

PARTS LIST AND SERVICE INFORMATION

FOR

PHILCO-TROPIC RADIO MODEL 3012

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 of the radio will be either unchanged or improved. When ordering replacements, use only the "Service Part No." DO NOT USE THE REFERENCE SYMBOL.

Reference Symbol	Description	Service Part No.	Reference Symbol	Description	Service Part No.
C1	Condenser, aerial coupling, .0022 μ f.	45-3505-54*	R10	Resistor, plate load, 470,000 ohms	66-4478340*
C2	Condenser, fixed trimmer, SW2, 18 μ f.	62-018300001*	R11	Resistor, special surge limiting	33-1343-3
C3	Condenser, fixed trimmer, SW1, 12 μ f.	62-012309021*	R12	Resistor, grid return, 470,000 ohms	66-4478340*
C4	Condenser, tuning gang, 2-section	31-2758	R13	Resistor, cathode bias, 120 ohms	66-1128340*
C4A	Condenser, trimmer, SW2 aerial	Part of C4	R14	Resistor, filter, 1000 ohms, 1 watt	66-2104340*
C4B	Condenser, trimmer, SW2 osc.	Part of C4	R15	Resistor, filter, 150 ohms, 1 watt	66-1154351*
C5	Condenser, d.c. blocking, 100 μ f.	62-110001001*	R16	Resistor, wire-wound, 2-section	33-3444
C6	Condenser, line filter, .01 μ f.	45-3505-58*	R16A	Resistor, filament-voltage dropping, 370 ohms	Part of R16
C7	Condenser assembly, trimmer, 3-section	31-6477-9	R16B	Resistor, filament dropping, 560 ohms	Part of R16
C7A	Condenser, series padder, BC osc.	Part of C7	R17	Resistor, osc. load, 15,000 ohms	66-3158340*
C7B	Condenser, trimmer, BC osc.	Part of C7	S1	Switch, slide, voltage change-over	42-1893-2
C7C	Condenser, trimmer, SW1 osc.	Part of C7	S2	Switch, off-on	Part of R6
C8	Condenser, tracker, SW1, 2200 μ f.	60-20225014*	T1	Transformer, aerial, SW1 and SW2	32-4204-3
C9	Condenser, fixed trimmer, SW2, 18 μ f.	62-018300001*	T2	Transformer, aerial BC	32-4495
C10	Condenser, d.c. blocking, 56 μ f.	62-056409001*	T3	Transformer, oscillator, BC, SW1, and SW2	32-4246-1
C11	Condenser, neutralizing, 2.2 μ f.	30-1221-6	T4	Transformer, output	Part of L51
C12	Condenser, screen by-pass, .047 μ f.	45-3505-28*	TC1	Tuning core, 1st if primary	Part of Z1
C13	Condenser, a-v-c filter, .047 μ f.	45-3505-28*	TC2	Tuning core, 1st if secondary	Part of Z1
C14	Condenser, bias filter, 470 μ f.	62-147001001*	TC3	Tuning core, 2nd if primary	Part of Z2
C15	Condenser, coupling, .0068 μ f.	45-3505-40*	TC4	Tuning core, 2nd if secondary	Part of Z2
C16	Condenser, d.c. blocking, .0068 μ f.	45-3505-40*	W1	Line cord and plug assembly	41-3865
C17	Condenser, electrolytic, 4-section	30-2570-20	WS	Water switch, band change, 1-section	42-1945
C17A	Condenser, filter, 40 μ f., 200v	Part of C17	Z1	Transformer, 1st if	32-4377
C17B	Condenser, filter, 30 μ f., 200v	Part of C17	Z2	Transformer, 2nd if	32-4378
C17C	Condenser, filter, 20 μ f., 200v	Part of C17			
C17D	Condenser, cathode by-pass, 10 μ f., 25v	Part of C17			
C18	Condenser, plate by-pass, 220 μ f.	62-122001001*			
C19	Condenser, tone compensation, .01 μ f.	45-3505-41*			
I1	Pilot lamp	34-2605*			
J1	Socket, male, a-c	27-6240-1			
LS1	Speaker, p-m, 5"	36-1614-7			
R1	Resistor, BC aerial primary loading, 15,000 ohms	66-3158340*			
R2	Resistor, grid return, 1 megohm	66-5108340*			
R3	Resistor, grid return, 33,000 ohms	66-3338340*			
R4	Resistor, screen dropping, 4700 ohms	62-2478340*			
R5	Resistor, cathode bias, 220 ohms	66-1228340*			
R6	Volume control, 500,000 ohms	33-5566-28			
R7	Resistor, diode load, 2.2 megohms	66-5228340*			
R8	Resistor, bias, 470,000 ohms	66-4478340*			
R9	Resistor, grid return, 10 megohms	66-6108340*			

MISCELLANEOUS

Description	Service Part No.
Adapter, a-c, Continental	L-3275
Cabinet	10796-1
Baffle and cloth assembly	40-7923
Drive cord (25-ft. spool)	45-8750*
Knob, band switch	54-4774-3
Knob, off-on-volume	54-4774-2
Knob, tuning	54-4774
Plate, electrolytic-condenser mounting	56-1643-1FA22
Pointer	56-5630-23
Scale-backplate assembly	76-6256
Scale	54-5089-1
Scale mtg. clip	56-7808FE11
Socket assembly, pilot lamp	27-6233-53*
Socket, Loktal (5 required)	27-6207
Spring, drive cord	28-8751-2
Tuning shaft assembly	31-2738-7

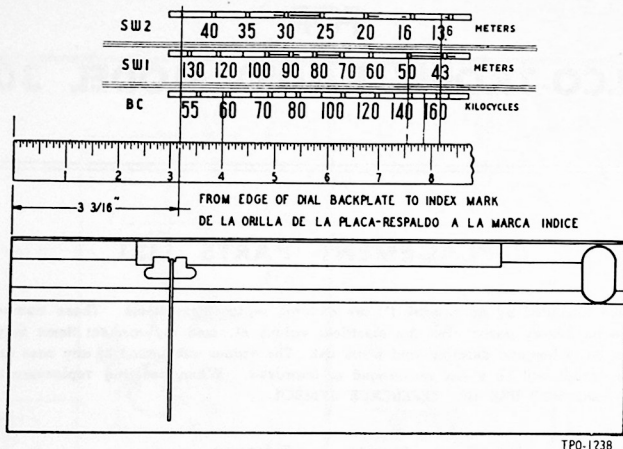


Figure 1. Dial-Calibration Measurements
Figura 1. Medidas para la Calibración del Cuadrante

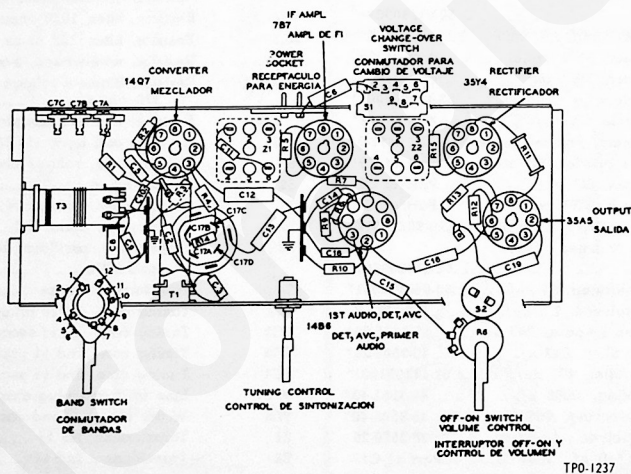


Figure 2. Symbolized Chassis, Showing Parts Placement
Figura 2. Vista del Chasis, Mostrando la Ubicación de las Partes

ALIGNMENT

DIAL POINTER — With the tuning-condenser plates fully meshed, adjust the dial pointer to coincide with the index mark in the left-hand corner of the dial (just to the left of the "55" mark).

SIGNAL GENERATOR — Connect the ground lead to the chassis, through a .01- μ f. isolating condenser, and the output lead as indicated in the chart. Use modulated output.

RADIO CONTROLS — Set the volume control to maximum. Set the band switch, tuning control, and signal-generator frequency as indicated in the chart.

ALINEAMIENTO

INDICADOR DEL CUADRANTE — Con el condensador de sintonización completamente cerrado, ajústese el indicador del cuadrante de modo que coincida con la marca índice en la esquina izquierda del cuadrante (a la izquierda del "55").

GENERADOR DE SEÑALES — Conéctese el cable de tierra al chasis, a través de un condensador aislador de .01 μ f., y el cable de salida como se indica en la tabla. Usese salida modulada.

CONTROLES DEL RADIO — Gírese el control de volumen al máximo. Fijense el conmutador de bandas, el control de sintonización y el generador de señales como se indica en la tabla.

OUTPUT METER — Connect between the lugs indicated on the rear of the chassis.

OUTPUT LEVEL — During alignment, the signal-generator output must be attenuated to hold the output-meter reading below 1.5 volts.

MEDIDOR DE SALIDA — Conéctese a los terminales indicados en la parte posterior del chasis.

INTENSIDAD DE LA SALIDA — Durante el alineamiento, atenúese la salida del generador de señales de modo que la indicación en el medidor de salida sea siempre menor de 1.25 voltios.

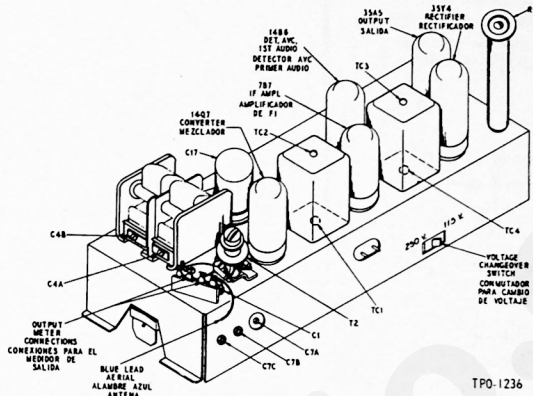
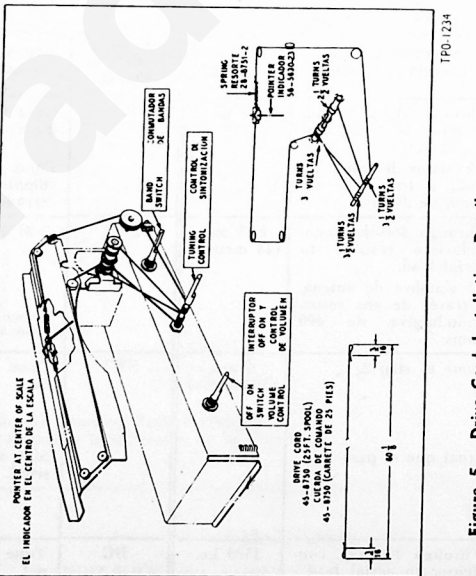
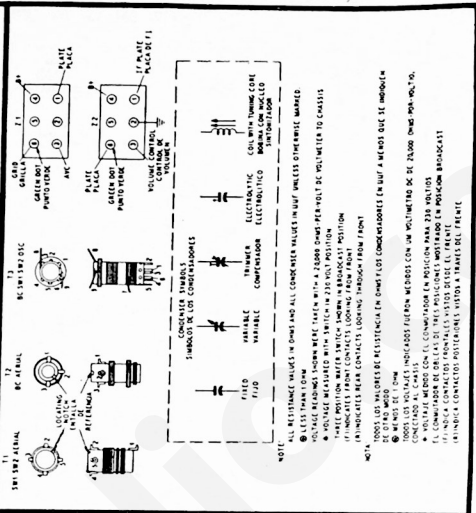
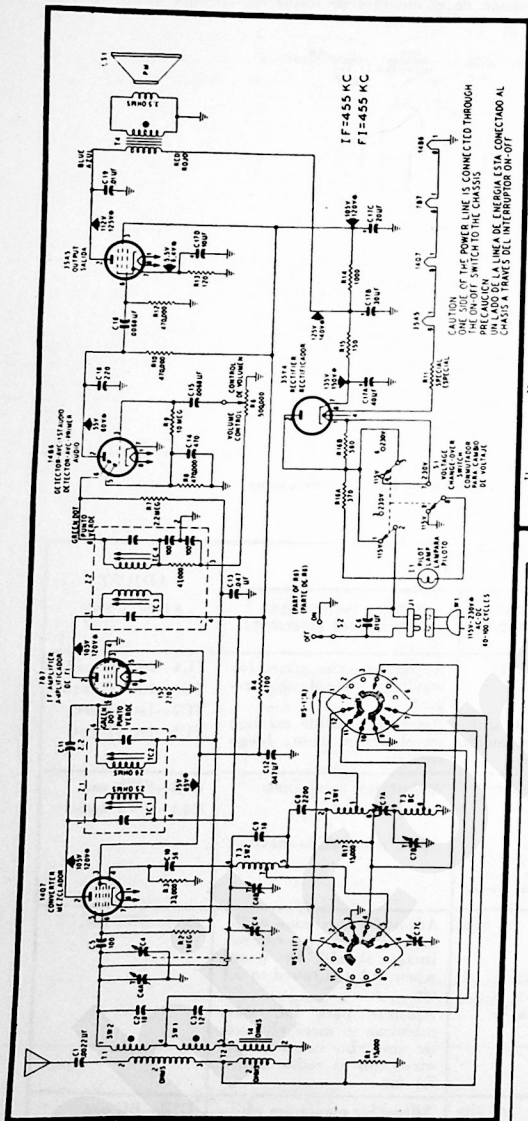


Figure 3. Top View of Chassis, Showing Trimmer Locations
 Figura 3. Vista Superior del Chasis, Mostrando la Posición de los Compensadores

STEP PASO	SIGNAL GENERATOR GENERADOR DE SEÑALES		RADIO			ADJUST AJUSTENSE
	CONNECTION TO RADIO CONEXION AL RADIO	DIAL SETTING FRECUENCIA	BAND SWITCH COMMUT. DE BANDAS	DIAL SETTING FRECUENCIA	SPECIAL INSTRUCTIONS INSTRUCCIONES ESPECIALES	
1	Through .05 μ f. cond. to stator of aerial tuning cond. Al estator del cond. de sint., a través de un cond. de .05 μ f.	455 kc.	BC	Gang fully meshed. Cond. de sint. completamente cerrado.	Adjust, in order given, for maximum output; then repeat. Ajust. para salida máxima en el orden dado; luego repítase.	TC4—2nd i-f sec. TC3—2nd i-f pri. TC2—1st i-f sec. TC1—1st i-f pri.
2	Through 400-ohm non-inductive resistor to aerial lead. Al alambre de antena, a través de una resist. no-inductiva de 400 ohms.	21.5 mc. (14 metros)	SW2	21.5 mc.	Adjust for maximum. Ajust. para salida máxima.	C4B—SW2 osc. C4A—SW2 aerial
3	Same as step 2. Igual que el paso 2.	6 mc. (50 metros)	SW1	Tune to signal. Sint. a la señal.	Adjust for maximum while rocking tuning control. Image should be heard when radio is tuned to 5.1 mc. Ajustese para sal. máx. mientras se mece el cond. de sint. La imagen debe oírse con el radio sint. a 5.1 mc.	C7C—SW1 osc.
4	Through 200 μ mf. condenser to aerial lead. Al alambre de antena, a través de un cond. de 200 μ mf.	1500 kc.	BC	Tune to signal. Sint. a la señal.	Adjust for maximum while rocking tuning control. Ajust. para sal. máx. mientras se mece el cond. de sint.	C7B—BC osc. (shunt)
5	Same as step 4. Igual que el paso 4.	580 kc.	BC	Tune to signal. Sint. a la señal.	Adjust for maximum while rocking tuning control. Ajust. para sal. máx. mientras se mece el cond. de sint.	C7A—BC osc. (series)
6	Repeat steps 4, 5, and 4 until no further improvement is obtained. Repítanse los pasos 4, 5, y 4 hasta que no se obtenga mejoría alguna.					



TPD-1235

Figure 4. Philco-Tropic Radio Model 3012. Schematic Diagram
Figura 4. Radio Philco-Tropic Modelo 3012. Diagrama Esquemático

TPD-1234

Figure 5. Drive-Cord Installation Details
Figura 5. Detalles Sobre la Instalación de la Cuerda de Comando de Comando