

# PHILCO TRANSITONE SERVICE BROADCAST

MARCH, 1935

## MODEL 806 RECEIVER

**T**HE PHILCO Transitone Model 806 is PHILCO's newest in automobile radio. It is a highly developed super-heterodyne single-unit type Receiver with all the outstanding features required in such a fine instrument.

The Receiver, speaker and full-wave PHILCO Vibrator are housed in a rugged, compact, fully shielded container, which is designed for quick and easy installation on the dash of all automobiles. When installed in the car, the loud speaker faces the front seat, so that the extremely powerful PHILCO electro-dynamic speaker, concealed behind an artistic grille, delivers its full-toned reproduction toward the occupants of the car with utmost fidelity. Bass compensation gives full, rounded tone at all volume levels, while PHILCO's full-range tone control permits the selection of the tone most pleasing to the listener.

All tubes used are the latest PHILCO high-efficiency tubes, designed especially for automobile radio.

PHILCO's system of automatic volume control used in this Receiver not only gives that smooth, elastic control which counteracts fading while driving along and prevents blasting of local stations, but also subdues the harsh interference usually present between stations.

The new Receiver is ALL-ELECTRIC, operating entirely from the car battery system. The full-wave PHILCO Vibrator is built in as an integral part of the Receiver.

Interference filters to cut out the motor interference set up by the car ignition system and specially designed shielding make the Receivers especially easy to install.

### I. F. TRANSFORMER AND PADDERS

The first I. F. transformer is assembled complete with padding condensers. The second I. F. transformer is assembled complete with a padding condenser, two resistors and two mica condensers.

The padders are placed in the top of the shield can, one above the other.

The primary padder is adjusted by means of the screw slot, accessible through the hole in the top of the shield can. The secondary padder is adjusted by means of the small hex nut, also accessible through the hole in the top of the shield. (See Figs. 1 and 2.)

The coil windings terminate in leads instead of terminals or lugs. The color scheme of the leads is given in Fig. 1.

If replacements are ever necessary, replace the entire coil assembly 32-1621 for the first I. F. stage and 32-1622 for the second I. F. stage. Neither the coil nor the padders will be furnished separately. Order only by the above numbers.

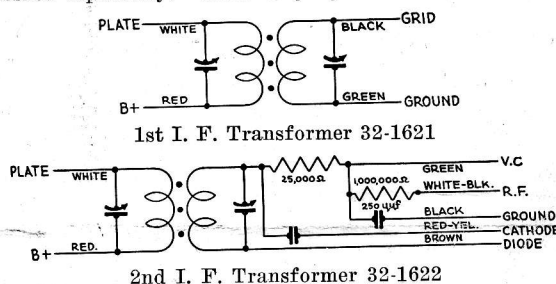


FIG. 1

### MODEL 806 ADJUSTMENTS

All adjustments have been carefully checked at the factory. If, however, it is found necessary to readjust the padding condensers, this procedure must be followed carefully. Do not attempt to make any adjustments until the procedure is clearly understood or without the use of a good oscillator or signal generator and output meter. The PHILCO Set Tester 048 is highly recommended for this procedure and for all service work.

The Receiver must be connected to a six-volt storage battery and set up for operation. It is assumed that tubes have been checked and that the Receiver is in good condition except for the padding adjustments.

Remove the cover from the Receiver and disconnect the grid clip from the 78 tube, I. F. stage. (For location see Fig. 2.)

Set up the signal generator and adjust it to exactly 260 K.C. Connect the generator lead to the grid cap of the 78 tube, and ground the shield to the Receiver housing.

Connect one lead from the output meter to the plate of the 41 tube and the other lead to the Receiver housing. The Re-

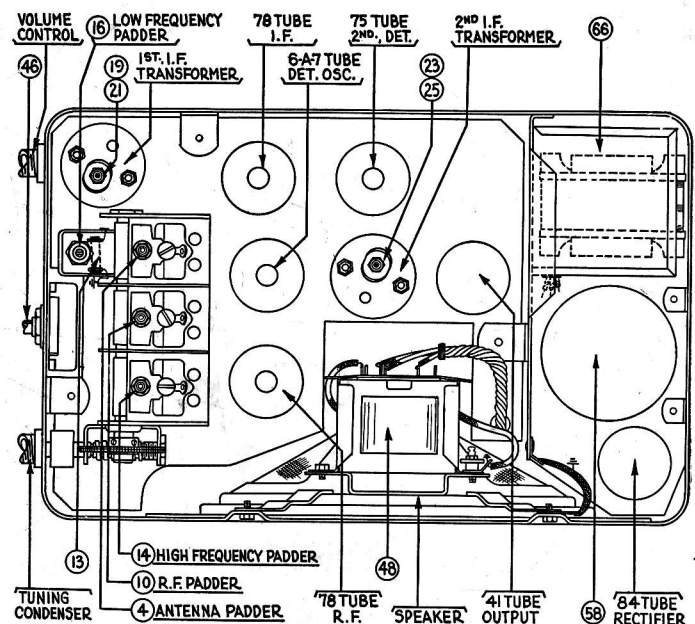


FIG. 2

ceiver volume control must be turned to approximately full volume, and the attenuator in the generator set for a half-scale reading of the output meter.

The secondary nut padder (25) must be adjusted for maximum reading in the output meter. Then adjust the primary screw padder (23) for maximum reading.

Remove the generator lead from the 78 tube and reconnect the grid clip.

Disconnect the grid clip from the 6A7 tube, and connect the generator lead to the grid cap of this tube. The secondary nut padder (23) must be adjusted for maximum reading in the output meter. Then adjust the primary screw padder (19) for maximum reading.

After padding the first I. F. stage, remove the generator lead from the 6A7 tube and reconnect the grid clip. Adjust the generator to 1580 K.C., and then connect the generator lead to the antenna lead, using a 200 mmfd. condenser in series between the two leads. Ground the shield to the Receiver housing.

Turn the tuning condenser plates fully out of mesh. Place a slip of paper, .006 inch thick between stator plates and the heel of the rotor plates. Turn the rotor plates back until they just strike the paper.

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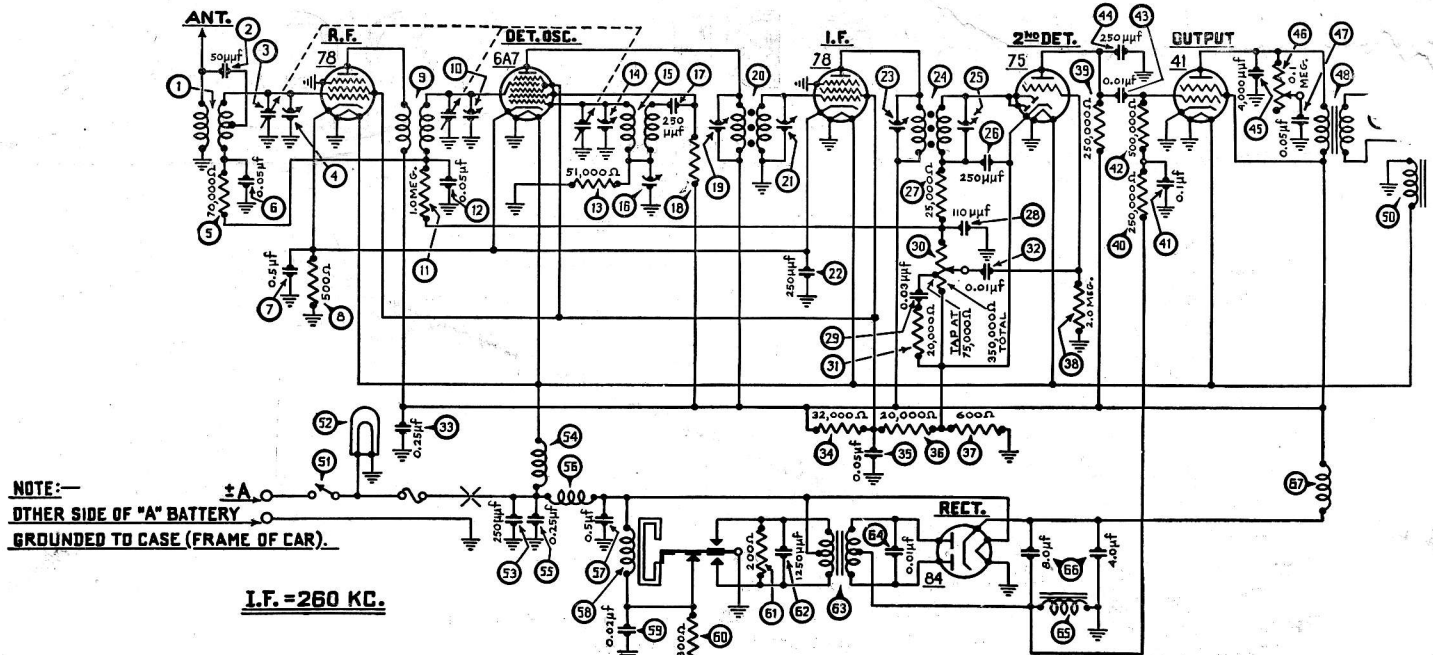


FIG. 3

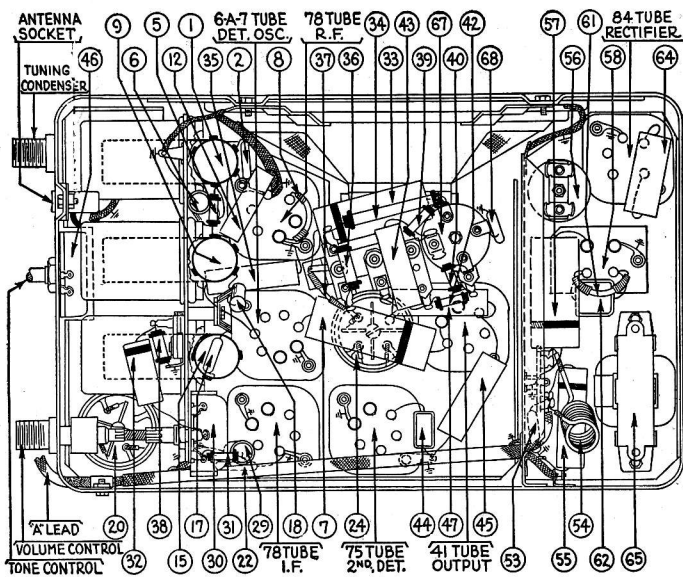


FIG. 4

With the tuning condenser in this position, adjust the high-frequency padder (13) until the maximum reading is obtained in the output meter. This is the true setting for 1580 K.C., 158 on the dial scale. Adjust the padders (10) and (4) in the same manner.

Remove the paper and turn the tuning condenser plates in mesh to approximately 60 on the dial scale, and adjust the signal generator to 600 K.C. Roll the tuning condenser and adjust the series padder (16) for the maximum meter reading.

Readjust the padder (14) at 1580 K.C.

Tune the condenser to 1400 K.C. and adjust the padders (10) and (4) for the maximum reading.

If this procedure has been carefully followed and an accurately calibrated oscillator or signal generator used, the Receiver will be adjusted properly.

**NOTE**—A condenser, (68), Part No. 30-1032 (250 mmfd.), has been added to the Receiver. One side is connected between the choke (67) and the 4 mfd. section of (66), and the other side to ground.

## MODEL 806 PARTS LIST

No. Shown on Schematic	Description	Part No.	No. Shown on Schematic	Description	Part No.
1	Antenna Transformer.....	32-1618	45	Condenser (4000 mmfd.).....	30-4185
2	Condenser (50 mmfd.).....	4587	46	Tone Control.....	33-5101
3	Tuning Condenser.....	31-1483	47	Condenser (.05 mfd.).....	30-4012
4	First Padder (on tun. cond.).....		48	Output Transformer.....	32-7019
5	Resistor (70,000 ohms).....	33-1115	49	Cone & Voice Coil.....	36-3406
6	Condenser (.05 mfd.).....	30-4020	50	Field-coil Assembly.....	36-3405
7	Condenser (.5 mfd.).....	30-4227	51	"On" & "Off" Switch Assm.....	42-5336
8	Resistor (600 ohms).....	33-3209	52	Pilot Lamp.....	34-2039
9	R. F. Transformer.....	32-1619	53	Condenser (250 mmfd.).....	30-1032
10	Second Padder (on tun. cond.).....		54	"A" Choke.....	32-1644
11	Resistor (1,000,000 ohms).....	33-1096	55	Condenser (.25 mfd.).....	30-4146
12	Condenser (.05 mfd.).....	30-4020	56	Vibrator Choke.....	32-1625
13	Resistor (51,000 ohms).....	6098	57	Condenser (.5 mfd.).....	30-4227
14	Third Padder (on tun. cond.).....		58	Vibrator.....	38-5036
15	Oscillator Transformer.....	32-1620	59	Condenser (.02 mfd.).....	30-4039
16	Fourth Padder (on tun. cond.).....		60	Resistor (300 ohms).....	33-3010
17	Condenser (250 mmfd.).....	30-1032	61	Resistor (200 ohms).....	7217
18	Resistor (51,000 ohms).....	33-1163	62	Condenser (1250 mmfd.).....	5886
19	Padder (Pri. 1st I. F. Tran.).....		63	Power Transformers.....	32-7352
20	First I. F. Transformer.....	32-1621	64	Condenser (.01 mfd.).....	30-4051
21	Padder (Sec. 1st I. F. Tran.).....		65	Filter Choke.....	32-7351
22	Condenser (250 mmfd.).....	30-1032	66	Filter Condenser.....	30-2109
23	Padder (Pri. 2nd I. F. Tran.).....		67	R. F. Choke.....	32-1348
24	Second I. F. Transformer.....	32-1622	68	Condenser (250 mmfd.).....	30-1032
25	Padder (Sec. 2nd I. F. Tran.).....			Control Assembly.....	42-5331
26	Condenser (250 mmfd.).....	30-1032		Glass and Dial.....	27-7835
27	Resistor (25,000 ohms).....	33-1013		Pointer Assembly.....	42-5335
28	Condenser (110 mmfd.).....	30-1031		Bezel Plate.....	28-7108
29	Condenser (.03 mfd.).....	30-4025		Knobs.....	27-4187
30	Vol. Con. & Coupling Assm.....	38-6605		Control Mounting Bracket.....	29-2773
31	Resistor (20,000 ohms).....	33-1178		Keys.....	28-2782
32	Condenser (.01 mfd.).....	30-4169		Studs (Set Mtg.).....	28-6272
33	Condenser (.25 mfd.).....	30-4134		Nuts (Set Mtg.).....	W98A
34	Resistor (32,000 ohms).....	3525		Spark Plug Resistors.....	33-1195
35	Condenser (.05 mfd.).....	30-4020		Distributor Resistor.....	33-1196
36	Resistor (20,000 ohms).....	6650		Interference Condensers.....	30-4007
37	Resistor (600 ohms).....	33-3207		Fuse.....	7227
38	Resistor (2,000,000 ohms).....	33-1025		Fuse Insulator.....	27-7729
39	Resistor (250,000 ohms).....	33-1097		Antenna Lead.....	38-5131
40	Resistor (250,000 ohms).....	33-1097		Flexible Shaft (21").....	28-8354
41	Condenser (.1 mfd.).....	30-4122		Flexible Shaft (28").....	28-8355
42	Resistor (500,000 ohms).....	6097		Lock Cylinder Assembly.....	42-5337
43	Condenser (.01 mfd.).....	30-4145		28" Shaft Kit.....	45-1133
44	Condenser (250 mmfd.).....	30-1032			