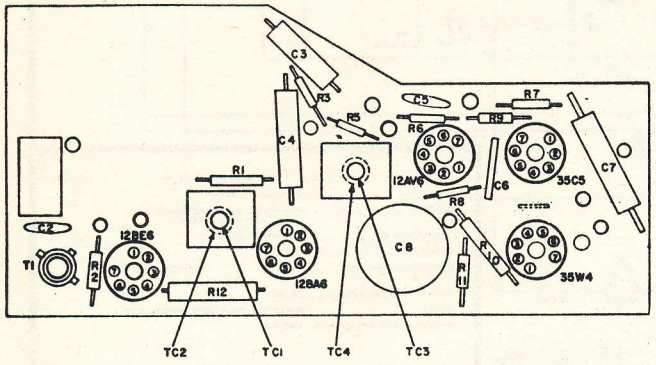
PHILCO HOME RADIO MODELS
181 and 182

PHILCO Factory-Supervised Service

HOME RADIO



BASE VIEW — MODELS 181 and 182

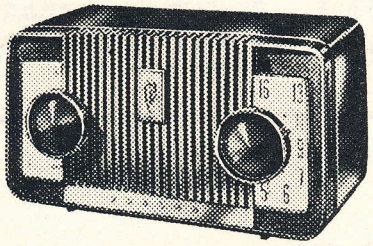
ALIGNMENT PROCEDURE

RADIO CONTROLS — Set volume control to maximum. Set tuning control as indicated in chart.

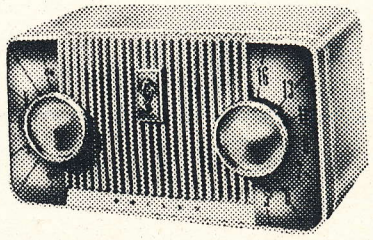
OUTPUT METER — Connect across voice-coil terminals.

SIGNAL GENERATOR — Connect generator and set frequency as indicated in chart. Use modulated output.

OUTPUT LEVEL — During alignment, adjust signal-generator output to hold output-meter reading below .5 volts.



PHILCO MODEL 181



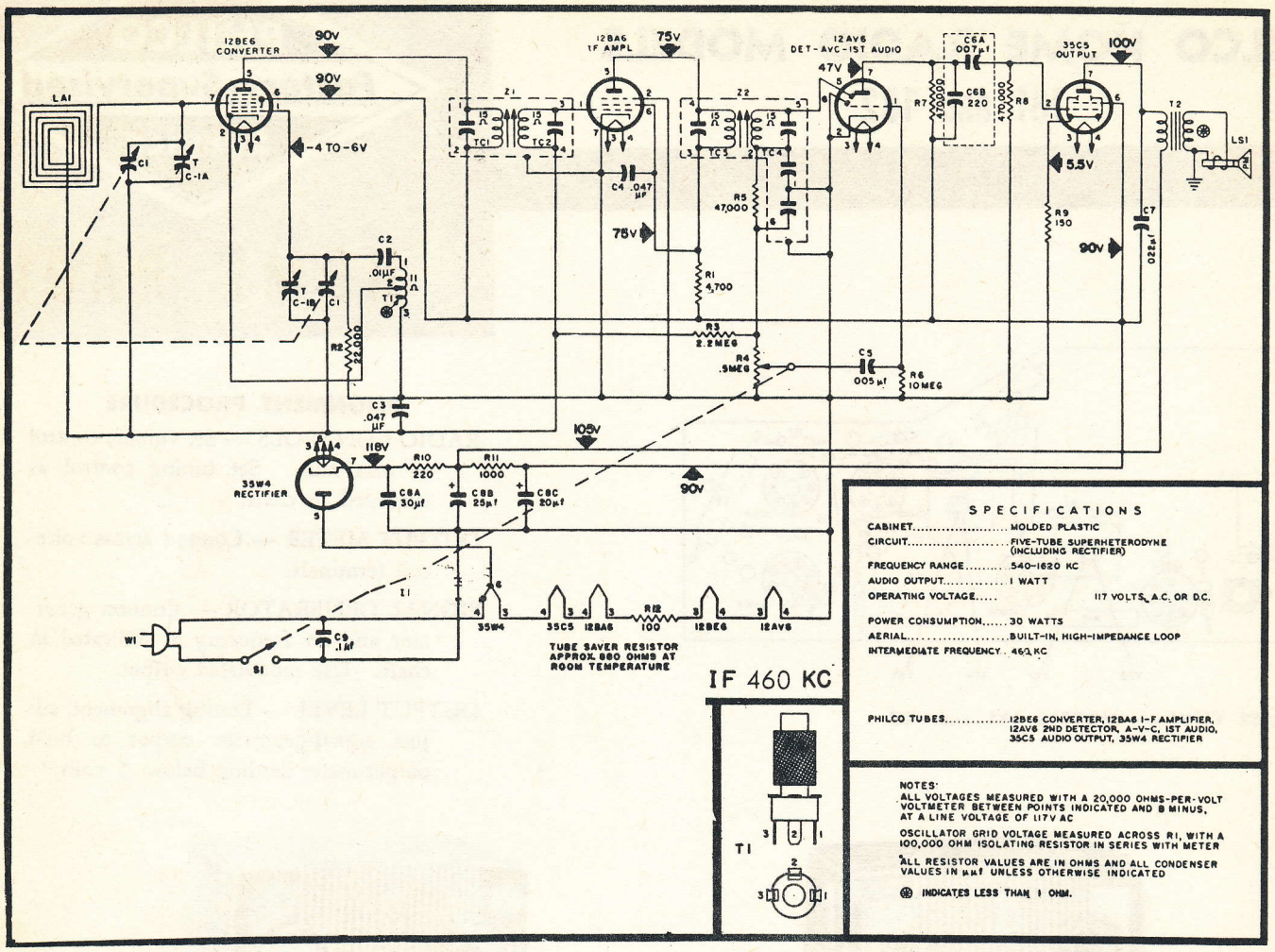
PHILCO MODEL 182

ALIGNMENT CHART

STEP	SIGNAL GENERATOR		RADIO		ADJUST
	CONNECTION TO RADIO	DIAL SETTING	DIAL SETTING	SPECIAL INSTRUCTIONS	
1	Ground lead to B—; output lead through a .1-mf. condenser to grid (pin 7) of 12BE6.	460 KC	Tuning gang fully open	Adjust tuning cores, in order given, for maximum output. TC1 and TC3 are located at top of transformers.	TC4—2nd i-f sec. TC3—2nd i-f pri. TC2—1st i-f sec. TC1—1st i-f pri.
2	Radiating loop (See note below).	1620 KC	1620 KC *	Adjust trimmer for maximum output.	C1-B — osc.
3	Same as step 2.	1500 KC	1500 KC	Adjust trimmer for maximum output.	C1-A — aerial

NOTE: Make up a 6-8 turn, 6 inch diameter loop from insulated wire, connect to signal-generator leads, and place near radio loop.

For proper adjustment of the oscillator trimmer, fully open the tuning gang and insert a .006 inch non-metallic shim between the heel of the rotor and the top of the stator plates. Close the tuning gang sufficiently to hold the shim in place, and then remove the shim without disturbing the gang setting.



SPECIFICATIONS

CABINET	MOLDED PLASTIC
CIRCUIT	FIVE-TUBE SUPERHETERODYNE (INCLUDING RECTIFIER)
FREQUENCY RANGE	540-1620 KC
AUDIO OUTPUT	1 WATT
OPERATING VOLTAGE	117 VOLTS, A.C. OR D.C.
POWER CONSUMPTION	30 WATTS
AERIAL	BUILT-IN, HIGH-IMPEDANCE LOOP
INTERMEDIATE FREQUENCY	460 KC
PHILCO TUBES	12BE6 CONVERTER, 12BA6 I-F AMPLIFIER, 12AV6 2ND DETECTOR, A-V-C, 1ST AUDIO, 35C5 AUDIO OUTPUT, 35W4 RECTIFIER

NOTES:
ALL VOLTAGES MEASURED WITH A 20,000 OHMS-PER-VOLT VOLTMETER BETWEEN POINTS INDICATED AND B MINUS, AT A LINE VOLTAGE OF 117 V AC

OSCILLATOR GRID VOLTAGE MEASURED ACROSS R1, WITH A 100,000 OHM ISOLATING RESISTOR IN SERIES WITH METER

ALL RESISTOR VALUES ARE IN OHMS AND ALL CONDENSER VALUES IN µµf UNLESS OTHERWISE INDICATED

⊛ INDICATES LESS THAN 1 OHM.

Schematic Diagram, Models 181 and 182

REPLACEMENT PARTS LIST FOR PHILCO MODELS 181 AND 182

Ref. Sym.	Description	Service Part No.
C1	Condenser, Tuning	31-2735-5
C2	Condenser, Oscillator grid, .01 mf	30-1238-2
C3	Condenser, A-V-C by-pass, .047 mf	30-4650-45
C4	Condenser, Screen by-pass, .047 mf	30-4650-45
C5	Condenser, Audio coupling, .005 mf	30-1238-14
C6	Condenser, Dual ceramic	30-1239-7
C6A	Condenser, Plate by-pass, 220 mmf	Part of C6
C6B	Condenser, d-c blocking, .007 mf	Part of C6
C7	Condenser, Tone compensation	30-4650-43
C8	Condenser, Electrolytic, filter	30-2585
C8A	Condenser	Part of C8
C8B	Condenser	Part of C8
C8C	Condenser	Part of C8
C9	Condenser, Line by-pass, .1 mf	30-4650-47
LA1	Loop antenna,	32-4052-111
	Back	— 54-9367-3
LS1	Speaker 16-0152	OPT 36-1654-2
R1	Resistor, IF decoupling, 4,700 ohms	½ watt
R2	Resistor, Oscillator grid, 22,000 ohms	½ watt
R3	Resistor, A-V-C load, 2.2 megohms	½ watt
R4	Volume control, with on-off switch	33-5566-59
R5	Resistor, Diode filter, 47,000 ohms	½ watt
R6	Resistor, Grid return, 10 megohms	½ watt
R7	Resistor, Plate load, 470,000 ohms	½ watt
R8	Resistor, Grid return, 470,000 ohms	½ watt
R9	Resistor, Cathode bias, 150 ohms	½ watt
R10	Resistor, Filter, 220 ohms, 1 watt	½ watt
R11	Resistor, Filter, 1000 ohms	½ watt
R12	Resistor, tube saver, filament dropping, 100 ohms	33-1343-3
T1	Transformer, oscillator	32-4582-1
T2	Transformer, output	12-0129
W1	Line Cord,	41-3865
		41-3865-4
Z1	Transformer, 1st IF	32-4583-3
Z2	Transformer, 2nd IF	32-4584-1

MISCELLANEOUS

Ref. Sym.	Description	Service Part No.
Cabinet 181		
	Brown	11074-1
	Knob-Volume & Tuning	54-6147-6
	Dial Bezel	28-10315
	Bezel Volume	28-10315-1
Cabinet 182		
	Ivory	11074-3
	Knob-Volume & Tuning	54-6147-8
	Scale Dial	28-10378
	Scale Volume	28-10378-1
Cabinet 182		
	Spruce Green	11074-2
	Knob-Volume & Tuning	54-6147-7
Cabinet 182		
	Cardinal	11074-4
	Knob-Volume & Tuning	54-6147-9
	Tube Shield	56-5629-12
	Tube socket, 12AV6	27-6296-4
	Tube socket, 12BA6	27-6296-6
	Tube socket, 35C5, 12BE6 35W4	27-6296-7
	Washer-Knob Holding	W-2556-7
	Nuts Scale MTG 182	1W60193

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