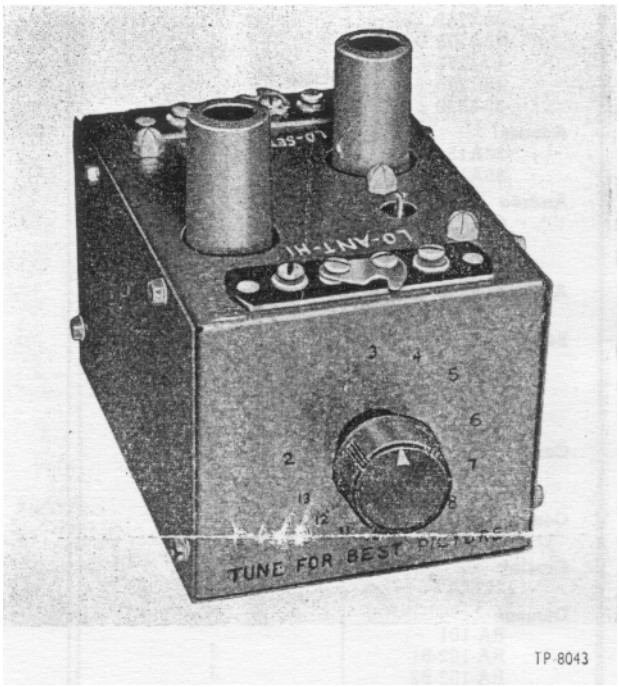
INSTRUCTIONS FOR PHILCO TELEVISION BOOSTER MODEL TB - 2

The Philco Television Booster, Model TB-2, is a specially designed amplifier for "boosting" television signals in cases where, because of shielding effects or distance from the station, television reception is un-satisfactory. It employs two miniature-type tubes, and covers all twelve television channels. To provide maximum efficiency over the entire television band, separate amplifiers are incorporated for the high-frequency and low-frequency portions of the band, and, in addition, the unit is provided with two sets of input and output connections, to permit the use of separate aerials on the high-frequency and low-frequency channels. Adaptability to all types of installations is provided by a design which permits the use of twin-lead, shielded twin-lead, or coaxial cable for the aerial leadin. Power for the operation of the Booster (6.3 volts, a.c., and 250 volts, d.c.) is obtained from the television receiver with which it is used, thereby eliminating the necessity for an extra power supply, and adding considerably to the compactness of the unit. An additional advantage is that the unit is automatically turned on and off with the television receiver.



INSTALLATION

In order to obtain the full performance of which the Booster is capable, it is strongly recommended that the installation be made by a qualified Philco Television Serviceman.

INSTALLING ADAPTER CABLE

When attaching the Booster to the television set, First locate the audio-output tube. This will ordinarily be a 6K6, 6V6, etc, when an octal type is used, or a 7B5, 7C5, etc. when a Loktal tube is used. Refer to the accompanying chart, which lists the audio-output tubes used in the principal makes of receivers. To locate the proper tube in other sets, tune in a television station in the usual manner, and then remove any of the above, or similar type tubes, one at a time (replace each tube before removing the next one), until the tube is found which cuts off the sound.

After the audio-output tube has been located, the next step is to install the adapter cable. The Booster is supplied with either of two types of cable, one type (Part No. 41-3914) for receivers using a 6K6, 6V6, or similar octal tube, the other type (Part No. 41-3913) for sets using 7B5, 7C5, or similar Loktal tube. Plug the adapter end of the cable into the socket from which the tube has been removed, then plug the tube into the adapter.

NOTE: The Booster cannot be used with television receivers of the AC-DC (series-connected filaments) type.

Next, refer to the accompanying chart, to see whether the reversing plug should be used. This plug, furnished with the Booster, is required with some receivers, to reverse the filament and ground connections to the Booster. If the information is not listed in the chart, proceed as follows:

1. With no other connections between the set and the Booster, insert the small plug, on the end of the adapter cable, into the receptacle on the Booster, and turn the set on.

2. Using an a-c voltmeter, set for about 10 volts full scale, check between the Booster chassis and the television chassis; if a reading is obtained (about 6.3 volts), the reversing plug is necessary.

When the reversing plug is required, it should be plugged onto the end of the adapter cable; the assembly should then be inserted into the Booster receptacle.

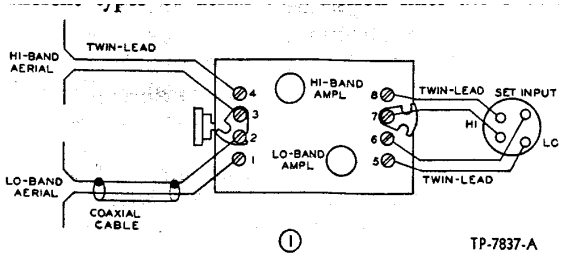
MODEL	AUDIO OUTPUT TUBE	ADAPTER (See notes at end of table)	REVERSING PLUG
Philco			
48-700*	7B5	L	Yes
48-1000*	7B5	L	No
48-1001*	7B5	L	No
48-2500*	7B5	L	No
49-701	7B5	L	Yes
49-702	7B5	L	Yes
49-1002	6K6GT	O	No
49-1040	6K6GT	O	No
49-1075	6K6GT	O	No
49-1076	6K6GT	O	No
49-1077	6K6GT	O	No
49-1078	6Y6	O	Yes
49-1079	6Y6	O	Yes
49-1240	6K6GT	O	No
49-1275	6K6GT	O	No
49-1278	6K6GT	O	No
49-1279	6Y6	O	No
49-1630	6Y6	O	No
Admiral			
30A15	6Y6G	O	No
30A16	6Y6G	O	No
Andrea			
C-VJ12	6V6GT	O	
Co-VJ12	6V6GT	O	
T-VJ12	6V6GT	O	
AVCo Mfg. Corp.			
307TA50	6K6GT	O	
Belmont			
21A21	6V6GT	O	
22A21	6K6GT	O	
22AX21	6K6GT	O	
22AX22	6K6GT	O	
Certified Radio Labs.			
47-71	6V6	O	
48-10	6V6	O	
Consolidated			
2315	6V6	O	
Crosley			
307TA	6K6GT	O	
Dumont			
RA-101	6V6GT	O	Yes
RA-102-B1	6V6GT	O	Yes
RA-102-B2	6V6GT	O	Yes
RA-102-B3	6V6GT	O	Yes
RA-103	6V6GT	O	Yes
Electro-Technical Inc.			
7" Telekit	6V6	O	
10" Telekit	6V6	O	
Emerson			
527	6V6GT	O	
545	6V6GT	O	Yes
554	6V6GT	O	
751	6K6GT	O	
Farnsworth			
GV-260	6V6	O	
Garod			
3912	6K6GT	O	
General Electric			
HM-174	6F6G	O	
HM-185	6F6G	O	
HM-225B	6F6	O	
HM-226	6F6	O	
801—Early	6V6GT	O	
801—Late	6V6GT	O	
802	6V6GT	O	
810	6K6GT	O	
901	6V6GT	O	
910	6V6GT	O	
Mitus			
Master No. 2	6V6GT	O	
Motorola			
VK-101 Early	6V6GT	O	
VK-101 Late	6V6GT	O	

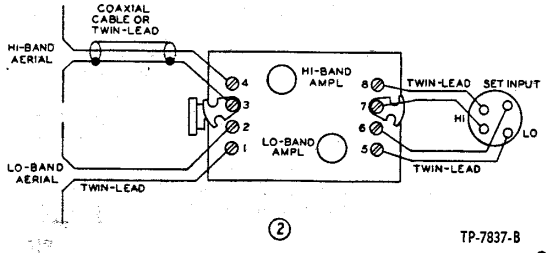
MODEL	AUDIO OUTPUT TUBE	ADAPTER (See notes at end of table)	REVERSING PLUG
R.C.A.			
241TS	6K6GT	O	Yes
621TS	6K6GT	O	No
630TS	6K6GT	O	No
641TV	6F6G	O	
648PTK	6F6G	O	
730TV	6K6GT	O	No
721TS	6K6GT	O	No
730TV1	6K6GT	O	
730TV2	6K6GT	O	
TRK5	6K6GT	O	
TRK9	6F6	O	
TRK12	6F6	O	
TRK90	6F6	O	
TRK120	6F6	O	
Remington			
80130	6L6	O	
Republic			
TL-4	6V6	O	
Stromberg Carlson			
TV10L	6V6GT	O	
TV10LW	6V6GT	O	
TV10PM	6V6GT	O	
TV10PY	6V6GT	O	
TV12LM	6V6GT	O	
TV12M5M	6V6GT	O	
TV12PGM	6V6GT	O	
TV12H2A	6V6GT	O	
Television Assy. Co.			
F6-101	6V6	O	
Telev-Development Televue			
820A	6V6	O	
Tele-vision Labs.			
TR7-1	6K6	O	
TR10-1	6K6	O	
Tradio Inc.			
9	6L6GA	O	
Transvision Inc.			
7" Kit E	6V6	O	
7" Kit L	6V6	O	
12" Kit	6V6GT	O	
Vuetone			
VP100	7C5	L	
VP100A	7C5	L	
U. S. Television			
10"	6K6GT	O	
15"	6K6GT	O	
Westinghouse			
WRT 700	6K6G	O	
WRT 701	6K6G	O	
WRT 702	6F6	O	
WRT 703	6F6	O	
H 818	7B5	L	
Zenith			
28F20	6V6GT	O	

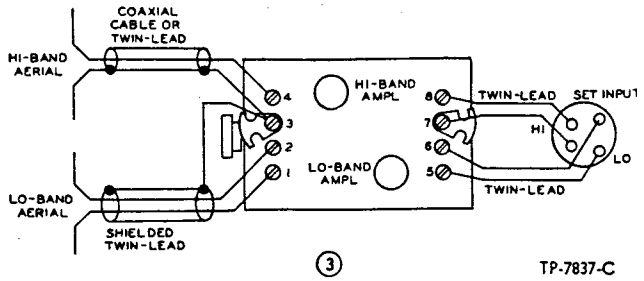
L — Loktal type, Cable Part No. 41-3913.
O — Octal type, Cable Part No. 41-3914.
* — These sets may require 220-ohm resistors, connected between the aerial terminals on the set and the set chassis.

AERIAL CONNECTIONS

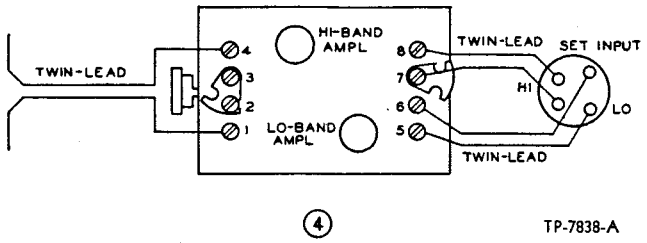
The Booster is primarily designed for two-aerial operation. Connections for using two aerials with different types of aerial transmission lines are shown below. In some instances, considerable improvement is obtained by varying the length of the leads between the Booster and the television set. However, these leads should never exceed 30 inches in length.

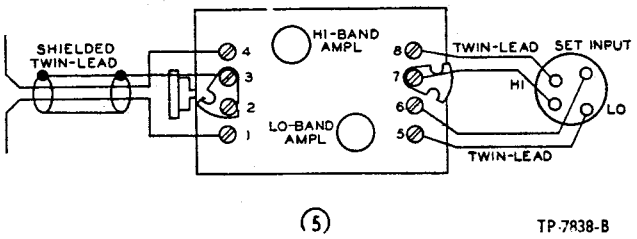


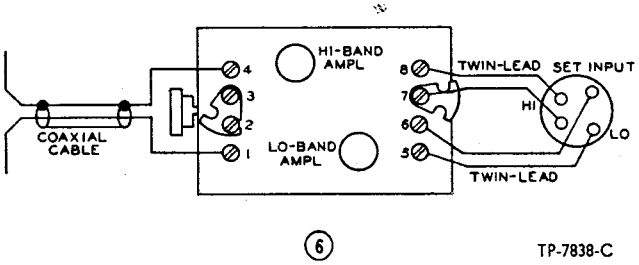




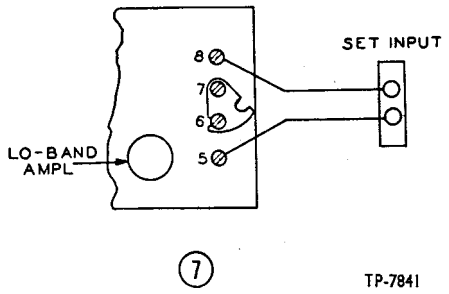
In cases where a single aerial is used, one of the following connections should be made.







When the Booster is to be used with television receivers having only a single input, the output connections from the Booster to the receiver should be made as shown below.



Where only the low band is to be used, make connections as shown in 1, 2, or 3, and remove the high-band amplifier tube.

Wherever twin-lead is used, whether at the input or output of the Booster, try reversing the connections of each pair of leads, to determine the proper connections for the best results on weak stations.

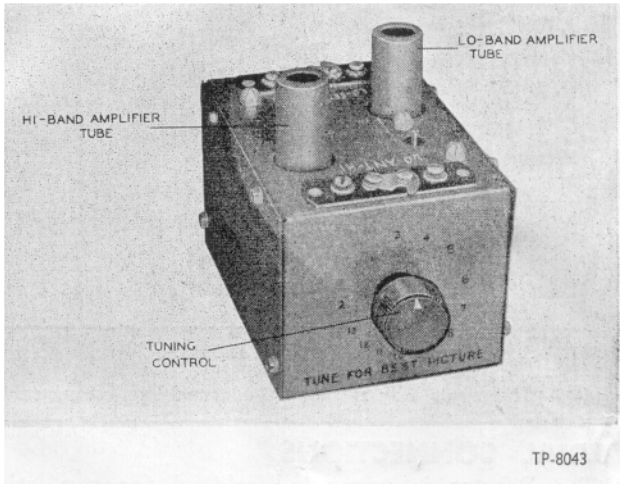
INSTALLING RESISTORS

Some receivers may require the installation of 220-ohm resistors between the aerial connections on the set and the set chassis, to prevent oscillation; this condition will be indicated by a blurry, streaked picture-tube screen when the Booster is tuned to the same channel as the television receiver. Resistors may be necessary on either or both the high- or low-channel aerial connections on the television receiver.

MOUNTING

The Booster may be mounted wherever convenient, using the brackets furnished, the location being limited only by the length of connecting leads found to give best results.

OPERATION



To operate the Booster, set the Booster control to the number of the channel it is desired to receive, and tune in the television station on the receiver in the regular manner. Then carefully readjust the Booster control for the best picture.

SERVICE AND PARTS DIVISION

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