

Models 211 and 211-A

Tubes. Eleven tubes are required, as follows:

- 4 Philco type 24 screen grid tubes
- 4 Philco type 27 tubes
- 2 Philco type 45 power amplifier tubes
- 1 Philco type 80 rectifier tube

Use only Philco tubes in this Receiver for 100 per cent balanced-unit performance.

Remove the large tube shield from the back of the Receiver by loosening the five screws along the bottom and lifting straight up on the shield.

Place the tubes in the correct sockets as shown in Figure 1.

After inserting the screen grid tubes (type 24), the clips attached to the wires coming from the round shields must be pressed down over the terminal caps on top of the tubes.

Replace the tube shield over the six tubes at the back of the Receiver and tighten the five screws to hold it in place.

Speaker. The Philco Electro-Dynamic Speaker is connected by inserting the Speaker plug in the special socket at the back of the Receiver. This socket is shown in Figure 1.

Never turn on the Receiver unless the Speaker plug is in place in the socket.

Aerial or Antenna. An outdoor aerial, consisting of a single copper wire 50 to 100 feet long, usually gives the best results. However, where there is no powerful broadcasting station within 50 miles, a longer aerial may be used and will bring in far-away stations with somewhat greater volume. The lead-in wire is an active part of the aerial and the aerial length should always be measured from the Receiver to the insulator at the far end. The outer end of the aerial should be as high as possible and the entire aerial should be spaced well away from trees and buildings and supported by glass or porcelain insulators.

Good results can also be obtained with an indoor aerial 25 feet or more in length. A shorter aerial usually will not be satisfactory.

Ground. A suitable ground clamp must be securely attached to a radiator pipe or water pipe and the bare wire end inserted in the "GND" terminal post of the Receiver.

NEVER OPERATE THE RECEIVER WITHOUT A GOOD GROUND CONNECTION.

Use separate insulated wires rather than a two-wire cord for the aerial and ground connections.

Radio Operation

After making the aerial and ground connections, placing all tubes in the sockets and inserting the Speaker plug in its special socket, the attachment plug on the cord should be inserted into a convenient wall receptacle. Turn on the Receiver by rotating the on-off switch in a clockwise direction. The pilot lamp should light, indicating that the power is turned on. When the on-off switch is turned off, no power is used and the attachment plug need not be withdrawn.

Turn the Radio-Phono switch on the right side of the turntable panel to the "Radio" position.

Range Switch. The Range Switch (see Figure 1) is left in the NORMAL position when the Receiver is shipped. This gives great distance range and is the setting which will be found most satisfactory in practically all locations. In a dead zone, however, far from any broadcasting station, the Range Switch may be changed to the MAXIMUM position. This will make the Receiver super-sensitive and will give extreme distance range. Do not use the Range Switch in the MAXIMUM position if there are one or more powerful broadcasting stations near you. In any location there will be less noise between stations with the Range Switch in the NORMAL position.

Wait about a minute after turning on the Receiver for the tubes to become heated, then turn the volume control (right-hand knob) clockwise about one-half the total range of movement. Turn the station selector (center knob) and different stations will be tuned in at various points on the scale.

The figures on the Philco scale represent channel numbers which by the addition of a cipher correspond with the station frequency use in kilocycles as listed in newspapers and other station logs. For example: 85 on the scale represents channel 85 and a frequency of 850 kilocycles.

The call letters of various stations can be marked with a pencil on the Philco scale. The call letters can be removed and the scale cleaned by means of a pencil eraser.

TUNE THE WANTED STATION ACCURATELY to the point where it is clearest and reduce or increase the volume as desired with the volume control. Never reduce the volume of a station by detuning the station selector as this will spoil the tone quality and bring in static noise.

Always regulate the volume by means of the volume control—never by detuning.

The automatic volume control incorporated in this Receiver tends to equalize the volume of all stations at the sound level for which the manual volume 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.

Control of Station Tone. The left-hand control knob operates the new Philco Tone Control which enables the user to adjust the tone quality of the reception from any broadcasting station to suit his taste.

There are four settings of the tone control which are felt as notches when the knob is turned. These have been named: (1) brilliant, (2) bright, (3) mellow and (4) deep. The approximate position of the dot on the tone control knob for each setting is shown in Figure 2.

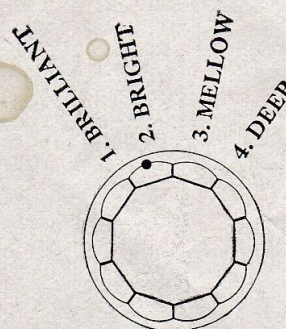


FIG. 2

With this control it is possible to compensate for differences in the quality of broadcasting from different stations and for differences in the human ear.

Setting 1 emphasizes the high notes and thus makes speech particularly sharp and clear. Setting 4 emphasizes the low notes and gives a deep character to the reproduction. Setting 2 will usually be found the most pleasing for music, although, under conditions where static or interference noises are bothersome, setting 3 (or in extreme cases 4) will be best as it will subdue these background noises.

When playing phonograph records which have considerable needle scratch due to wear, setting 2 or setting 3 will reduce the scratch and make the music more enjoyable.

Automatic Phonograph Operation

Loading the Record Magazine. To load the magazine with records, lift the record magazine upright and place either all 10-inch records or all 12-inch records on the magazine spindle, loading them on one at a time, with the sides to be played toward the back. Be sure that the bottom edge of each record is behind the magazine record hooks.

Place a record of the same size on the turntable and before the magazine and records are lowered to operating position throw both the lever at the back left side of the instrument and the lever at the right side of the magazine, to either the 10-inch or 12-inch position, according to the size of the records on the magazine.

NOTE: Both levers must be set for the size records to be played only while the record magazine is in the upright or loading, position. Then lower the record magazine gently into playing position.

Playing Ten-Inch Records. To play 10-inch records, the tone arm shift lever at the left back side of the record magazine should be in the forward position, and the record support plate shift lever at the right side of the record magazine should be in the down position, so the numeral ten (10) is visible.

Playing Twelve-Inch Records. To play 12-inch records, the tone arm shift lever at the left back side of the record magazine should be pushed back against the lever stop and the record support plate shift lever at the right side of the record magazine should be lifted so the numeral twelve (12) is visible.

PHILCO RADIO INSTRUCTIONS

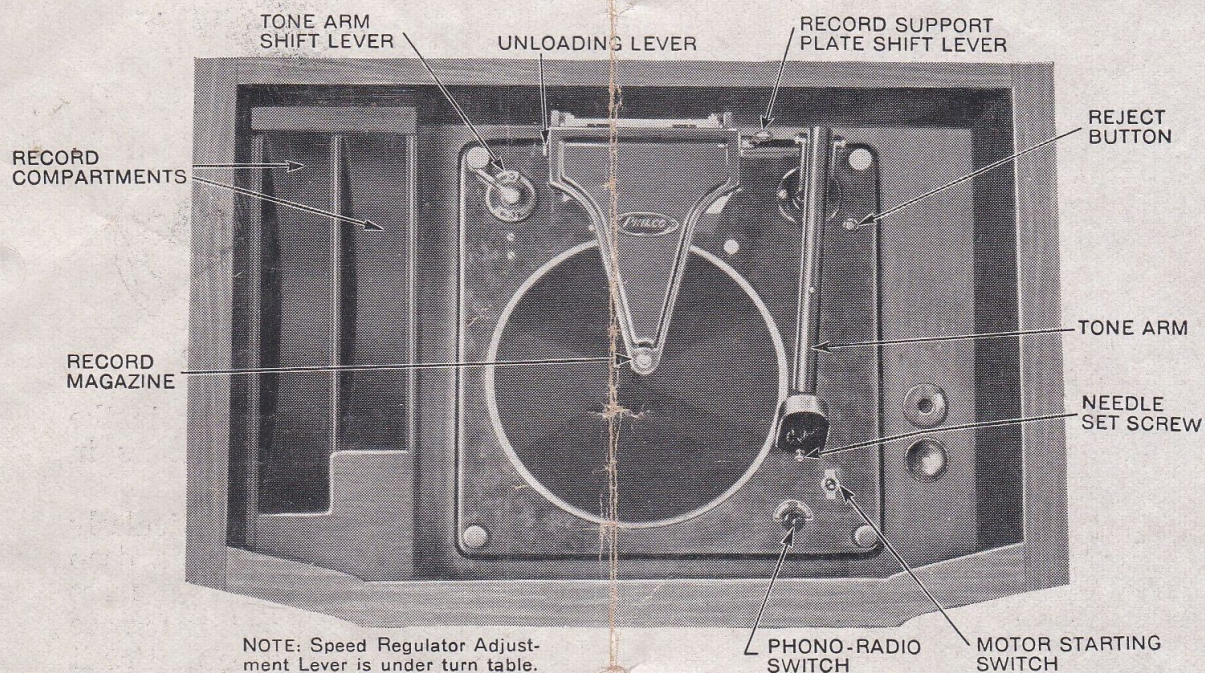


FIG. 3

Starting Switch. The starting switch is located at the right front corner of the chassis plate and when turned on will allow the instrument to operate until the switch is turned off.

After the starting switch is turned off, the turntable will continue to run until the record being played is finished and automatically tripped, and the pickup has returned to the full automatic stop position. If desired, the reject button shown in Figure 3 can be pressed after the starting switch has been turned off, which will cause the instrument to instantly trip and come to the automatic stop position.

Needles. Loosen the needle screw and place the needle in the pickup being sure that the set screw is securely fastened. Turn the starting switch on and let the pickup down on the record by hand.

It is important to change needles at any time the tone is not satisfactory.

When placing a new needle in the pickup, always let the pickup down by hand the first time the needle is played as this will eliminate damaging the point of the needle in sliding across the record.

Needles capable of playing more than one record should be used, otherwise the tone quality will be impaired and records subjected to extreme wear.

Care should be exercised that the pickup is not dropped or allowed to swing against any part of the instrument.

Rejecting a Record. If at any time it is desired to reject the record that is playing, and have the next record that is on the magazine played immediately, it is only necessary to press the reject button located at the right of the tone arm.

Pressing the reject button immediately silences the record being played.

P H I L C O R A D I O I N S T R U C T I O N S

To repeat a record, lift the record magazine, which will keep the other records from being placed on the turntable. The instrument will then play the top record on the turntable continuously. When the last record has been transferred from the magazine to the turntable, the instrument will continue to repeat that record until the switch is turned off or the records reloaded on to the record magazine.

Unloading Record Magazine. The lever on the left side of the record magazine is for unloading records one at a time from the magazine on to the turntable.

This lever must never be moved except when the current is turned off and the pickup has come back to the full automatic stop position and the turntable not operating.

Turntable Speed. The speed of the turntable must be 78 R. P. M. to obtain the best tone quality.

Place a piece of paper under the edge of the record and count 78 revolutions, which should take exactly one minute.

If necessary to adjust the speed of the turntable, move the adjustment arm, which is located under the right-hand edge of the turntable, either forward to increase or backward to decrease the speed.

This can be done by laying a pencil on the base plate under the right edge of the turntable so it will touch the speed lever.

Oiling. Do not oil this instrument any place except the two oil wells provided under the turntable for electric motor bearings, as all bearings, with the exception of the electric motor, are of the oilless type.

Oil placed on any other bearings will cause them to gum and stick.

STANDARD WARRANTY. *We warrant each new Radio-Phonograph 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 Radio-Phonograph 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 Radio-Phonographs or Speakers.*

This warranty shall not apply to any Radio-Phonograph 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 Radio-Phonograph or Speaker which has been connected otherwise than in accordance with the instructions furnished by us.

PHILADELPHIA STORAGE BATTERY CO.

Ontario and C Streets, Philadelphia, Pa., U. S. A.

PHILCO STATION LOG

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