Philco Radio & Television Corp.

	Model: TP-12	**Chassis:**	**Year:** Pre June 1940
	Power:	**Circuit:**	**IF:**
	Tubes:		
	Bands:		

Resources

- Riders Volume 11 - PHILCO 11-4
- Riders Volume 11 - PHILCO 11-13

MODELS TH-3,TH-4,TP-4,
TH-5,TP-5,TP-10,TP-11
TP-12
Alignment Instructions

PHILCO RADIO & TELEV. CORP.

GENERAL ALIGNING INSTRUCTIONS

Models TH-3, TH-4, TP-4, TH-5, TP-5, TP-10, TP-11, TP-12

The same general procedure is followed in aligning the compensating condensers in any of the above listed models.

EQUIPMENT REQUIRED

Signal Generator Philco Model 077 or 177 should be used.

Aligning Indicator Philco Model 027 and Model 028 circuit testers which contain an audio output meter and vacuum tube voltmeter. Either of the vacuum tube voltmeter or the audio ouput meters may be used as an aligning indicator and are connected as given under "Connecting Aligning Instruments".

Tools: Fibre handle aligning screw driver, Philco Part No. 45-2610.

CONNECTING ALIGNING INSTRUMENTS

Audio Output Meter: If an aligning indicator of this type is used, connect it to the plate and screen terminals of the output tube.

Vacuum Tube Voltmeter: To use the vacuum tube voltmeter as an aligning indicator, make the following connections:

Attach the negative terminal of the voltmeter to any point in the circuit where the A.V.C. voltage can be obtained. Connect the positive terminal to the ground connection of the receiver. In AC-DC sets the positive (+) terminal of the vacuum tube voltmeter should be connected to (B—) of the receiver. (Cathode 7C6.)

For aligning receivers with loktal type tubes, an aligning adaptor, Philco Part No. 45-2767 may be used with the vacuum tube voltmeter. To use the adaptor, remove the second detector tube from its socket and insert the aligning adaptor in the socket, then replace the tube in the adaptor. Connect the negative terminal of the vacuum tube voltmeter to the light colored wire which protrudes from the side of the adaptor. Attach the positive terminal of the vacuum tube voltmeter to the black wire of the adaptor.

Signal Generator: When adjusting the I.F. padders, the high side of the signal generator is connected through a .004 mfd. condenser to the antenna section of the tuning condenser. Connect the ground or low side of the generator to the chassis. It may be necessary when adjusting AC-DC models to reverse the power plug to eliminate hum.

The R.F. and oscillator padders are aligned with the high side of the signal generator connected to the antenna of the receiver through a 100 mmfd. condenser.

After connecting the aligning instruments, adjust the compensators on all models in the order as shown in the tabulation below. The first and second I.F. transformers in all models are located on the top and bottom sections of the chassis respectively. The antenna and oscillator padders are located on the tuning condenser.

Operations in Order	SIGNAL GENERATOR		RECEIVER			SPECIAL INSTRUCTIONS
	Output Connections to Receiver	Dial Setting	Dial Setting	Control Setting	Adjust Compensators in Order	
1	Ant. Section of Tuning Cond.	470 K. C.	540 K. C. Tuning Cond. closed	Vol. Max.	1st & 2nd I.F.	Push in manual button on push button models
2	Ant. Ter.	1700 K. C.	1700 K. C.	Vol. Max.	"Osc"	Note A and B
3	Ant. Ter.	1500 K. C.	1500 K. C.	Vol. Max.	"Ant"	Note B

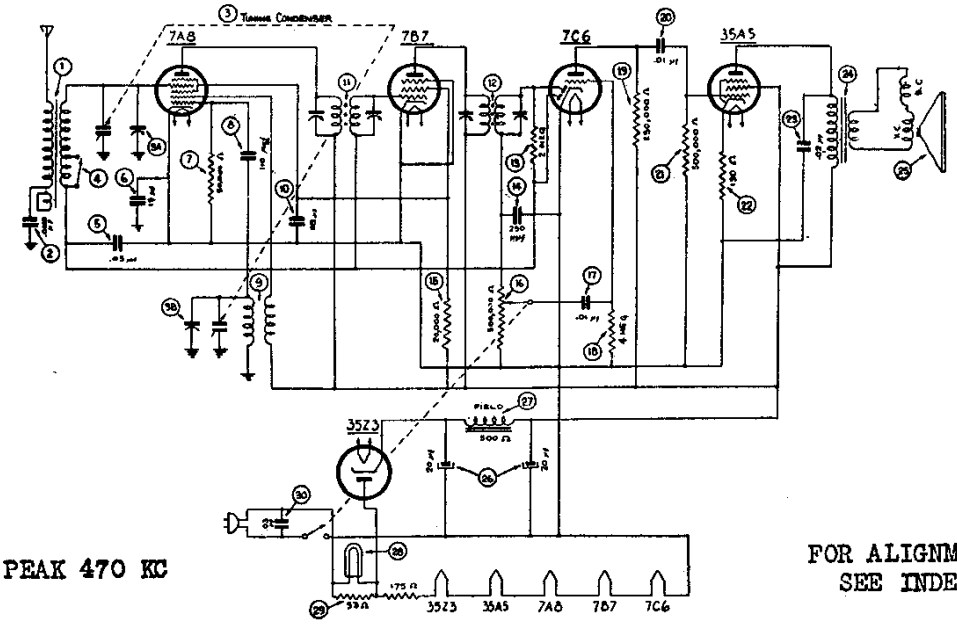
NOTE A — DIAL CALIBRATION: With the exception of Models TP-10 and TP-11 the dial pointers are adjusted by closing the tuning condenser (plates fully meshed) and setting the pointers on the dot below 55 on the dial.

NOTE B——The alignment procedure for the I.F. padders in Models TP-10 and TP-11 is the same as that given above. The antenna and oscillator padders of these models, however, are adjusted as follows:

1. Turn the tuning condenser to the extreme high frequency position (all plates out of mesh).
2. Insert a .004" gauge between the stationary and rotor plates of the oscillator condenser. If the gauge is not handy, a piece of bond writing paper can be used. After inserting gauge, turn rotor toward the low frequency end so that the gauge will be held in position.
3. Set signal generator at 1720 K.C. and tune oscillator padder for maximum reading on the output meter.
4. Remove gauge and set signal generator to 1500 K.C. and tune tuning condenser for maximum reading on this signal, then adjust the antenna padder for maximum output.
5. Place set in cabinet so that the tuning arm on the tuning condenser engages the dial on the cabinet. After placing receiver in the cabinet and it is found that the dial does not track properly with station signals, the dial can be calibrated as follows: Set the signal generator to a low frequency signal (600 K.C.) and tune receiver until signal shows maximum reading on the output meter. The dial is then set to this signal by inserting a 6-32 Phillips screw driver to the adjustment screw on the tuning condenser pulley. Loosen screw and slightly turn dial so that it reads 600 K.C. then retighten screw. When doing this, however, precaution should be taken so that the tuning condenser is not disturbed while dial is being adjusted and screw is being tightened or loosened.

MODEL TP-12
Schematic, Notes

PHILCO RADIO & TELEV. CORP.



REPLACEMENT PARTS

TRANSITONE HOME RADIO MODEL TP-12

Schem. No.	Description	Philco Part No.
1	Antenna Transformer	32-3164
2	Tubular Condenser (.0015 mf.,200V)	30-4555S
3	Tuning Condenser	31-2354
4	Switch	42-1406
5	Tubular Condenser (.05 mf., 200V)	30-4519S
6	Tubular Condenser (.15 mf., 400V)	30-4505S
7	Resistor (50,000 ohms, (1/3 watt)	33-350244
8	Mica Condenser (110 mmf.)	30-1031
9	Oscillator Transformer	32-3152
10	Tubular Condenser (.05 mf., 200V)	30-4519S
11	1st I.F. Transformer	32-3149
12	2nd I.F. Transformer	32-3150
13	Resistor (2 meg., 1/3 watt)	33-520244
14	Mica Condenser(250 mmf.)	30-1032
15	Resistor (20,000 ohms, 1/3 watt)	33-320244
16	Volume Control (500,000 ohms)	33-5306
17	Tubular Condenser (.01 mf., 200V)	30-4479S
18	Resistor (4 meg., 1/3 watt)	33-540244
19	Resistor (250,000 ohms, 1/3 watt)	33-425244
20	Tubular Condenser (.01 mf., 400V)	30-4572S
21	Resistor (500,000 ohms, 1/3 watt)	33-450244
22	Resistor (130 ohms, 1/2 watt)	33-113336
23	Tubular Condenser (.02 mf., 400V)	30-4516S
24	Output Transformer	
	For Speaker 36-1469-1	32-8047
	For Speaker 36-1469-9	32-8044
25	Cone Assembly	
	For Speaker 36-1469-1	36-4115
	For Speaker 36-1469-9	36-4113
26	Electrolytic Condenser (20-20 mf., 150V)	30-2382
27	Field Coil.....Part of Speaker No	36-1469
28	Pilot Lamp	34-2068
29	Line Resistor	33-3367
30	Tubular Condenser (.03 mf., 400V)	30-4449S
	Cardboard	27-9299
	Cabinet	10374
	Cable (Power)	L-3183
	Dial Scale	27-5498
	Drive Drum	28-6662
	Drive Shaft Assembly	31-2355
	Drive Cord Assembly	31-2358
	Knob Assembly	27-4820
	Pointer Dial	56-1326
	Spring (Drive Cord)	28-8751
	Speaker	36-1469
	Socket Assembly (Pilot Lamp)	38-9825
	Sockets	27-6128

MODEL TP-12 is a 5 tube superheterodyne receiver having 2 tuning ranges covering from 540 to 1720 kilocycles (K.C.) on the broadcast band and from 2.3 to 2.5 megacycles (M.C.) on the police band. This model is designed to operate on either alternating (A.C.) or direct current (D.C.) 115 volts. This model is assembled in a walnut cabinet with contrasting maple inlays.

An indoor aerial 20 feet in length is attached to the receiver for average receiving conditions; however in apartment houses, hotels or steel re-inforced buildings, the Philco Utility Aerial Part No. 40-6384 is recommended.

NOTE: If no sound is heard after connecting the receiver to the power supply and sufficient time has been allowed for the tubes to heat, reverse the electric plug in the outlet. The same procedure should be observed on A.C. power supplies when a slight hum is heard with the volume turned low.