

R. F. and I. F. ALIGNING INSTRUCTIONS

MODELS TH-9, TH-18, TH-22, PT-25 (121-122); PT-27 (121-122) PT-29-31-37-38-39-45-47-49-51-53

The same general procedure is followed in aligning the compensating condensers in the "R.F." and "I.F." circuits of any of the above listed models. The procedure for adjusting the push-buttons on models equipped with automatic tuning will be found on page 10.

EQUIPMENT REQUIRED

SIGNAL GENERATOR: Philco Model 077, A. C. operated or 177 battery operated should be used.

ALIGNING INDICATOR: Philco Models 027 and 028 Vacuum Tube Voltmeters and Circuits Testers which contain an audio output meter are recom-

mended. Either the vacuum tube voltmeter or the audio output 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 either of the following connections:

1—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 of the vacuum tube voltmeter to (B—) of the receiver. (Cathode 7C6)

2—An aligning adaptor, Philco Part No. 45-2767 can be obtained from your Philco Distributor for use 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 these 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.

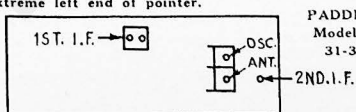
Models PT-25-27-29-31-39-45-47-49-51

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 Condenser	470 K. C.	540 K. C. Tuning Cond. Closed	Vol. Max.	1st & 2nd I. F.	Push in "Dial" 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."	

Models TH-18, TH-18E, PT-37-38-53

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 Condenser	455 K. C.	Tuning Cond. Closed	Vol. Max. Range Sw. Brdcast.	1st & 2nd I. F.	
2	Aerial with 400 ohm Dummy	18 M. C.	18 M. C.	Range Sw. Brdcast.	3B, 3A on Tuning Condenser	
3	Aerial with 100 mmfd Dummy	1500 K. C.	1500 K. C.	Range Sw. Brdcast.	13 Shunt Padder	
4	Aerial with 100 mmfd Dummy	580 K. C.	580 K. C.	Range Sw. Brdcast.	13 Series Padder	Roll Tuning Conds. when Adjusting Padder
5	Aerial with 100 mmfd Dummy	1500 K. C.	1500 K. C.	Range Sw. Brdcast.	13 Shunt Padder	

NOTE A—DIAL CALIBRATION: The dial pointers are adjusted by closing the tuning condenser (plates fully meshed) and setting the pointers slightly below the top edge of the brown center line at the extreme left end of pointer.



NOTE B—The Police Band on Models PT-29-31-49 and 51 is automatically adjusted when the "Brdcast" Band is adjusted.

PADDER LOCATIONS
Models TH-18, TH-18E,
PT-37-38-53

