

PHILCO - TROPIC RADIO - PHONOGRAPH

MODEL 48-1284T

SPECIFICATIONS

CABINET	Wood console, walnut finish
RADIO CIRCUIT	Seven-tube superheterodyne
FREQUENCY RANGES	
Broadcast	540—1650 kc.
Short Wave	9.3—15.7 mc.
AUDIO OUTPUT	6 watts
OPERATING VOLTAGE	105—120 volts, 60 cycles, a.c.
POWER CONSUMPTION	
Radio	75 watts
Record Changer	20 watts
AERIAL	Built-in low-impedance loop; terminal provided for external aerial
INTERMEDIATE FREQUENCY	455 kc.
PHILCO TUBES (7)	7AF7, 7A7, 7R7, 7F7, 6K6GT(2), 7Z4
PHONOGRAPH	Philco Automatic Record Changer Model M-8 (for service information see Page 475)

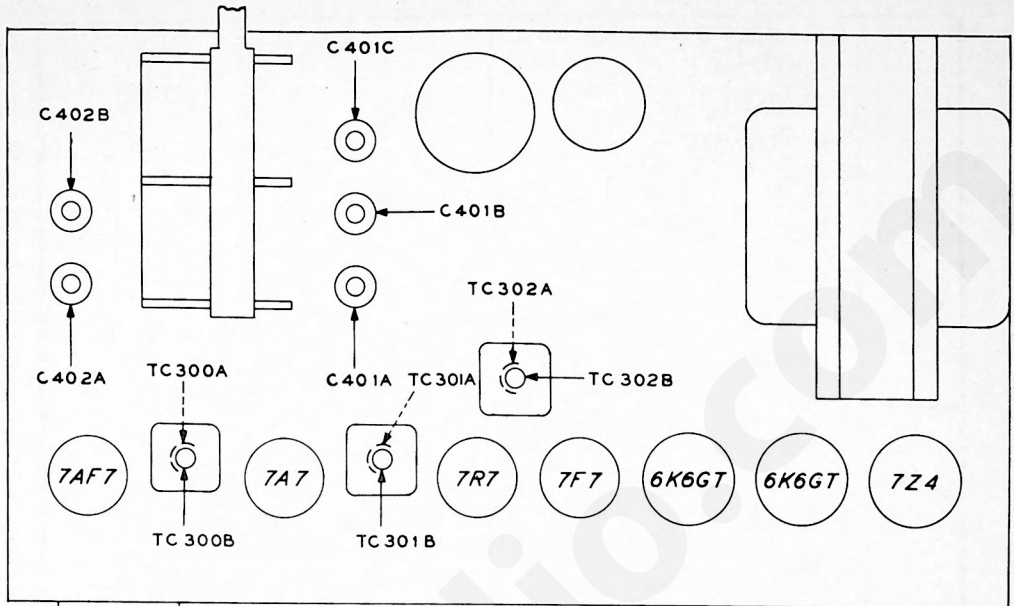
ALIGNMENT PROCEDURE

OUTPUT METER—Connect one lead to chassis, and other lead to terminal 3 of TB400.

RADIO CONTROLS—Set volume control to maximum, and turn tone control fully counterclockwise.

SIGNAL GENERATOR—Connect generator ground lead to chassis; connect output lead as indicated in chart. Use modulated output, and attenuate signal-generator output to hold output indication below 1.5 volts.

MODEL 48-1284T



TC 300A TC301A TC302A ARE LOCATED UNDERNEATH CHASSIS

Top View, Showing Alignment Points

TP-6485A

STEP	SIGNAL GENERATOR		RADIO			ADJUST
	CONNECTION TO RADIO	DIAL SETTING	BAND SWITCH	DIAL SETTING	SPECIAL INSTRUCTIONS	
1	Through .1-mf. condenser to terminal 1 of TB400.	455 kc.	BC	540 kc.	Adjust tuning cores, in order given, for maximum output.	TC302B—3rd i-f sec. TC302A—3rd i-f pri. TC301B—2nd i-f sec. TC301A—2nd i-f pri. TC300B—1st i-f sec. TC300A—1st i-f pri.
2	Radiating loop (see note below).	580 kc.	BC	580 kc.	Adjust trimmer for maximum output.	C401—BC osc. (series)
3	Same as step 2.	1600 kc.	BC	1600 kc.	Adjust trimmer for maximum output.	C402B—BC osc. (shunt)
4	Same as step 2.	1500 kc.	BC	1500 kc.	Adjust trimmer for maximum output.	C402A—BC aerial
5	Same as step 2.	580 kc.	BC	580 kc.	Adjust trimmer for maximum output while rocking tuning condenser.	C401C—BC osc. (series)
6	Repeat steps 3, 4, 5, 3, and 4 until no further improvement is noted.					
7	Same as step 2.	15 mc.	SW	15 mc.	Adjust trimmer for maximum output on first peak from loose position. Check for image at 14.1 mc.	C401B—SW osc.
8	Same as step 2.	15 mc.	SW	15 mc.	Adjust trimmer for maximum output while rocking tuning condenser.	C401A—SW aerial

RADIATING LOOP: Make up a 6-8 turn, 6-inch diameter loop from insulated wire; connect to signal-generator leads and place near radio loop aerial. Make certain that radio loop aerial is connected to radio.

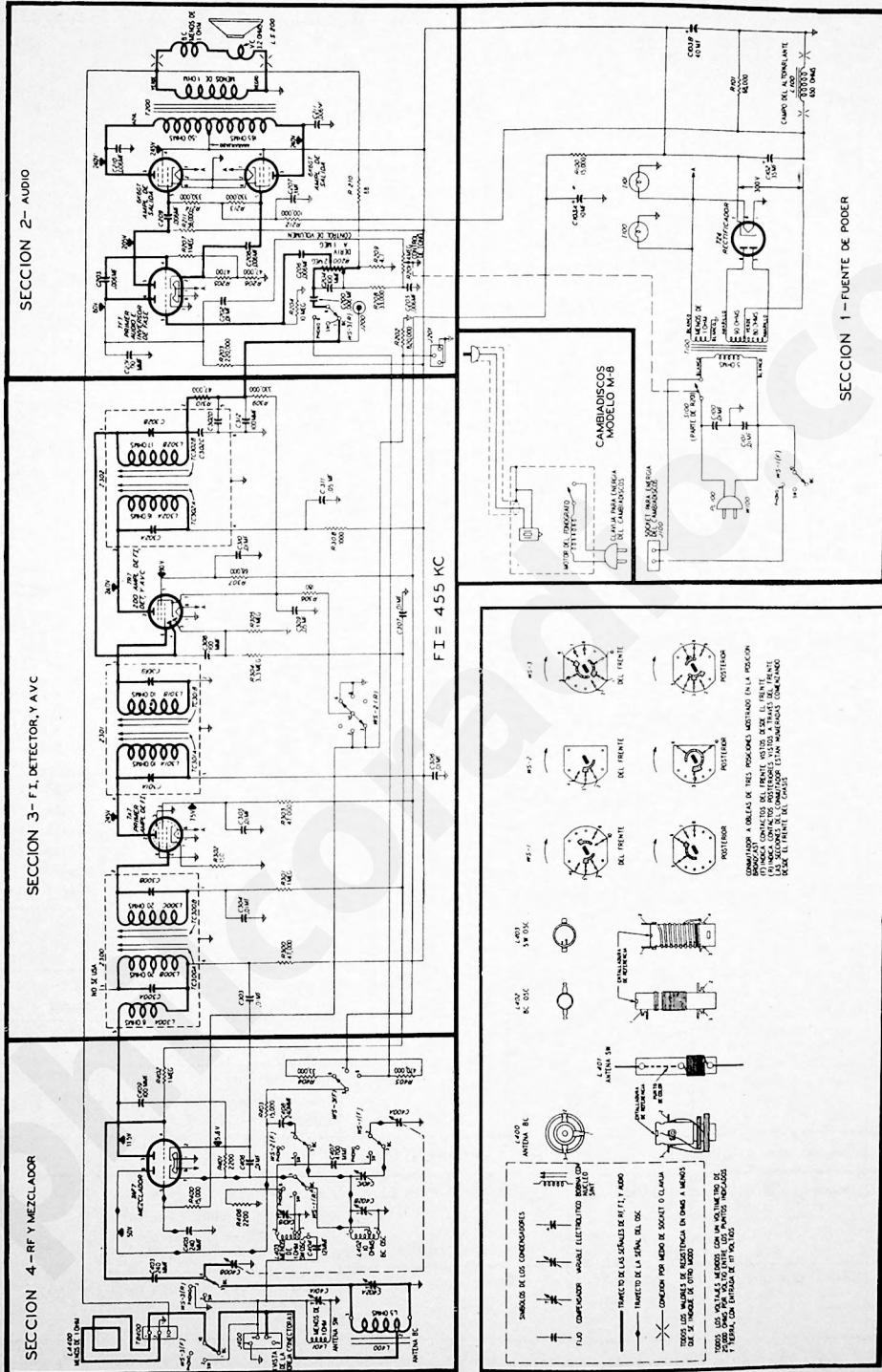


Diagrama Completo Del Radio-Fonógrafo Philco-Tropic Modelo 48-1284T

TP-6485

REPLACEMENT PARTS LIST

NOTE: An asterisk (*) indicates a general replacement item. The part numbers of these items may not be identical with those on factory parts; also, the electrical values of some replacement items may differ from the values given 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."

SECTION 1
POWER SUPPLY

Reference Symbol	Description	Service Part No.
C100	Condenser, line filter, .01 mf.	61-0120*
C102	Condenser, line filter, .01 mf.	61-0120*
C102	Condenser, electrolytic, filter, 35 ml., 450v.	30-2570-25
C103	Condenser, electrolytic, 2-section	30-2570-24
C103A	Condenser, filter, 10 mf., 450v.	Part of C103
C103B	Condenser, filter, 40 mf., 450v.	Part of C103
I100	Pilot Lamp	32-2040
I101	Pilot Lamp	34-2040
J100	Socket, record-changer power	27-6200
L100	Speaker field	Part of LS200
PL100	Plug, a-c power	Part of W100
R100	Resistor, filter, 15,000 ohms	66-3155340*
R101	Resistor, bias, 68,000 ohms	66-3693340*
S100	Switch, on-off	Part of R201
T100	Transformer, power	32-8350
W100	Line-cord-and-plug assembly	L-2183*
WS-1(F)	Switch-water section	Part of 42-1875*

SECTION 2
AUDIO CIRCUITS

C200	Condenser, d-c blocking, .006 mf.	45-3500-7*
C201	Condenser, r-f by-pass, 100 mmf.	60-10105407*
C202	Condenser, tone control, .01 mf.	61-0120*
C203	Condenser, d-c blocking, .006 mf.	45-3500-7*
C204	Condenser, tone compensation, 100 mmf.	60-10105407*
C205	Condenser, tone compensation, .006 mf.	45-3500-7*
C206	Condenser, d-c blocking, .006 mf.	45-3500-7*
C207	Condenser, bias filter, 1 mf.	61-0113*
C208	Condenser, d-c blocking, .006 mf.	45-3500-7*
C209	Condenser, d-c blocking, .006 mf.	45-3500-7*
C210	Condenser, parasitic suppressor, .006 mf.	61-0153*
C211	Condenser, parasitic suppressor, .006 mf.	61-0153*
J200	Test socket	27-6180
J201	Cable and plug, phono input	41-3735-16
LS200	Loud speaker	36-1611-3
R200	Volume control, 2 megohms (Tap at 1 megohm)	33-5535-16
R201	Tone control (with on-off switch) 4 megohms	33-5538-29
R202	Resistor, crystal load, 920,000 ohms	66-4823340
R203	Resistor, plate load, 220,000 ohms	66-4223340*
R204	Resistor, grid return, 10 megohms	66-6103340*
R205	Resistor, cathode bias, 4700 ohms	66-2473340*
R208	Resistor, cathode load, 47,000 ohms	66-3473340*
R207	Resistor, grid return, 1 megohm	66-5103340*
R208	Resistor, tone compensation, 33,000 ohms	66-3333340*
R209	Resistor, voltage divider (negative feedback), 4.7 ohms	66-9474360
R210	Resistor, voltage divider (negative feedback), 68 ohms	66-0683340*
R211	Resistor, plate load, 56,000 ohms	66-3563340*
R212	Resistor, bias filter, 100,000 ohms	66-4103340*
R213	Resistor, grid return, 330,000 ohms	66-4333340*
R214	Resistor, grid return, 330,000 ohms	66-4333340*
T200	Transformer, output	32-8274
WS-3(R)	Switch-water section	Part of 42-1875*

SECTION 3
I.F. DETECTOR, AND A-V-C CIRCUITS

C300A	Condenser, shunt	Part of Z300
C300B	Condenser, shunt	Part of Z300
C301A	Condenser, shunt	Part of Z301
C301B	Condenser, shunt	Part of Z301
C302A	Condenser, shunt	Part of Z302
C302B	Condenser, shunt	Part of Z302
C302C	Condenser, r-f by-pass	Part of Z302
C302D	Condenser, r-f by-pass	Part of Z302
C303	Condenser, plate by-pass, .01 mf.	61-0120*
C304	Condenser, a-v-c by-pass, .05 mf.	62-110090001*
C305	Condenser, screen by-pass, .01 mf.	61-0120*
C305	Condenser, r-f by-pass, .01 mf.	61-0120*
C307	Condenser, a-v-c by-pass, .01 mf.	61-0120*
C308	Condenser, d-c blocking, 100 mmf.	62-110090001*
C309	Condenser, cathode by-pass, .05 mf.	61-0122*
C310	Condenser, screen by-pass, .01 mf.	61-0120*
C311	Condenser, plate by-pass, .05 mf.	61-0122*
C312	Condenser, r-f by-pass, 100 mmf.	62-110090001*
R300	Resistor, plate decoupling, 47,000 ohms	66-3473340*
R301	Resistor, a-v-c decoupling, 1 megohm	66-5103340*
R302	Resistor, cathode bias, 150 ohms	66-1153340*
R303	Resistor, screen dropping, 47,000 ohms	66-3473340*
R304	Resistor, a-v-c filter, 3.3 megohms	66-5333340*
R305	Resistor, a-v-c diode load, 1 megohm	66-5103340*
R306	Resistor, cathode bias, 180 ohms	66-1183340*

SECTION 3 (Continued)
I.F. DETECTOR, AND A-V-C CIRCUITS

Reference Symbol	Description	Service Part No.
R307	Resistor, screen dropping, 68,000 ohms	66-3683340*
R308	Resistor, plate decoupling, 1000 ohms	66-2103340*
R309	Resistor, diode load, 330,000 ohms	66-4333340*
R310	Resistor, r-f filter, 47,000 ohms	66-3473340*
WS-2(R)	Switch-water section	Part of 42-1875*
Z300	Transformer, 1st i-f.	32-4258
Z301	Transformer, 2nd i-f.	32-4160-3
Z302	Transformer, 3rd i-f.	32-4240-2

SECTION 4
R-F AND CONVERTER CIRCUITS

C400	Condenser, tuning gang	31-2728
C400A	Condenser, tuning (osc. section)	Part of C400
C400B	Condenser, tuning (aerial section)	Part of C400
C401	Condenser, assembly trimmer, 3-section	31-6477-10
C401A	Condenser, trimmer, SW aerial	Part of C401
C401B	Condenser, trimmer, SW osc.	Part of C401
C401C	Condenser, trimmer, BC osc. (series)	Part of C401
C402	Condenser, assembly trimmer, 2-section	31-6476-16
C402A	Condenser, trimmer, BC aerial	Part of C402
C402B	Condenser, trimmer, BC osc. (shunt)	Part of C402
C403	Condenser, d-c blocking, 240 mmf.	60-10245307*
C404	Condenser, stabilizing, 12 mmf.	30-1224-33
C405	Condenser, grid return, 240 mmf.	60-10245307*
C406	Condenser, cathode by-pass, .01 mf.	61-0120*
C407	Condenser, fixed padder (SW osc.), 4700 mmf.	60-20515304*
C408	Condenser, d-c blocking, 240 mmf.	60-10245307*
C409	Condenser, r-f by-pass, 100 mmf.	62-110090001*
J400	Socket, external aerial	27-6214-1
L400	Coil, BC aerial	32-4033-7
L401	Coil, SW aerial	32-4050-10
L402	Coil, BC osc.	32-4221-2
L403	Coil, SW osc.	32-4280
LA400	Loop aerial	76-3583-1
R400	Resistor, grid return, 15,000 ohms	66-3153340*
R401	Resistor, cathode bias, 2200 ohms	66-2223340*
R402	Resistor, grid return, 1 megohm	66-5103340*
R403	Resistor, plate load, 15,000 ohms	66-3153340*
R404	Resistor, plate load, 33,000 ohms	66-3333340*
R405	Resistor, plate dropping, 470,000 ohms	66-4473340*
R406	Resistor, cathode, 2200 ohms	66-2223340*
TB400	Terminal panel, aerial	38-9342
WS-1(F)	Switch-water section	Part of 42-1875*
WS-1(R)	Switch-water section	Part of 42-1875*
WS-2(F)	Switch-water section	Part of 42-1875*
WS-3(F)	Switch-water section	Part of 42-1875*
WS-3(R)	Switch-water section	Part of 42-1875*

MISCELLANEOUS

Description	Service Part No.
Cabinet (less case)	10705
Baffle and cloth	40-6998
Baffle, wood	219110
Bezel, metal	66-4878
Bin mechanism, L.H.	76-3223-5
Bin mechanism, R.H.	76-3223-6
Bullet catch	45-6002
Cabinet back, binder's board	54-7552
Cabinet back, Masonite	54-7555
Dial scale	76-3187-5
Dome	45-6190
Door pull	56-5272
Frame assembly	76-3222-1
Knife hinge (with stop arm)	66-5222
Knife hinge	76-3716
Scale strap	56-4916
Spring, changer mounting	56-3043FA15
Cable and plug, speaker	41-3734-8
Dial-backplate assembly	56-4882
Dial cord (25-ft. apool)	56-3179
Dial pointer	54-4486
Knob	35-2670
Needle	35-2674
Pickup crystal	56-2194FA3
Shield, pilot lamp	27-6138
Socket, Loktal	27-6174
Socket, octal	27-6174
Socket assembly, pilot lamp	27-6233-16
Spring (pointer drive cord)	28-8953
Spring (tuning-condenser drive cord)	56-217
Tuning shaft	76-3820
Water, condenser mounting	27-8508

*42-1875 Band switch, 3-section water switch

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