000 ohms).....	33-1178	.20
① Compensating Condenser (2nd I.F. Sec.).....	Part of ②	.....	② Condenser (.025 Mf.).....	7653-SU	.35
① Condenser (.00011 Mfd.) (Twin Bakelite).....	8035-DG	.35	② Automatic Stop.....	6345	3.15
②a Condenser (.00011 Mfd. Mica).....	30-1031	.35	② Phon. Motor (115 V. 60 Cycle).....	35-1112	20.00
① Condenser (.00011).....	Part of ②	.....	② Dial Scale.....	28-5098	.25
② Resistor (50000 ohms) (Green, Brown, Orange).....	6098	.20	② Dial Hub & Set Screw.....	31-1550	.15
② Condenser (.02 Mfd. Tubular).....	30-4215	.30	② Dial Front Spring.....	28-2837	.10
② Condenser (.02 Mfd. Tubular).....	30-4215	.30	② Knob (Station Selector).....	27-4206	.12
② Volume Control and On-Off Switch.....	35-1055	1.45	② Knob (Fine Tuning).....	27-4207	.10
② Resistor (20000 ohms) (Red, Black, Orange).....	33-1178	.20	② Knob (Waveband).....	27-4219	.10
② Condenser (.02 Mfd. Tubular).....	30-4215	.30	② Knob (Volume Control, Tone Control).....	27-4208	.10
② Resistor (10000 ohms) (Brown, Black, Orange).....	4412	.30	② Tube Shield.....	28-2726	.10
② Resistor (15000 ohms) (Brown, Black, Orange).....	5718	.35	② Tube Shield Base.....	27-4207	.05
② Resistor (20000 ohms) (Red, Black, Orange).....	3524	.20	② Tube Socket (4-Prong).....	27-6034	.10
② Resistor (20000 ohms) (Red, Black, Orange).....	6649	.20	② Tube Socket (6-Prong).....	27-6036	.11
② Condenser (.15 Mfd. Tubular).....	36-4191	.40	② Tube Socket (7-Prong).....	27-6037	.11
② Condenser (16 Mfd. Electrolytic).....	30-2118	1.65	② Speaker Plug Socket.....	27-6033	.08
			② Chassis Mfg. Screw.....	W-1495 1.50perC.	
			② Chassis Mtg. Washer (Rubber).....	27-4198	.01
			② Electric Cord & Plug.....	L-943-A	.60

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

## PHILCO RADIO &amp; TELEV. CORP

MODELS 623, 623B, 623F

630, 630(121)

640(121) 640B

641, 642, 643, 650

Changes

## MODEL 623 (Continued)

Approximate Date of Change	Run No.	CHANGES
..	9	<p><b>S. W. SECTION OF OSC. TRANSFORMER</b></p> <p>Condenser @ and Resistor @ were removed and the wires connected to the ends of these parts were connected together. The wires between the police tap at the left of Switch Section No. 2 and the joint in the wire just above that was broken and Condenser No. 30-1049 inserted.</p> <p>The connection between the bottom (S. W.) primary and secondary of the Oscillator Transformer was broken and condensers @ and @ connected between the bottom of the secondary and ground. Resistor @ removed. The lead connected to the top of the primary disconnected and brought down to the bottom of the secondary. Resistor @ also removed.</p> <p>A lead from the bottom of the primary was connected to the lead running from Condenser @ to Resistor @. The oscillator plate wire was disconnected from this lead and brought down to the top of the primary.</p> <p><b>BROADCAST AND POLICE SECTION OF OSC. TRANSFORMER</b></p> <p>Resistor @ was disconnected from the bottom of the upper section of the Osc. Transformer and connected to the switch side of the Condenser @.</p>

## MODEL 623-B and 623-F

9-1-35	..	Remove bezel glass gasket, Part No. 27-7981, and replace with Part No. 27-8F36.
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## Model 630 (Code 121)

10-1-35	4		
	<u>Old Part</u>	<u>New Part</u>	
Resistor @	33-1040 (1/2 watt) 4,000 ohms	33-1031 (1/2 watt)	
Resistor @	6650 (1/2 watt) 20,000 ohms	6649 (1 watt)	
11-1-35	7	Remove Shadowmeter Shunt Resistor @ Part No. 33-1040 (4,000 ohms).	
<u>Part</u>	<u>Schematic No.</u>	<u>Old Part</u>	<u>New Part</u>
Shadowmeter	@	45-2086	45-2083

## MODEL 630

Schematic No.	Old Part No.	New Part No.
Ant. Transformer @	32-1699	32-1867
Det. Transformer @	32-1636	32-1868
Osc. Transformer @	32-1637	32-1869

## MODEL 640 (Code 121)

8-1-35	6	Replace Resistor @, Part No. 6650 (20,000 ohms) with Part No. 33-1177.	
	4	Replace speaker plug socket, No. 27-6033 with No. 27-8043.	
		Replace 1st I. F. Transformer, Part No. 32-1835 with No. 32-1917 to prevent microphonics.	
		Remove rubber bumper, No. 27-4150 to prevent microphonics.	
		Remove Bezel Light Guard No. 27-8001.	
		Part @ on base view in bulletin should be 2nd I. F. Part @, 1st I. F.	
		Replace Bezel Glass Gasket No. 27-7981 with No. 27-8036.	
		Add No. 27-7972 Bezel Frame Gasket.	
11-1-35	9		
Part	Schematic No.	Old Part	New Part
Tuning Condenser	@	31-1556	31-1671
Run No. 10			
Shadow Meter	@	45-2086	45-2083
Resistor	@	33-1040	Removed

## MODEL 640-B

Approximate Date of Change	Run No.	CHANGES
9-1-35	..	Uses K31 instead of K21 Speaker.

## MODEL 641

9-1-35	..	Connect an 8,000 ohm resistor, Part No. 33-1114, across shadow meter.						
10-1-35	..	<p><b>Corrections in Replacement Parts List</b></p> <p>Part @ .015 mf. Condenser is part of (64-A)</p> <p>Part @ should be .03 mf. and the correct Part Number is 30-4926.</p> <p>Part @ should be 3015-DG.</p> <p>Referring to bottom view of chassis, condenser marked @ should be @ and condenser @ changed to @.</p> <p>Capacity of sections in @ is (.05 — .2 — .75 — .09 — .25).</p> <p>Part Number of B-C Resistor is 33-8214.</p> <p>List Price 25c.</p> <p>Price of No. 27-4225 Waveband Knob, List 10c.</p>						
11-1-35	..	<table> <tr> <th>Part</th><th>Old Part</th><th>New Part</th></tr> <tr> <td>Bezel Assembly</td><td>40-5722</td><td>40-5724</td></tr> </table>	Part	Old Part	New Part	Bezel Assembly	40-5722	40-5724
Part	Old Part	New Part						
Bezel Assembly	40-5722	40-5724						
12-1-35	2	A .00011 Mf. Condenser, Part No. 30-1081 is connected from the plate of the 85 Detector Tube to the Cathode Circuit.						

## MODEL 642

9-1-35	Tone Control @	Old Part	New Part
		30-4316	30-4392
12-1-35	2	The Dial and Mask Assembly were changed to the Glowing Arrow Wave Band Indicator Type.	
Part	Schematic No.	Old Part No.	New Part No.
Tuning Condenser	@	31-1626	31-1741
Hub and Set Screw Assembly		31-1650	31-1724
Mask Assembly			27-5137
Glowing Arrow Screen			27-5166
Screen Bracket			31-1760
Glowing Arrow Mask			27-5167
Mask Arm			29-3274
Link			29-3285
Coupling			29-3586
Pilot Lamp Assembly		38-7032	
Wave Switch	@	42-1107	42-1152

## MODEL 643

9-1-35	..	Filament current reads (point) .750MA. It should read 750MA.	
		Part No. 33-5119 @ in Model 643, Bulletin No. 226, listed at \$1.10 changed to \$1.45.	
12-1-35	..	Change Chassis Mounting Washer (rubber) listed as 27-4021 to 27-4201.	
		Pilot Lamp @, Part No. 5316, should be Part No. 34-2065.	
11-1-35	8		
Part	Schematic No.	Old Part	New Part
Condenser	@	6369 (.006 mf.)	30-1081 (.00011 mf.)

## MODEL 650

11-1-35		13	
<u>Part</u>	<u>Schematic No.</u>	<u>Old Part</u>	<u>New Part</u>
Tuning Condenser	⊗	31-1556	31-1671
Code 121, Run No. 15.			
Code 122, Run No. 13.			
Shadow Meter	⊗	45-2086 & 45-2082	45-2088
Resistor	⊗	6096	Removed





## Remler 49, 171

The Remler Model 171 is identical with Model 49, shown on page 9-3 of *Rider's Volume IX*. The following additional information, not included on page 9-3, is now available.

The antenna-RF coil is located near the back of the chassis and is trimmed by the trimmer on the rear section of variable condenser. The detector coil is located under the chassis and is trimmed by the trimmer on the front section of the variable condenser.

The following table shows the d-c voltages to ground with no signal and the volume control at full volume.

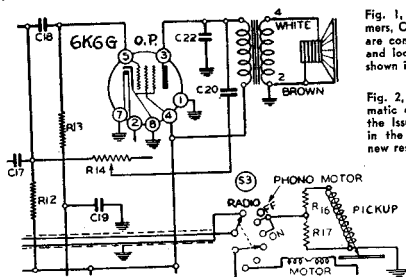
Tube	Plate	Screen	Cathode
6126	180	180	4.5
6C5	70	180	0.0
41	170	180	0

The d-c voltage of the bias supply for the 41 grid is a 15-volt drop across resistor (9) in the negative side of the power supply.

## Airline 62-362 Issue B

Several changes are included in Issue B of the Model 62-362 Airline receiver (above serial number 8J285-200) as compared with the Model 62-362 shown on *Montgomery-Ward pages 9-45 to 9-47 of Rider's Volume IX*. Fig. 1 shows that condensers C1, C4, C5, C6, and C9 are mounted in the same unit in Model 62-362, Issue B. Fig. 1 of course corresponds to the layout shown in the upper left-hand corner of page 9-45.

Fig. 2 shows the output end of the schematic for Issue B of Model 62-362. By comparing Fig. 2 with the corresponding portion of the schematic shown on page 9-45, you will notice the new position of the tone control consisting of R14 and C20, and also the two resistors R16 and R17 added across the winding of the phonograph pickup coil.



The accompanying table lists the part numbers and descriptions for Model 62-362 Issue B which are different from those listed on page 9-45.

Schematic Reference	Part Number	Description
R1	BE130144	15,000 ohms, 1 w.
R16	BE130238	400,000 ohms, 1/2 w.
R17	BE130220	100,000 ohms, 1/2 w.
C1	BE12456	3-35 mmf adjustable trimmer
C4	BE12456	2-15 mmf " "
C5	BE12456	2-15 mmf " "
C6	BE12456	2-15 mmf " "
C9	BE12456	450 mmf working capacity, series pad
C20	BE1292	.0095 mfd, mica
C22	BE10092	.001 mfd, 600 v

## Philco 630, 630PF

Certain oscillator trimmers are incorrectly numbered on pages 6-32 and 6-33 of *Rider's Volume VI* (early model 630 Philco). In Fig. 2 and in the alignment instructions, both on page 6-32, the reference numbers should be changed as follows: Change 13 to 16; change 14 to 17; change 16 to 13; change 17 to 14. The same changes should be made in the parts list on page 6-33. These changes must be made so that the reference numbers will agree with those shown on the schematic which appears on page 6-31. Do NOT alter the numbers on the schematic.

These errors in numbering also appear in the parts list for the late Model

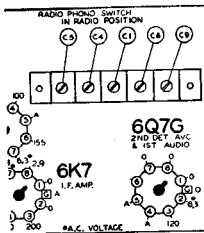


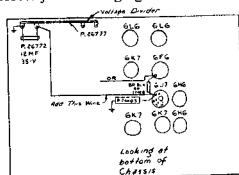
Fig. 1, above. The five trimmers, C1, C4, C5, C6, and C9 are contained in a single unit and located on the chassis as shown in Issue B of the Airline model 62-362.

Fig. 2, left. The partial schematic of the output circuit of the Issue B shows the change in the tone control and two new resistors across the pickup coil.

630 and the Model 630PF Philco. Therefore the reference numbers on page 7-98 of *Rider's Volume VII* must be changed as follows: Change 13 to 16; change 14 to 17; change 16 to 13; change 17 to 14.

## Stromberg 160-L

Variations in new 6J7 tubes have occasionally caused distortion in the automatic tone-control circuit of the Stromberg Model 160-L receiver as first released. These tubes function correctly after "aging" a few hours.



By adding the wire indicated, distortion can be eliminated from the automatic tone control circuit of the Stromberg Model 160-L.

This possibility of distortion can also be eliminated by adding a wire as shown in the accompanying layout. This change stabilizes the screen voltage; it was put in effect at the factory in all 160-P and 180-L receivers, and in all 160-L receivers produced after October 23, 1936.

## Philco 37-62

In order to eliminate oscillation, the screen resistor, No. 11, has been changed from 25,000 ohms to 32,000 ohms. See schematic on page 8-19 in *Rider's Volume VIII*.

## Fairbanks-Morse 12A

Refer to the schematic shown on page 8-11 of *Rider's Volume VIII*. During production, the 47,000-ohm resistor in the AVC line which was connected to the bottom of the antenna coil secondary, and the condenser (4) were removed. The r-f secondary was then grounded directly, thus removing AVC from the 6L7G mixer tube, and the bottom of the antenna coil secondary was connected directly to the resistor (16). The condenser (33) in the grid circuit of the 6C5G oscillator was changed from 50 mmf to 100 mmf to increase sensitivity on the u-h-f band.