

• INSTRUCTIONS •

PHILCO

REG. U. S. PAT. OFF.

BALANCED-UNIT RADIO

Model 18 Series

The Model 18 is an eight-tube superheterodyne receiver designed for operation upon alternating current. It employs the latest type Philco high-efficiency tubes, and makes possible the reception of standard broadcast, police, aircraft and amateur radio-telephone signals by means of a wave-band switch located upon the instrument panel. The frequency range of the receiver is 520-4000 kilocycles.

The receiver is shipped with the tubes installed in their respective sockets. Before the receiver is connected, make certain that the packing material is removed from around the tubes, and that the radio chassis' hold-down bolts are loosened to permit the free floating of the chassis upon its rubber supports. The tubes should be seated properly in their sockets, the four terminals at the ends of the four black wires should be connected to the terminals at the top of the screen grid tubes, and the tube shields in place over the proper tubes *before* the attachment plug of the receiver is inserted in the A. C. line outlet. Fig. 1 shows the correct arrangement of the tubes.

Connect the receiver only to a source of alternating current within the limits of voltage and frequency (cycles) given in the license notice on the radio chassis.

Eight Philco high-efficiency tubes are supplied. They are:

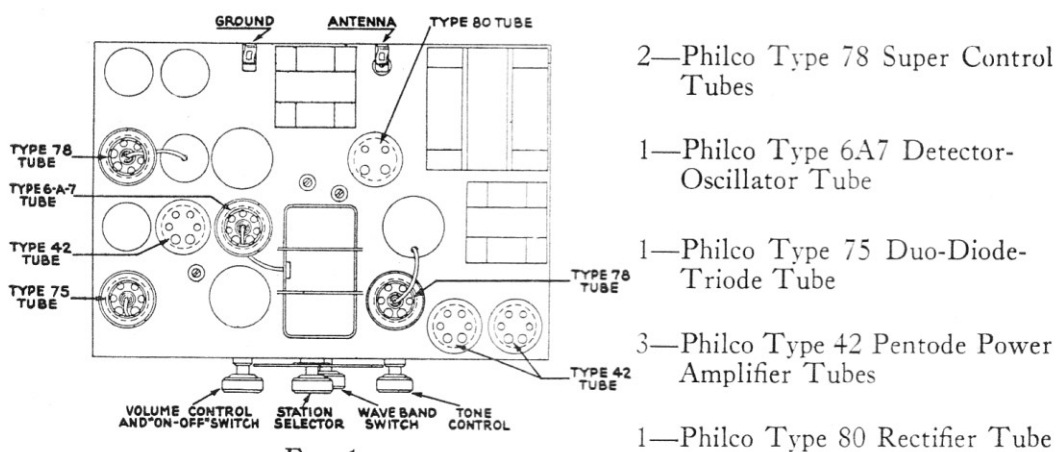


FIG. 1

USE ONLY PHILCO TUBES IN THIS RECEIVER FOR 100 PER CENT. BALANCED-UNIT PERFORMANCE

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AERIAL—An outdoor aerial, consisting of a single copper wire 50 to 100 feet in length and elevated well above surrounding objects, usually give best results. The lead-in wire, unless shielded, forms an active part of the aerial. The aerial should be supported by glass or porcelain insulators and separated as much as possible from trees and buildings. The lead-in should be connected, after scraping the end of the wire to brightness, to the "ANT." terminal of the receiver. The aerial should be carefully designed and installed. The *Philco Three-Purpose Complete Antenna System* is highly recommended.

GROUND—The ground connection should be made from the "GND." terminal of the receiver to a ground clamp securely fastened to a hot-water radiator pipe or to a water pipe. The surface of the pipe should be brightened at the place where the clamp is to be secured.

DO NOT ATTEMPT TO REGULATE ANY OF THE ADJUSTMENT SCREWS UPON THE RECEIVER CHASSIS. SUCH ADJUSTMENT IS APT TO CAUSE UNSATISFACTORY PERFORMANCE OF THE RECEIVER.

OPERATING THE RECEIVER—BROADCAST—After all connections have been made, turn the combination "On-Off" switch and volume control clockwise about one-half the total range of movement. Turn the wave-band switch to the left. After the tubes heat (approximately thirty seconds), turn the station selector to the frequency at which the desired station will be received. Adjust the station selector to the point at which a station is received most clearly. Philco shadow tuning is invaluable in accurately tuning the Receiver. Adjust the station selector to the point at which the shadow is narrowest when thrown upon the screen above the station selector dial. The volume control always should be used for reduction or increase in the signal strength. DO NOT de-tune the Receiver in an effort to decrease volume. De-tuning will spoil the tone quality.

Silent tuning may be obtained between stations by turning the volume control to the "minimum" setting (to the left until *just* before "On-Off" switch operates), and

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observing the shadow-tuning meter as a station is tuned in. The volume control then can be advanced to the desired level.

OPERATING THE RECEIVER—AIRCRAFT AND POLICE—Turn the wave-band switch to the right, following the procedure above.

AUTOMATIC VOLUME CONTROL—The automatic volume control incorporated in this Receiver tends to equalize the volume of all stations at the sound level for which the manual control has been set. This prevents the blaring of strong stations during tuning and reduces the fading of distant stations. With the volume control in a given position, the reproduction will not vary greatly in volume, even if the tuning is changed from a weak station to a strong one, or *vice versa*.

BASS-COMPENSATING TONE CONTROL—With this device tone control takes on new meaning and has greater usefulness. Instead of cutting the reproduction of treble or high tones, this improved system brings up the proportion of bass or low tones as the tone control is advanced. This gives a pleasing depth and mellowness of tone combined with the desirable crispness and clarity which only the correct balance of unmodified high tones can give. Furthermore, the speaker may be turned up to tremendous volume without offending the ears.

The bass-compensating circuit is tied in with the manual volume control, as well as with the tone control, in such manner that the proportion of low tones increases as the volume control is turned in the direction to reduce volume. This compensates for the well-known insensitiveness of the human ear to low tones at low volume, and gives more faithful and pleasing reproduction at the volume levels generally used in the home.

The tone control has four points or settings, as before, but the use of these four points is somewhat different, as will be explained.

POINT 1 (Brilliant)—No bass compensation. This setting must be used when receiving local stations which have a characteristic rumble or low-pitched carrier hum. The exceptional, high-quality reproduction afforded by Philco bass compensation cannot be enjoyed when receiving certain stations in a few localities, due to the objectionable amount of rumble or hum in their transmission, and this tone-control point is needed to receive such stations, especially on speech programs.

POINT 2 (Bright)—Moderate bass compensation. This setting gives most faithful reproduction on very strong local stations.

POINT 3 (Mellow)—Full bass compensation. This setting should be used for best tone reproduction on most local stations and all distant stations, where the greater faithfulness of low-tone reproduction does not bring in an objectionable station rumble.

POINT 4 (Deep)—Full bass compensation plus a reduction in high-tone response. This setting may be used on distant stations where the static or background noise

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must be modified in order to enjoy the program. This setting may also be used to reduce excessive needle scratch on phonograph record reproduction.

NOTE that unless the program you are listening to has bass music in it, you will notice no difference in tone between points 1, 2 and 3 of the tone control, since the bass compensation naturally cannot bring out low tones unless they exist in the broadcast program. Neither will there be much difference between points 1, 2 and 3 on distant station programs. On strong local and semi-distant station programs, however, either point 2 or point 3 will be found to give the most faithful and pleasing reproduction of orchestra, band, organ, piano, male voice and other programs which cover the bass as well as the treble register.

SERVICE—Should your Philco require service, call an authorized Philco Service Station or a representative of RADIO MANUFACTURERS SERVICE (a Philco Service Plan), one of whom is to be found near you.

RADIO MANUFACTURERS SERVICE members have been selected for their technical ability and business integrity. For guaranteed radio service, call an R. M. S. member. The use of *genuine* Philco Parts and Tubes is necessary to obtain original quality of performance.

STANDARD WARRANTY

We warrant each new Radio Receiver and Speaker manufactured by us to be free from defects in material and workmanship under normal use and service, our obligation under this warranty being limited to making good at our factory or factory depots any part or parts thereof which shall, within ninety (90) days after delivery of such Receiver to the original purchaser, be returned to us with transportation charges prepaid, and which our examination shall disclose to our satisfaction to have been thus defective; this warranty being expressly in lieu of all other warranties, expressed or implied, and of all other obligations or liabilities on our part, and we neither assume nor authorize any representative or other person to assume for us any other liability in connection with the sale of our Receivers or Speakers.

This warranty shall not apply to any Receiver or Speaker which shall have been repaired or altered outside of our factory or factory depots in any way so as, in our judgment, to affect its stability or reliability, nor which has been subject to misuse, negligence or accident, nor which has had the serial number altered, effaced or removed. Neither shall this warranty apply to any Receiver or Speaker which has been connected otherwise than in accordance with the instructions furnished by us.

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PHILADELPHIA—TORONTO—LONDON

POLICE BROADCASTING STATIONS—*Municipal*

CITY	Frequency in Kilo- cycles	STATION	CITY	Frequency in Kilo- cycles	STATION
Louisville, Ky.....	2442	WPDE.....	Shreveport, La.....	2450	KGZL.....
McAlester, Okla.....	2450	KGZS.....	Sioux City, Iowa.....	2470	KGPK.....
Memphis, Tenn.....	2470	WPEC.....	Sommerville, Mass.....	1712	WPEH.....
Miami, Fla.....	2440	WNDA.....	Swarthmore, Pa.....	2470	WPFQ.....
Milwaukee, Wis.....	2450	WPKD.....	Syracuse, N. Y.....	2458	WPEA.....
Minneapolis, Minn.....	2430	KGPB.....	Tacoma, Wash.....	2414	KGZN.....
Mt. Pleasant, N. Y.....	2414	WPFW.....	Toledo, Ohio.....	2470	WRDQ.....
Muskegon, Mich.....	2442	WPFC.....	Toms River, N. J.....	2430	WFFF.....
New Bedford, Mass.....	1712	WPFN.....	Topeka, Kansas.....	2422	KGZC.....
New Orleans, La.....	2430	WPEK.....	Tulare, Calif.....	2414	WPDA.....
New York, N. Y.....	2450	WPEF.....	Tulsa, Okla.....	2450	KGPO.....
	2450	WPEG.....	Vallejo, Calif.....	2422	KGPG.....
Newton, Mass.....	1712	WPFA.....	Waco, Texas.....	1712	KGZQ.....
Oklahoma City, Okla.....	2450	KGPH.....	Washington, D. C.....	2422	WPDW.....
Omaha, Neb.....	2470	KGPI.....	Wichita, Kans.....	2450	KGpz.....
Palm Beach, Fla.....	2442	WPFX.....	Wichita Falls, Texas.....	1712	KGZI.....
Pasadena, Calif.....	1712	KGJX.....	Woonsocket, R. I.....	2470	WPEM.....
Passaic, N. J.....	2416	WPDJ.....	Yonkers, N. Y.....	2414	WPFY.....
Pawtucket, R. I.....	2470	WPFV.....	Youngstown, Ohio.....	2458	WPDG.....
Philadelphia, Pa.....	2470	WPDP.....			
Phoenix, Ariz.....	2430	KGZJ.....			
Pittsburgh, Pa.....	1712	WPDU.....			
Portland, Me.....	2422	WPFU.....			
Portland, Ore.....	2442	KGPP.....			
Providence, R. I.....	1712	WPEI.....			
Richmond, Ind.....	2442	WPDH.....			
Rochester, N. Y.....	2458	WPDR.....			
St. Louis, Mo.....	1712	KGPC.....			
St. Paul, Minn.....	2430	WPDS.....			
Salem, Ore.....	2442	KGZR.....			
Salt Lake City, Utah.....	2470	KGpw.....			
San Diego, Calif.....	2430	KGZD.....			
San Francisco, Calif.....	2470	KGPD.....			
San Jose, Calif.....	2470	KGPM.....			
Santa Barbara, Calif.....	2414	KGZO.....			
Saginaw, Mich.....	2442	WPES.....			
Seattle, Wash.....	2414	KGPA.....			

<i>Marine Police</i>		
Boston, Mass.....	1558	WEY.....
Detroit, Mich.....	1558	WKDT.....
Seattle, Wash.....	1558	KIDA.....

<i>State Police</i>		
Baton Rouge, La.....	1574	WPEQ.....
Des Moines, Iowa.....	1534	KGHO.....
East Lansing, Mich.....	1574	WRDS.....
Framingham, Mass.....	1574	WMP.....
	1574	WPEZ.....
Middleboro, Mass.....	1574	WPEL.....
Northampton, Mass.....	1574	WPEW.....
San Antonio, Texas.....	2506	KGZE.....
Shreveport, La.....	1574	KGpy.....

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PHILADELPHIA—TORONTO—LONDON

POLICE BROADCASTING STATIONS

THIS Philco Radio Receiver is equipped for reception of short-wave police broadcast stations, aircraft and amateur stations. The Philco dial is calibrated in channel numbers (1 channel number = 10 kilocycles) and megacycles (1 megacycle = 1000 kilocycles).* A station which is listed at 2414 kilocycles will come in at approximately 2.4 (megacycles) on the short-wave dial; a station listed at 1712 kilocycles will come in at 1.7; etc. Municipal police stations will be heard at settings of approximately 1.7, and from 2.4 to 2.5. Marine police will be located at approximately 1.5 to 1.6. State police stations will be heard at 1.5 to 1.6, and at 2.5. Airport and airplane stations will be heard at dial settings of from 2.6 to 3.5, on receivers with a range above 2.5. Amateur stations may be heard from 1.8 to 2.0. The following is a list of the police broadcasting stations in various cities throughout the United States:

Municipal Police

CITY	Frequency in Kilo- cycles	STATION	CITY	Frequency in Kilo- cycles	STATION
Akron, Ohio.....	2458	WPDO.....	Denver, Colo.....	2442	KGPX.....
Arlington, Mass.....	1712	WPED.....	Des Moines, Iowa.....	2470	KGZG.....
Asheville, N. C.....	2458	WPFS.....	Detroit, Mich.....	2414	WCK.....
Atlanta, Ga.....	2414	WPDY.....		2414	WPDX.....
Auburn, N. Y.....	2458	WPDN.....		2414	WMO.....
Bakersfield, Calif.....	2414	KGPS.....	El Paso, Texas.....	2414	KGZM.....
Baltimore, Md.....	2414	WPFH.....	Flint, Mich.....	2442	WPDF.....
Beaumont, Texas.....	1712	KGPI.....	Fort Wayne, Ind.....	2470	WPDZ.....
Berkeley, Calif.....	2422	KSW.....	Fort Worth, Texas.....	1712	KGPR.....
Birmingham, Ala.....	2414	WPFM.....	Fresno, Calif.....	2414	KGZA.....
Brookline, Mass.....	1712	WPEJ.....	Gary, Ind.....	2470	WPFJ.....
Brooklyn, N. Y.....	2450	WPEE.....	Grand Rapids, Mich.....	2442	WPEB.....
Buffalo, N. Y.....	2422	WMJ.....	Grosse Point, Mich.....	2414	WRDR.....
Cedar Rapids, Iowa.....	2470	KGOZ.....	Hackensack, N. J.....	2430	WPFK.....
Chanute, Kansas.....	2450	KGZF.....	Hammond, Ind.....	1712	WPFJ.....
Charlotte, N. C.....	2458	WPDV.....	Highland Park, Ill.....	1712	WPDF.....
Chattanooga, Tenn.....	2470	WPEY.....	Honolulu, T. H.....	2450	KGPQ.....
Chicago, Ill.....	1712	WPDB.....	Houston, Texas.....	1712	KGZB.....
	1712	WPDC.....	Indianapolis, Ind.....	2442	WMDZ.....
	1712	WPDD.....	Jacksonville, Fla.....	2442	WPFJ.....
Cincinnati, Ohio.....	1712	WKDU.....	Johnson City, Tenn.....	2470	WPFJ.....
Clarksburg, W. Va.....	2414	WPFJ.....	Kansas City, Mo.....	2422	KGPE.....
Cleveland, Ohio.....	2458	WRBH.....	Klamath Falls, Ore.....	2442	KGZH.....
Coffeyville, Kans.....	2450	KGZP.....	Knoxville, Tenn.....	2470	WPFJ.....
Columbus, Ohio.....	2430	WPDJ.....	Kokomo, Ind.....	2470	WPDJ.....
Columbus, Ga.....	2414	WPFJ.....	Lakeland, Fla.....	2442	WPFJ.....
Dallas, Texas.....	1712	KVP.....	Lansing, Mich.....	2442	WPDJ.....
Davenport, Iowa.....	2470	KGPN.....	Lexington, Ky.....	1712	WPET.....
Dayton, Ohio.....	2430	WPDJ.....	Los Angeles, Calif.....	1712	KGPL.....

*Where the dial is calibrated in degrees, the instruction sheet (included with the receiver) makes possible the easy location of the station.

PHILCO STATION LOG

Philco Scale Numbers	STATIONS	Alphabetical List	Scale	LOCATION	Alphabetical List	Scale	LOCATION
55	WGR	KDKA	98	E. Pittsburgh, Pa.	WDAE	122	Tampa, Fla.
	WFI-WLIT	KDYL	129	Salt Lake City, Utah	WDBO	112	Orlando, Fla.
	WWNC-WNAX	KECA	143	Los Angeles, Calif.	WDGY	118	Minneapolis, Minn.
60	KSAC	KFAB	77	Lincoln, Neb.	WDOD	128	Chattanooga, Tenn.
	KHQ-WOW	KFI	64	Los Angeles, Calif.	WEAF	66	New York, N. Y.
	KFSD	KGW-WTMJ	105	Millford, Kans.	WENR	87	Chicago, Ill.
	WIP-KFRC	WOS			WFAA	80	Grapevine, Texas
65	KFI-WOI	KFKU	122	Lawrence, Kans.	WFI	56	Philadelphia, Pa.
	WSM	KFKX	102	Chicago, Ill.	WGN	72	Elgin, Ill.
	WEAF	KFMX	125	Northfield, Minn.	WGR	55	Amherst, N. Y.
	WMAQ	KFRC	61	San Francisco, Calif.	WGY	79	Schenectady, N. Y.
70	WPTF-KPO	KFSD	60	San Diego, Calif.	WHAM	115	Rochester, N. Y.
	CANADA	KGA	147	Spokane, Wash.	WHAS	82	Jeffersontown, Ky.
	WLW	KGMB	132	Honolulu, T. H.	WHK	139	Cleveland, Ohio
	WOR	KGO	79	Oakland, Calif.	WHO	100	Des Moines, Iowa
75	WGN-WLIB	KGRS	141	Amarillo, Texas	WIOD	130	Miami Beach, Fla.
	CANADA	KGU	94	Honolulu, H. I.	WIP	61	Philadelphia, Pa.
	WSB-KMMJ	KGW	62	Portland, Ore.	WIS	101	Columbia, S. C.
	WJR	KHJ	90	Los Angeles, Calif.	WJAS	129	Pittsburgh, Pa.
80	WBBM-KFAB	KHQ	59	Spokane, Wash.	WJD	113	Mooseheart, Ill.
	WMC	KIDO	125	Paese, Idaho	WJR	75	Detroit, Mich.
	KGO-WGY	KMBC	95	Independence, Mo.	WJSV	146	Mt. Vernon Hills, Va.
	WBAP-WFAA	KMMJ	74	Clay Center, Neb.	WJZ	76	New York, N. Y.
85	WCCO	KMOX	109	St. Louis, Mo.	WKAQ	89	San Juan, Porto Rico
	WHAS	KNX	105	Hollywood, Calif.	WKBH	138	La Crosse, Wis.
	KOA-WRUF	KOA	83	Denver, Colo.	WKBW	148	Amherst, N. Y.
	CANADA	KOB	118	State College, N. M.	WKY	90	Oklahoma City, Okla.
90	KWKH-WWL	KOIL	126	Council Bluffs, Iowa	WLAC	147	Nashville, Tenn.
	WABC	KOIN	94	Portland, Ore.	WLIB	72	Chicago, Ill.
	WENR-WLS	KOMO	92	Seattle, Wash.			
	CANADA	KPC					
95	WKAQ	KPC					
	WKY-KHJ	KSAC	58	Manhattan, Kans.	WLS	87	Crete, Ill.
	CANADA	KSCJ	133	Sioux City, Iowa	WLW	70	Mason, Ohio
	WWJ-KOMO	KSL	113	Salt Lake City, Utah	WLWL	110	New York, N. Y.
100	WBRC	KSOO	111	Sioux Falls, S. D.	WMBF	130	Miami Beach, Fla.
	KOIN-KGU	KSTP	146	Wescott, Minn.	WMC	78	Memphis, Tenn.
	KMBC-WRC	KTBS	145	Shreveport, La.	WMAQ	67	Chicago, Ill.
	CANADA	KTHS	104	Hot Springs, Ark.	WNAC	123	Boston, Mass.
105	WCFL	KTNT	117	Muscataine, Iowa	WNAX	57	Yankton, S. D.
	WBZ-WBZA	KUOA	139	Fayetteville, Ark.	WOAI	119	San Antonio, Texas
	WHO-WOC	KVI	76	Tacoma, Wash.	WOC	100	Davenport, Iowa
	WIS	KVOO	114	Tulsa, Okla.	WOI	64	Ames, Iowa
110	KFKX-KYW	KWK	135	St. Louis, Mo.	WOR	71	Newark, N. J.
	CANADA	KWKH	85	Shreveport, La.	WOS	63	Jefferson City, Mo.
	KTHS-WMAK	KYA	123	San Francisco, Calif.	WOW	59	Omaha, Neb.
	KNX-KFKB	KYW	102	Chicago, Ill.	WOWO	116	Fort Wayne, Ind.
115	WBAL-WTIC	WABC	86	New York, N. Y.	WPG	111	Atlantic City, N. J.
	WTAM	WACO	124	Waco, Texas	WPTF	68	Raleigh, N. C.
	WBT	WADC	132	Tallmadge, Ohio	WRC	95	Washington, D. C.
	KMOX	WAPI	114	Birmingham, Ala.	WRUF	83	Gainesville, Fla.
120	WPG-WLWL	WBAL	106	Baltimore, Md.	WRVA	110	Richmond, Va.
	KSOU-WRVA	WBAP	80	Fort Worth, Texas	WSB	74	Atlanta, Ga.
	WDBO	WBBM	77	Chicago, Ill.	WSM	65	Nashville, Tenn.
	WJJD-KSL	WBRC	93	Birmingham, Ala.	WTAM	107	Cleveland, Ohio
125	KVOO-WAPI	WBT	108	Charlotte, N. C.	WTAQ	133	Twp. Washington, Wis.
	WHAM	WBZ	99	E. Springfield, Mass.	WTIC	106	Avon, Conn.
	WOWO-WVVA	WBZA	99	Boston, Mass.	WTMJ	62	Brookfield, Wis.
	KTNT-WCAU	WCAM	128	Camden, N. J.	WWJ	92	Detroit, Mich.
130	WDGY-KOB	WCAU	117	Philadelphia, Pa.	WWL	85	New Orleans, La.
	WOAI	WCCO	81	Minneapolis, Minn.	WWNC	57	Asheville, N. C.
	WIL	WCFL	97	Chicago, Ill.	WWVA	116	Wheeling, W. Va.
	WCBS	WCKY	149	Covington, Ky.	WXYZ	124	Detroit, Mich.
135	WDAE-KFKU						
	KYA-WNAC						
	WACO-WXYZ						
	KIDO-KFMX						
140	KOIL						
	WJDX						
	WCAM-WDOD						
	KDYL-WJAS						
145	WIOD-WMBF						
	WTRC						
	WADC-KGMB						
	KSCJ-WTAQ						
150	WSPD						
	KWK						
	WFBL						
	KMAC						