

# PARTS LIST AND SERVICE INFORMATION

## FOR PHILCO-TROPIC MODEL 3113

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 equipment will either be 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, tuning gang, 2-section	31-2723-2	R3	Resistor, oscillator loading (SW1 and SW2) 22,000 ohms	66-3228340*
C2	Condenser, trimmer assembly, 7-section	31-6414-5	R4	Resistor, cathode bias, 5600 ohms	65-2538340
C2A	Condenser, trimmer, oscillator (SW4)	Part of C2	R5	Resistor, grid return, 68,000 ohms	66-3688340*
C2B	Condenser, trimmer, oscillator (SW3)	Part of C2	R6	Resistor, plate load, 22,000 ohms	66-3228540
C2C	Condenser, trimmer, oscillator (SW2)	Part of C2	R7	Resistor, dropping, 82,000 ohms	66-3828340*
C2D	Condenser, trimmer, oscillator (SW1)	Part of C2	R8	Resistor, a-v-c filter, 2.2 megohms	66-5228340*
C2E	Condenser, trimmer, aerial (BC)	Part of C2	R9	Resistor, grid return, 1 megohm	66-5108340*
C2F	Condenser, trimmer, aerial (SW2)	Part of C2	R10	Resistor, phono feedback, 100,000 ohms	66-4228340*
C2G	Condenser, trimmer, aerial (SW1)	Part of C2	R11	Resistor, cathode bias, 1000 ohms	66-2108340
C3	Condenser, trimmer assembly, 4-section	31-6414-2	R12	Resistor, screen dropping, 100,000 ohms	66-4108340
C3A	Condenser, trimmer, aerial (SW3)	Part of C3	R13	Resistor, diode filter, 47,000 ohms	Part of Z2
C3B	Condenser, trimmer, aerial (SW4)	Part of C3	R14	Resistor, plate load, 470,000 ohms	66-4478340*
C3C	Condenser, padder, oscillator (BC)	Part of C3	R15	Resistor, diode load, 470,000 ohms	66-4478340*
C3D	Condenser, trimmer, oscillator (BC)	Part of C3	R16	Tone control, 5 megohms (includes S1)	33-5535-32
C4	Condenser, d-c blocking, 100 $\mu$ f.	62-110001011	R17	Resistor, tone compensation, 22,000 ohms	65-3228340
C5	Condenser, screen by-pass, .01 $\mu$ f.	45-3505-41*	R18	Volume control, 2 megohms (tap at 1 megohm)	33-5556-25
C6	Condenser, a-v-c by-pass, .047 $\mu$ f.	45-3505-28*	R19	Resistor, grid return, 10 megohms	66-6108540
C7	Condenser, d-c blocking, 100 $\mu$ f.	62-110001011	R20	Resistor, bias load, 470,000 ohms	66-4478340*
C8	Condenser, fixed padder, 310 $\mu$ f.	30-1220-11	R21	Resistor, filter, 330 ohms	33-1334-8
C9	Condenser, d-c blocking, 100 $\mu$ f.	62-110001011	R22	Resistor, tilter, 1000 ohms	66-2104340
C10	Condenser, fixed padder, 310 $\mu$ f.	30-1220-11	R23	Resistor, grid return, 10 megohms	66-6108540
C11	Condenser, fixed padder, 2400 $\mu$ f.	60-20245304*	R24	Resistor, cathode load, 470,000 ohms	66-4478340*
C12A	Condenser, trimmer, 1st i-f pri.	Part of Z1	R25	Resistor, plate load, 470,000 ohms	66-4478340*
C12B	Condenser, trimmer, 1st i-f sec.	Part of Z1	R26	Resistor, bias load, 470,000 ohms	66-4478340*
C13A	Condenser, trimmer, 2nd i-f pri.	Part of Z2	R27	Resistor, grid return, 470,000 ohms	66-4478340*
C13B	Condenser, trimmer, 2nd i-f sec.	Part of Z2	R28	Resistor, cathode bias, 470 ohms	66-1475340
C13C	Condenser, by-pass, 100 $\mu$ f.	Part of Z2	R29	Resistor, grid return, 470,000 ohms	66-4478340*
C13D	Condenser, by-pass, 100 $\mu$ f.	Part of Z2	R30	Resistor, oscillator loading, 3300 ohms	66-2338340*
C14	Condenser, by-pass, 56 $\mu$ f.	62-056009021	S1	Switch, on-off	Part of R16
C15	Condenser, d-c blocking (phono input), .0068 $\mu$ f.	45-3505-40*	S2	Switch, voltage change-over	42-1569
C16	Condenser, line filter, .01 $\mu$ f.	45-3505-58*	T1	Transformer, power	32-8448
C17	Condenser, line filter, .01 $\mu$ f.	45-3505-58*	T2	Transformer, output	32-8300-3*
C18	Condenser, tone compensation, high-cut, .0022 $\mu$ f.	45-3505-54*	T3	Transformer, aerial (BC, SW1, and SW2)	32-4456
C19	Condenser, treble compensation, 220 $\mu$ f.	62-122001011	T4	Transformer, aerial (SW3 and SW4)	32-4195
C20	Condenser, bass compensation, .01 $\mu$ f.	45-3505-41*	T5	Transformer, oscillator (BC, SW1, and SW2)	32-4329
C21	Condenser, electrolytic, 4-section	30-2570-57	T6	Transformer, oscillator (SW3 and SW4)	32-4194
C21A	Condenser, electrolytic, filter, 40 $\mu$ f., 300v	Part of C21	W1	Line cord	L-2183*
C21B	Condenser, electrolytic, filter, 20 $\mu$ f., 300v	Part of C21	WS	Switch, band selector, 4-wafer	42-1931
C21C	Condenser, electrolytic, filter, 10 $\mu$ f., 300v	Part of C21	Z1	Transformer, 1st i-f	32-4345
C21D	Condenser, electrolytic, filter, 10 $\mu$ f., 300v	Part of C21	Z2	Transformer, 2nd i-f	32-4346-2
C22	Condenser, audio coupling, .0068 $\mu$ f.	45-3505-40*	<b>MISCELLANEOUS</b>		
C23	Condenser, audio coupling, .0068 $\mu$ f.	45-3505-40*	Description	Service Part No.	
C24	Condenser, bias filter coupling, 680 $\mu$ f.	62-168001001*	Cabinet back	54-8128	
C25	Condenser, output coupling, .0068 $\mu$ f.	45-3505-40*	Baffle-and-cloth assembly	76-5688	
C26	Condenser, bias filter, 680 $\mu$ f.	62-168001001*	Knob, volume and tuning	54-4718-14	
C27	Condenser, output coupling, .0068 $\mu$ f.	45-3505-40*	Knob, band selector, off-on-tone	54-4718-17	
C28	Condenser, electrolytic, cathode by-pass, 25 $\mu$ f.	45-3001*	Mtg. foot (4 req.)	27-4911	
C29	Condenser, output plate by-pass, 0033 $\mu$ f.	45-3505-89*	Pilot-lamp assembly	27-6233-53*	
C30	Condenser, audio coupling, .01 $\mu$ f.	45-3505-41*	<b>Scale and Scale-Mounting Parts</b>		
I1	Pilot lamp	34-2605*	Backplate assembly, scale	76-4360	
J1	Socket, phono input	27-6126	Drive cord (25-ft. spool)	45-8750*	
J2	Socket, phono motor	27-6252-7	Pointer	56-5630-27	
LS1	Loud-speaker	36-1632	Scale, dial	54-5094	
R1	Resistor, grid return, 1 megohm	66-6108340*	Scale, regional (diffusing panel)	54-5043-1	
R2	Resistor, oscillator stabilizing, 120 ohms	62-1128340	Spring, scale mounting (4 required)	56-3841	
			Spring, gang and pointer	50-3084	
			Strap scale mounting (3 req.)	56-4756FE11	
			Shaft, drive	31-2738-6	
			Socket, Loktal	27-6207	
			Socket, phono input	27-6126	
			Socket, phono motor	27-6200*	

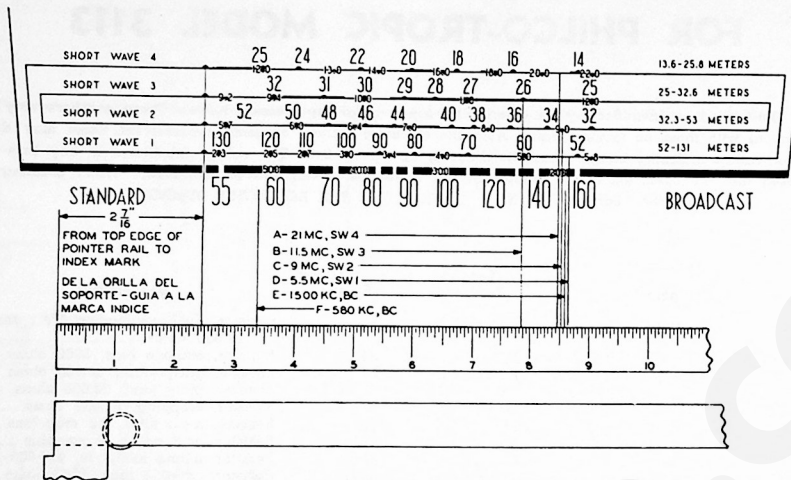


Figure 1. Dial-Calibration Measurements  
Figura 1. Medidas para la Calibración del Cuadrante

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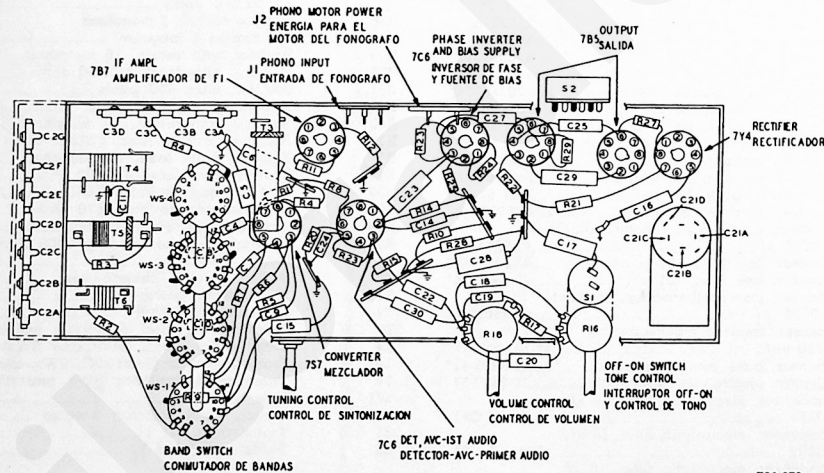


Figure 2. Symbolized Chassis, Showing Parts Placement  
Figura 2. Vista del Chasis, Mostrando la Ubicación de las Partes

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**ALIGNMENT PROCEDURE**

**CAUTION**—Before connecting the radio to the power source, make certain that the voltage change-over switch, located on the rear of the chassis, is correctly set for the line voltage.

**DIAL POINTER**—With the tuning condenser fully meshed, adjust the dial pointer to coincide with the index mark just to the left of "55" (BC). See figure 1.

**SIGNAL GENERATOR**—Connect the ground lead to the chassis, and the output lead as indicated in the chart. Use modulated output.

**ALINEAMIENTO**

**PRECAUCION**—Antes de conectar el radio a la fuente de energía, asegúrese de que el conmutador para cambio de voltaje, ubicado en la parte posterior del chasis, está fijado correctamente para el voltaje de línea.

**INDICADOR DEL CUADRANTE**—Con el condensador de sintonización completamente cerrado, ajústese el indicador del cuadrante de modo que coincida con la marca índice a la izquierda del "55" (BC). Véase la figura 1.

**GENERADOR DE SEÑALES**—Conectese el cable de tierra al chasis, y el de salida como se indica en la tabla. Usese salida modulada.

**RADIO CONTROLS**—Set the volume control to maximum, and the tone control counterclockwise (without turning set off). Set the band switch, tuning control, and signal generator as indicated in the chart.

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

**OUTPUT LEVEL**—During alignment, the signal-generator output must be attenuated to hold the output-meter indication below 1.25 volts.

**NOTE:** Allow 15 minutes for the radio and signal generator to warm up before starting alignment.

**CONTROLES DEL RADIO**—Gírese el control de volumen al máximo, y el control de tono hacia la izquierda (sin apagar el radio). Fíjense el conmutador de bandas, el control de sintonización y el generador de señales como se indica en la tabla.

**MEDIDOR DE SALIDA**—Conéctese a los terminales de la bobina de voz del altoparlante.

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

**NOTA:** Permitanse 15 minutos hasta que el radio y el generador de señales se calienten antes de comenzar el alineamiento.

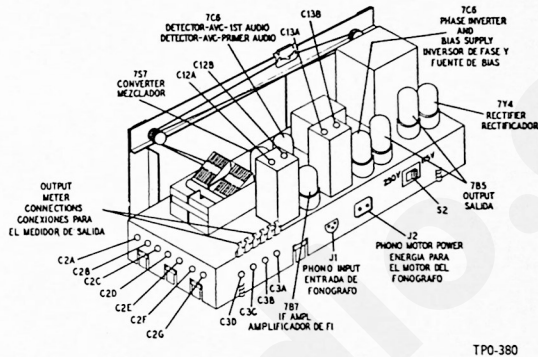


Figure 3. Top View of Chassis, Showing Trimmer Locations  
 Figura 3. Vista Superior del Chasis, Mostrando la Ubicación de los Compensadores

STEP PASO	SIGNAL GENERATOR GENERADOR DE SEÑALES		RADIO			ADJUST IN ORDER GIVEN AJUSTENSE EN EL ORDEN DADO
	CONNECTION TO RADIO CONEXION AL RADIO	DIAL SETTING FRECUENCIA	BAND SWITCH COMMUT. DE BANDAS	DIAL SETTING FRECUENCIA	SPECIAL INSTRUCTIONS INSTRUCCIONES ESPECIALES	
1	Through a .05- $\mu$ f. condenser to pin 6 of the 7S7. Al alfiler 6 del 7S7, a través de un condensador de .05 $\mu$ f.	455 kc.	BC	Gang fully meshed. Cond. de sint. comp. cerrado.	Adjust for maximum output, then repeat once. Ajustense para salida máxima, luego repítase una vez.	C13B—2nd i-f sec. C13A—2nd i-f pri. C12B—1st i-f sec. C12A—1st i-f pri.
2	Through a 400-ohm resistor to external aerial lead. Al alambre de antena exterior, a través de una resist. de 400 ohms.	21 mc. (fig. 1, A)	SW4	21 mc.	Adjust for maximum output. Ajustese para salida máxima.	C2A—SW4 osc. C3B—SW4 aerial*
3	Same as step 2. Igual que el paso 2.	11.5 mc. (fig. 1, B)	SW3	11.5 mc.	Same as step 2. Igual que el paso 2.	C2B—SW3 osc. C3A—SW3 aerial
4	Same as step 2. Igual que el paso 2.	9 mc. (fig. 1, C)	SW2	9 mc.	Same as step 2. Igual que el paso 2.	C2C—SW2 osc. C2F—SW2 aerial*
5	Same as step 2. Igual que el paso 2.	5.5 mc. (fig. 1, D)	SW1	5.5 mc.	Same as step 2. Igual que el paso 2.	C2D—SW1 osc. C2G—SW1 aerial
6	Through a 200- $\mu$ f. condenser to external aerial lead. Al alambre de antena exterior, a través de un cond. de 200 $\mu$ f.	1500 kc. (fig. 1, E)	BC	1500 kc.	Same as step 2. Igual que el paso 2.	C3D—BC osc. (shunt) C2E—BC aerial
7	Same as step 6. Igual que el paso 6.	580 kc. (fig. 1, F)	BC	580 kc.	Same as step 2. Igual que el paso 2.	C3C—BC osc.* (series)

\*Rock gang while tuning.

\*Muévase el condensador de sintonización levemente de un lado a otro mientras se hace este ajuste.

