

# PHILCO HOME RADIO

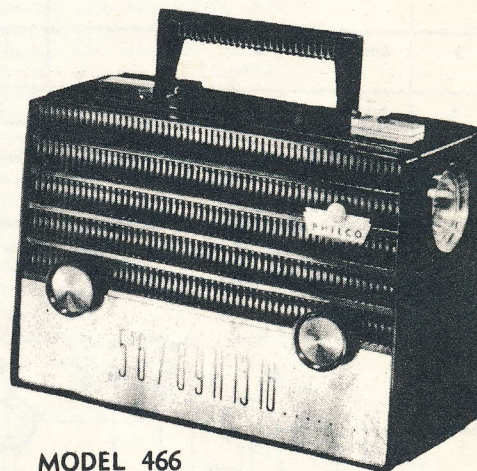
PORTABLE MODEL 466



## HOME RADIO

### SPECIFICATIONS

CABINET .....	Molded Plastic
CIRCUIT .....	Five-tube superheterodyne (plus selenium rectifier)
FREQUENCY RANGE .....	540-1620 KC
INTERMEDIATE FREQUENCY .....	460 KC
AUDIO OUTPUT AC .....	160 milliwatts
Battery .....	140 milliwatts
OPERATING VOLTAGES .....	117 volts, a.c. or d.c., 9-volt "A" Battery and 90-volt "B" battery
POWER CONSUMPTION, a-c or d-c operation .....	15 watts
ANTENNA .....	Magnacore high-impedance loop; provision for connecting an external antenna.
PHILCO TUBES .....	1T4 r-f amplifier, 1R5 converter, 1U4 i-f amplifier, 1U5 detector-a.v.c. — 1st audio and 3V4 output.
BATTERY TYPE Radio .....	Philco — P-274
Flashlight .....	(2) Philco P912 "D" cells



MODEL 466

### ALIGNMENT PROCEDURE

#### POINTER

Set pointer to coincide with first index mark from left side of dial back-plate (looking at front of dial back-plate).

RADIO REPAIRS **S.O.S.** TELEVISION SERVICE  
 927 DECARIE BLVD. - TEL. RL. 7-5403

**RADIO CONTROLS** — Set volume control to maximum; set gain as indicated in chart.

**OUTPUT METER** — Connect across voice-coil terminals.

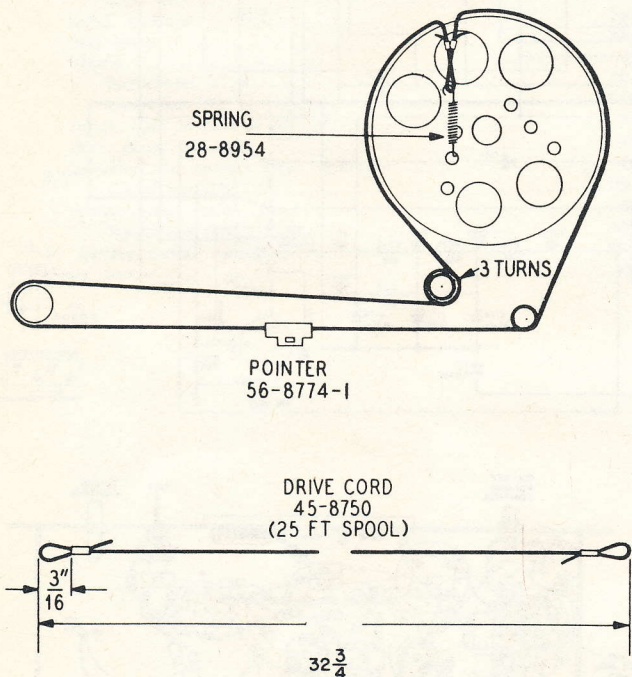
**SIGNAL GENERATOR** — Use modulated output. Adjust frequency as indicated in chart.

**OUTPUT LEVEL** — During alignment, adjust signal-generator output to maintain an output-meter indication below .5 volts.

**GENERAL** — Allow both radio and signal generator to warm-up for fifteen minutes before starting alignment.

#### CLEANING THE PLASTIC CABINET

Use a weak, lukewarm solution of soap and water to clean the plastic cabinet. After cleaning, remove all traces of soap and then wipe with a dry cloth. Never use abrasive soaps or cleaning solvents or furniture polishes as they may destroy the cabinet's finish.



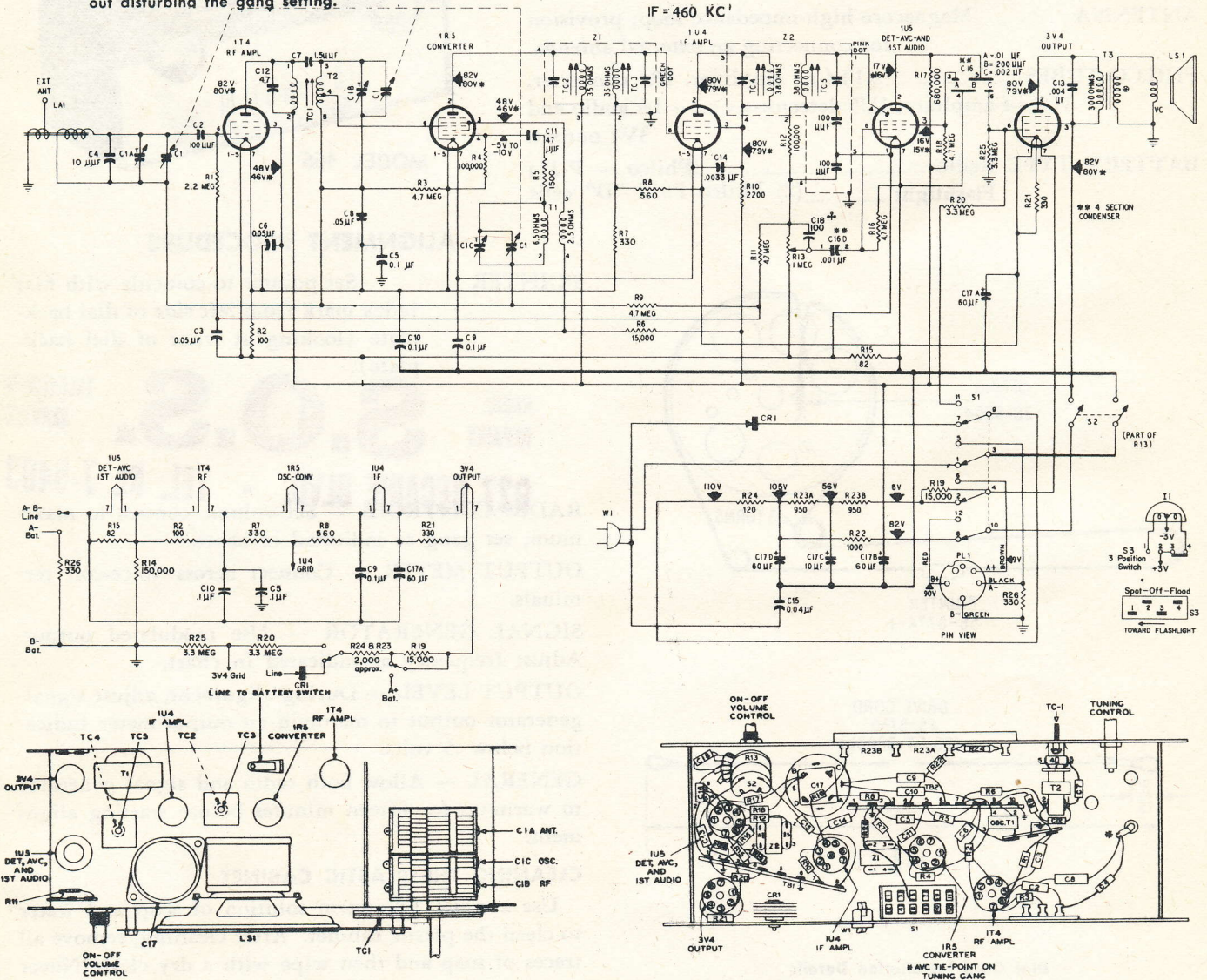
Dial Cord Installation Details

ALIGNMENT CHART,

STEP	SIGNAL GENERATOR		RADIO		ADJUST TRIMMER
	CONNECTION TO RADIO	DIAL SETTING	DIAL SETTING	SPECIAL INSTRUCTIONS	
1	Through a .1 mfd condenser to pin 6 or 1R5 converter.	460 KC	1630 KC (gang fully open)	Adjust, in order given, for maximum output.	TC5—2nd i-f sec. TC4—2nd i-f pri. TC2—1st i-f pri. TC3—1st i-f sec.
2	Radiating loop, see note below.	1630 KC	*1630 KC (gang fully open)	Adjust for maximum output.	C1C—osc.
3	Same as step 2.	1500 KC	1500 KC	Adjust, in order given, for maximum output.	C1B—r-f C1A—ant.
4	Same as step 2.	580 KC	580 KC	Adjust for maximum output.	TC1—r-f sec.

NOTE: Make a six-to-eight turn, 6-inch diameter loop using 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 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.



Top View Model 466

Base View Model 466

REPLACEMENT PARTS LIST

NOTE: Part numbers identified by an asterisk (\*) are general replacement items. These numbers may not be identical with those on factory parts. Also, the electrical values of some replacement items may differ from the values indicated in the schematic diagram and parts list. The values substituted in any case are so chosen that the operation will be unchanged. When ordering replacements, use only the "Service Part No."

Reference Symbol	Description	Part No.	Symbol	Description	Service Part No.
C1	Condenser, tuning gang, 3 sections in 2 section frame	31-2779	R8	Resistor, filament shunt, 560 ohms	1/2 watt
C2	Condenser, r-f grid coupling, 100 mmf	62-110009001*	R9	Resistor, a-v-c filter, 4.7 megohms	1/2 watt
C3	Condenser, a-v-c by-pass, .05 mfd	30-4650-45*	R10	Resistor, dropping, 2200 ohms	1/2 watt
C4	Condenser, gang shunt, 10 mmf	60-00105420	R11	Resistor, a-v-c filter, 4.7 megohms	1/2 watt
C5	Condenser, filament by-pass, .1 mfd	30-4650-47*	R12	Resistor, diode filter, 100,000 ohms	1/2 watt
C6	Condenser, screen by-pass, .05 mfd	30-4650-45*	R13	Volume control, 1 megohm	33-5566-11
C7	Condenser, r-f coupling, 1.5 mmf	30-1221-3			
C8	Condenser, a-v-c by-pass, .05 mfd	30-4650-45*	R15	Resistor, 1U5 filament shunt, 82 ohms	1/2 watt
C9	Condenser, filament by-pass, .1 mfd	30-4650-47*	R16	Resistor, grid return, 4.7 megohms	1/2 watt
C10	Condenser, filament by-pass, .1 mfd	30-4650-47*	R17	Resistor, plate load, 680,000 ohms	1/2 watt
C11	Condenser, oscillator coupling, 47 mmf	62-047009001	R18	Resistor, Screen dropping, 4.7 megohms	1/2 watt
C12	Condenser, r-f transformer shunt, 4.7 mmf	30-1221-5	R19	Resistor, Grid return, 3.3 megohms	1/2 watt
C13	Condenser, Tone compensation, .004 mfd	30-4650-56*	R20	Resistor, grid bias, 3.3 megohms	1/2 watt
C14	Condenser, i-f neutralizing, .0033 mfd	30-4650-55*	R21	Resistor, filament shunt, 330 ohms	1/2 watt
C15	Condenser, line by-pass, .04 mfd	30-4650-45*	R22	Resistor, B+ filter, 1000 ohms	1/2 watt
C16	Condenser, multi-section ceramic	30-1237	R23	Resistor, wire-wound, 2 section, filament dropping	33-3431-7
C17	Condenser, electrolytic, 4 section	30-2568-58	R24	Resistor, wire-wound, current limiting, 120 ohms	33-1334-14
C18	Condenser, hi compensation, 100 mmf	62-110009001	R25	Resistor, grid return, 15,000 ohms	1/2 watt
CR1	Selenium rectifier, 75 ma	34-8003	R26	Resistor, 3V4 bias, 330 ohms	1/2 watt
I1	Lamp, flashlight, double filament	3463-3	S1	Switch, battery-line change-over	42-1899
LA1	Coil, antenna, magnacore	32-4455-14	S2	Switch, on-off	Part of R13
LS1	Speaker	36-1625	S3	Switch, flashlight, 3 position	42-2038
R1	Resistor, grid return, 2.2 megohms	1/2 watt	T1	Transformer, oscillator	32-4263-7
R2	Resistor, filament shunt, 100 ohms	1/2 watt	T2	Transformer, r-f	32-4624-2
R3	Resistor, a-v-c bleeder, 4.7 megohms	1/2 watt	T3	Transformer, output	32-8528
R4	Resistor, oscillator grid return, 100,000 ohms	1/2 watt	W1	Line cord	41-3821
R5	Resistor, oscillator compensating, 1500 ohms	1/2 watt	Z1	Transformer, 1st IF	32-4160A
R6	Resistor, dropping, 15,000 ohms	1/2 watt	Z2	Transformer, 2nd IF	32-4240-10
R7	Resistor, 1R5 filament shunt, 330 ohms	1/2 watt			

MISCELLANEOUS

Description	Service Part No.	Description	Service Part No.
Cabinet, maroon	11054	Backplate, dial assembly	76-9101
Back	54-6130	Bracket and spring assembly, battery	76-9109
Clip, back (2)	56-3807-3	Speed nut (2)	28-10093
Bezel, flashlight	28-10090	Cable, battery	41-3712-7
Dial Scale	28-10091	Drive cord (25 ft. spool)	45-8750
Handle	54-6131	Knobs (2)	54-6093-2
Escutcheon, L. H.	28-10089	Mounts, rubber, gang mtg. (2)	27-4596
Escutcheon, R. H.	28-10089-1	Pointer	56-8774-1
Hinge, back to cabinet (2)	56-7968	Spring, pointer and drive	28-8954
Lens, glass, flashlight	54-5206	Screw (2)	W2537-9FA3
Reflector and contact assy., flashlight	76-9206	Shaft, tuning	56-7931-5
Speed nut (2)	28-10093	Shield, 1U5 tube	56-5629FA3
Window dial scale	54-6134	Spring, antenna mtg. (2)	56-9051
Speed nut (2)	28-10093	Socket, tube (3)	27-6203
"A" Battery contact spring	28-9117-4	Socket, 1U5 tube	27-6203-22
Battery spacer	28-10097	Socket, 3V4 tube	27-6203-12