CROSLEY RADIO RECEIVEDS

MODELS 30S - 31S - 33S - 34S FOR A. C. LIGHT SOCKET OPERATION

INSTRUCTIONS for CROSLEY RADIO RECEIVERS

Models 30S, 31S, 33S, 34S

POWEL CROSLEY

CROSLEY

LISTENIN

THE CROSLEY RADIO CORPORATION

GING INNATO

Dear Crosley Owner:

I hope that this receiver will bring you many hours of pleasure and entertainment.

You may be sure that you have made a wise decision in purchasing a Crosley. Every effort has been made and no expense has been spared to make this receiver the finest that can be built. I want you not only to be satisfied with it, but to be proud of its performance in every way.

Powol Crosley, Jr.

President THE CROSLEY RADIO CORPORATION

THE CROSLEY RADIO CORPORATION

GUARANTEE

This instrument is guaranteed for 30 days from date of purchase against faulty material and workmanship. Should your dealer be unable to make repairs he will return it through his jobber. Within this period repairs will be made without charge provided the set has not been abused, changed or tampered with and the "Purchaser's Identification Card" has been sent to

us properly filled out within five days after the purchase of the equipment.

CROSLEY RADIO INSTRUCTIONS

GENERAL INFORMATION

Type of Receiver

Model 30S, 31S, 33S, and 34S Crosley receivers differ only in the type of

case or cabinet in which they are mounted.

These receivers obtain their power direct from alternating current, electric house-lighting circuits. Each model is made in three types for operation from lighting circuits of different voltages and cycles frequency. When the receiver is purchased the dealer should see that it is of suitable voltage and frequency rating for your lighting circuit. If you move to another community have a competent dealer or service man see that the receiver is of the proper rating for your new lighting circuit, or else check this yourself before connecting the receiver. The voltage and frequency rating are marked on the top of one of the shields, inside of the receiver. The company from whom you purchase electricity will furnish information regarding your lighting system.









Tubes for Models 30S, 31S, 33S, 34S

Accessories Required

For operating these receivers certain accessories are required, as follows:

MATERIAL FOR AN AERIAL. If "outdoor" aerial (see page 5) is to be erected, the following material will be required:

50 to 100 feet of No. 14 copper wire or other aerial wire approved by the National Board of Fire Underwriters.

2 aerial insulators.

1 lead-in insulator. 1 approved lightning arrestor.

If "indoor" aerial is to be erected, not less than 40 feet of insulated copper wire, No. 16, 18, 20, or 22, will be required. Flexible wire may be handled more easily.

MATERIAL FOR A GROUND.

1 ground clamp if connection is to be made to a water pipe. Sufficient insulated copper wire, preferably No. 14 or 16, for connecting to the ground.

CROSLEY RADIO INSTRUCTIONS

SEVEN TUBES, AS FOLLOWS:

Two (2) Radiotron UY 224 or Cunningham C 324. Two (2) Radiotron UY 227 or Cunningham C 327. Two (2) Radiotron UX 245 or Cunningham CX 345. One (1) Radiotron UX 280 or Cunningham CX 380.

DYNACOIL SPEAKER, TYPE M, Model 262 for Model 30S receiver, and Model 260 for Model 31S receiver. Model 33S and 34S receivers are equipped with built-in Dynacoil speakers (Type M, Model 261).

THE GROUND

The "ground" is a wire connection made from the receiver to some object that eventually makes good electrical contact with the earth. A good ground is even more essential than a good aerial.

The ground wire should be insulated copper wire, as described above. It is best to run it in as short and direct a route as possible to the object used as a means of grounding.

Pipes

A connection to a water pipe is one of the most efficient and convenient grounds. The ground wire may be connected to the pipe by means of a "ground clamp." This is a device for clamping onto the pipe, provided with a terminal for the ground wire. Preferably connect to a cold water pipe. Hot water pipes, steam radiator or water radiator pipes may be used. Never use gas pipe.

Before attaching the ground clamp, scrape or sand paper the pipe until it is clean and bright where the clamp is to be attached. Tighten the clamp securely over this cleaned portion. Scrape off the covering from the end August 11 August

of the ground wire. Scrape the bare wire until it is bright, and attach this bared end to the terminal on the ground clamp.

Wells and Streams

If no water pipe or radiator is available the next best ground is a well or stream. The scraped end of the ground wire may be soldered to a galvanized sheet of iron, or to a piece of bright metal pipe, and dropped into the water.

Ground Rods

A piece of bright metal pipe, or bright metal rod, driven into the earth in a damp location may be used as ground. Wire fences have been used as fair substitutes for grounds. The ground wire should preferably be soldered to such objects.

The "aerial" is a wire, connected to the receiver, for intercepting the radio programs. The best aerial to use depends upon the distance from broadcasting stations, and upon the nature of the surroundings, as described below. This receiver may be operated without an aerial by connecting the ground wire (page 4) to the receiver aerial terminal (pages 6, 7).

Outdoor Aerials

In localities far from broadcasting stations (for example in some of the western and southern states) or if surrounded by tall buildings, a very large outdoor aerial may give hest results.

To erect an outdoor aerial, choose two convenient supports between which a wire 50 feet or more in length may be stretched. In the open country or in residential sections made up mostly of detached dwellings, the aerial



up mostly of detached dwellings, the aerial should be 25 feet, or more, above the ground. The house may serve as one support, and a tree, pole, or other building as the second support. If you live in an apartment building, the aerial may be stretched above the roof. It should preferably be at least ten feet above the roof.

To erect the aerial, fasten an aerial insulator to each support by means of a piece of wire or rope. Attach the aerial wire to the free end of the insulator farthest from the place where you wish to bring the lead wire into the house. Run the wire through the free hole in the other insulator, and stretch the aerial taut, securing it by a few twists of the excess wire about the stretched portion. Use the free length of wire, that is left over, as a "lead in" wire, to connect the aerial to the receiver. This is preferable to splicing a lead-in to the aerial. The lead-in should enter the building through a porcelain tube or other lead-in insulator.

The aerial should be protected by an approved lightning arrestor. Follow the directions for installation packed with the arrestor.



Indoor Aerials

In localities near broadcasting stations (as for example, in many cities) unless one is in a steel building or is surrounded by tall steel buildings, an indoor aerial will usually be found quite satisfactory. A small wire concealed along the baseboard serves quite well for this purpose. If powerful broadcasting stations are located within a few miles, a wire not less than 40 feet long may be found best. For more distant reception, indoor aerials 50 feet or more in length may be used. The longer aerials may be stretched along a hall-way, or through several rooms; the wire be-

longer aerials may be stretched along a hallway, or through several rooms; the wire being laid out so that its full length extends in one direction, if practicable.

CONNECTING THE RECEIVER

Do not connect receiver to lighting circuit until all other connections have been made, and tubes are in sockets.

After you have located the receiver where you wish it, erected the aerial and made the ground connection (as described on pages 4 and 5), you are ready to connect and operate the receiver.

Aerial and Ground

Scrape off the covering from the ground and aerial wires for about half an inch from their ends, and scrape he bared wire until it appears bright. You will find four screw terminals at the rear of the receiver, toward the right as viewed from the front of the receiver. To the one marked "A" connect the scraped end of the aerial lead-in wire, tightening the terminal screw until the wire is fastened securely. To the one marked "O" connect the ground wire, in a similar manner. The terminals marked "P₁, P₂" are for use only with phonograph pick-up devices, as explained on page 10.

Loudspeaker

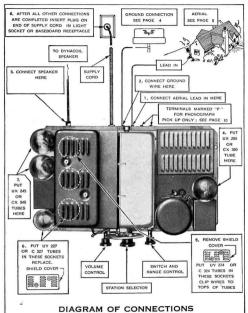
Insert the plug on the end of the Dynacoil loudspeaker cord in the socket at the rear of the chassis. This socket is at the left of the supply cord, as viewed from the front of the receiver.

Inserting the Tubes

At the left of the receiver (as viewed from the front) there is a shielded compartment, with a removable cover held by two thumb screens. Remove this cover and insert a UY 224 (or C 324) tube in each of the two rear sockets, and a UY 227 (or C 327) tube in the front socket. The numbers of the tubes are shown on the tube cartons and on the base of each tube (see also pictures of the tubes on page 3). Note the arrangement of prongs on the tubes and the location of the holes in the sockets, and be sure that you have the prongs lined up properly with the holes before you try to insert each tube. After the tubes have been inserted, connect the wires inside the two rear shields to the tops of the tubes in those shields (placing each wire as near the center of its shield as possible) and replace the shield cover. Insert the other UY 227 (or C 327) tube, the UX 245 (or CX 345) tubes, and the UX 280 (or CX 380) tube in their sockets, as marked on the Diagram of Connections, being sure to register the prongs and socket holes as described above.

Line Voltage Adjustment

There is a fuse mounted on the chassis which may be reached from the bottom of the receiver. Remove the cover, held in place by a screw, to reach the fuse. The fuse must be so placed in its clips as to adapt the receiver to the line voltage being used. When the fuse is in the clips marked "High" the receivers is adapted to operation from lighting circuits of 115 to 130 volts for 110 volt receivers. When the fuse is in the clips marked "County" to the fuse is in the clips marked "Low" the receiver is adapted to operation from lighting circuits of 100 to 115 volts for 110 volt receivers, or 200 to 230 volts for 220 volt receivers. Your dealer will measure your lighting circuit voltage for you and insert the fuse in the proper clips, or you may obtain



MODELS 308 - 318 - 335 - 345

BE SURE TO MAKE CONNECTIONS IN CORRECT ORDER AS NUMBERED ABOVE

this information from your light company and see that the fuse is inserted properly. If the line voltage is not known, the fuse should be inserted in the clips marked "High."

Insert the plug on the end of the supply cord in a convenient light socket or receptacle (see second paragraph, page 3). Never put your hand inside the receiver without first disconnecting the supply cord from the light circuit.

OPERATION

To Turn On Receiver

Connecting to Light Circuit

Pull the switch and range control knob toward you (do not turn it). The dial light should light up, and the set should be in operating condition in about one minute.*



SWITCH AND RANGE CONTROL

To Tune to Stations

Turn the volume contro, and range control all of the way on (to the right). Rotate the station selector slowly until a program is heard. Reduce the volume, if necessary, by means of the range control and volume control (see below) and readjust the station selector for maximum loudness. Continue readjusting the volume control, range control, and station selector until satisfactory volume is obtained with the station selector adjusted for maximum loudness.



To Adjust Volume or Loudness

The signals from the broadcasting stations vary enormously in strength, depending on the distance, the power of the stations and other factors. Two methods of control are provided to adjust the receiver for these different signals. One, the range control, is operated by rotating the switch knob. There is a white spot on the knob which indicates the position of the range control. To



VOLUME CONTROL

control extremely strong signals, turn the range control all the way to the left. For very weak signals, turn it all the way to the right. The middle position is suitable for the average antenna, and for maximum selectivity. If there are no powerful nearby stations, the middle, or in some cases the right hand position of the range control can be used. The volume control adjusts the amplification of the receiver. To increase the volume or loudness, turn the volume control knob to the right (clockwise). To decrease the volume, turn the volume control knob to the left (counter clockwise).

*Note: When the receiver is first installed or after it has been standing idle for a number of weeks it may require fifteen minutes or more before it will operate with full efficiency.

To Turn Off Receiver

Push the switch and range control knob toward the receiver (do not turn it). When the dial light goes out the power is off.

FURTHER INFORMATION

Care of the Receiver

The following rules will help you to get the best results:

- 1. Turn off the receiver when not in use. This will save tubes and electricity.
- 2. Tune carefully. Turn the station selector slowly. In this way you will receive the greatest number of stations.
- 3. Never put your hand inside the receiver without first disconnecting
- the power cable from the light socket.

 4. Do not connect the power cable to a light socket unless the loudspeaker
- is connected. Do not disconnect the loudspeaker without first disconnecting the power cable. This will prevent possible serious damage to the receiver.

If Receiver Does Not Operate Properly

Crosley radio receivers are carefully constructed of the best materials throughout. They undergo extremely rigid inspection before they are shipped from the factory. Properly installed and properly operated they will give satisfactory service indefinitely. Certain difficulties of operation, which have nothing to do with the receiver itself, occasionally arise, however. The causes of these difficulties are quite simple and are easily remedied, as outlined below. Your radio dealer or service man will be glad to take care of such matters for you, or you may do it yourself if you prefer.

IF DIAL LIGHT FAILS TO LIGHT WHEN SWITCH IS TURNED ON: Examine the tubes inside the receiver. If they are burning, the dial light is either loose in its socket or is burnt out. If screwing it tighter in its socket does not cause it to light, it should be replaced (use a Mazda, miniature base-bulb, 2½ volt No. 41, for replacement). If the tubes are not lighted, the power may be off at the light socket. To check this, disconnect the receiver from the light circuit, and connect a table or floor lamp in its place. If the lamp lights, when turned on, the power is on at socket. In this case the fuse in the receiver probably needs to be replaced. This fuse may be reached from the bottom of the receiver. To replace it, a one ampere, automobile light fuse is required.

IF YOU DO NOT RECEIVE STATIONS—Read footnote at bottom of page 8: If this trouble occurs on first installing receiver, pull out the plug at once and carefully check the connections and installation throughout. If none of the tubes light when the switch is turned on, the power is probably off at the socket, or the fuse in the receiver is burnt out. These possibilities may be checked and remedied as outlined in the preceding paragraph. If some tubes light but others fail to light, be sure that those not lit are firmly seated in their sockets. If they are, then they are probably burnt out, and need to be replaced by new ones.

NOISY RECEPTION-A raspy sound in receiving powerful signals may be caused by turning on the volume so far that the speaker is overloaded, Crackling and crashing sounds are usually due to static (lightning, disturbances from nearby electric light and power circuits, etc.) Occasionally they are caused by loose connections, such as a ground wire loosely clamped to a pipe or loosely fastened to the terminal on the receiver. Whistling or screeching notes received only at certain settings of the station selector are due to broadcasting stations interfering with one another, or to other forms of outside interference, beyond the control of the listener. A ringing or howling sound gradually building up in intensity is due to jarring of the tubes. To overcome it, see that the receiver is firmly supported and that the tubes are properly seated in their sockets. Noisy reception may also be caused by faulty installation, faulty tubes, or tubes nearing the end of their life.

DISTORTED RECEPTION-If the reception does not "sound natural," the fault usually lies at the broadcasting station. Programs are occasionally broadcast imperfectly, and some stations broadcast with better tone quality than others. Faulty tubes, or tubes nearing the end of their life, may also cause distorted reception.

LACK OF VOLUME-The volume of distant stations may often be improved by a longer aerial, differently located aerial, or by an improved ground system. Old tubes, nearly worn out, or faulty tubes will cause lack of volume.

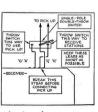
Dynacoil Speaker

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The Dynacoil speakers used with these receivers are properly adjusted at the Crosley factory and should need no further adjustment. If for any reason you believe that your speaker needs regulation, do not attempt to adjust it yourself, but have your dealer examine it.

Phonograph Pick Up

The terminals marked "P1" and "P2," next to the Antenna and Ground terminals, are for use with phonograph pick-up devices, for reproducing phonograph records through the radio receiver and loudspeaker. The pick-up device must be equipped with a single-pole. double-throw switch, connected as shown in the diagram. The strap connecting the two bick-up terminals "P1" and "Po" must be broken before the leads from the pick-up switch are connected to the receiver. If the pickup is disconnected from the receiver at any time, the "P1" and "P2" terminals must be connected with a short wire before the receiver is used.



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Below is a condensed list of broadcasting stations. In the columns below record for future reference, the station selector settings at which you receive stations. The column headed "Frequency" refers to the broadcasting frequency or wave length assigned to the station by the Federal Radio Commission. The higher frequencies will be received at the smaller numbers on the station selector drum and the lower frequencies at the larger numbers. The kilocycles (frequency), as specified on the dial in red numerals, are not absolute. They are merely to be used as a guide to help the listener identify the various stations.

Call Letters	LOCATION	Frequency (Kilo Cycles)	Dial Setting	Call Letters	LOCATION	Frequency (Kilo Cycles)	Dial Setting
KDKA	East Pittsburgh, Pa	980		KOIL	Council Bluffs, Iowa	1260	2222222
KDYL	Salt Lake City, Utah	1290		KOIN	Portland, Oregon	940	
KEX	Portland, Oregon	1180		KOL	Seattle, Wash	1220	
KFAB	Lincoln, Nebraska	770		комо	Seattle, Wash	920	
KFDY	Brookings, S. D	550		KPLA	Los Angeles, Calif	570	
KFEQ	St. Joseph, Mo. (day)	560		KPWF	Westminster, Calif	1490	
KFI	Los Angeles, Calif	640		KPO	San Francisco, Calif	680	
	Oklahoma City, Okla	1470		KPRC	Houston, Texas	920	
KFKB	Milford, Kansas (day)	1050		KPSN	Pasadena, Calif	950	
KFKU	Lawrence, Kansas	1220		KRLD	Dallas, Texas	1040	
	Chicago, Illinois	1020		KSCJ	Sioux City, Iowa	1330	
KFMX	Northfield, Minn	1250	****	KSL	Salt Lake City, Utah	1130	
	Long Beach, Calif	1250	*******	KSO	Clarinda, Iowa	1380	
KFRC	San Francisco, Calif	610	******	KS00	Sioux Falls, S. D. (day).	1110	
KFUM	Colorado Springs, Colo	1270		KSTP	St. Paul, Minn	1460	
	Los Angeles, Calif	950		KTAT	Fort Worth, Texas	1240	
KGA	Spokane, Wash	1470	*******	KTBI	Los Angeles, Calif	1300	
	Los Angeles, Calif	1300		KTBS	Shreveport, La	1450	
	Pierre, S. D. (day)	580	*******	KTHS	Hot Springs, Ark	1040	
KGGC	San Francisco, Calif	1420		KTNT	Muscatine, Iowa (day)	1170	
	Little Rock, Ark			KTSA	San Antonio, Texas	1290	
	Las Vegas, Nevada	1420 790			Seattle, Wash	1270	
	Oakland, Calif				Fayetteville, Ark	1390	
	Amarillo, Texas Portland, Oregon	1410 620	*******	KVOO	Tacoma, Wash	760	
	Los Angeles, Calif	900	*******		Tulsa, Okla	1140 1350	****
	Spokane, Wash	590	*******		St. Louis, Mo Shreveport, La	850	
	Boise, Idaho	1250			San Francisco, Calif	1230	
	Seattle, Wash	970	111111111		Arlington, Va	690	
	Little Rock, Ark	1390			Newark, N. J.	1250	
	Denver, Colo	560		WABC	New York City	860	
	Independence, Mo	950			Rochester, N. Y	1440	
	Clay Center, Neb. (day).	740	******		Akron, Ohio	1320	
	St. Louis, Mo	1090			Birmingham, Ala	1140	
	Hollywood, Calif	570			Baltimore, Md	1060	
	Los Angeles, Calif	1050			Fort Worth, Texas	800	
KOA 1	Denver, Colo	830	********		Nashville, Tenn	1490	
KOAC (Corvallis, Oregon	560		WBBM	Chicago, Ill	770	
KOB S	State College, N. Mex	1180		WBBR	Rossville, N. Y.	1300	

Call Letters	LOCATION	Frequency (Kilo Cycles)	Dial Setting	Call Letters	LOCATION	Frequency (Kilo Cycles)	Dial Setting
WBIS	Boston, Mass	1230	,,,,,,,,	WJZ	New York City	760	
WBT	Charlotte, N. C	1080		WKAR	East Lansing, Mich.	1040	
WCAC	Storrs, Conn	990 600		WKBH	(day)	1380	
WCAL	Northfield, Minn	1250		WKBW	Buffalo N V	1470	
WCAO	Baltimore, Md	600		WKEN	La Crosse, Wis Buffalo, N. Y Grand Isl., N. Y	1040	
WCAU	Philadelphia, Pa	1170		WKY	Oklahoma City, Okla	900	
WCBD	Zion, Illinois (day)	1080		WLAC WLB	Nashville, Tenn	1490	
WCCO	Minneapolis, Minn New York City	810 1350		WLBL	Minneapolis, Minn Stevens Point, Wis. (day)	1250 900	
WCFL	Chicago, Ill. (Ltd.)	970		WLBZ	Bangor, Maine	620	
WCKY	Covington, Ky.	1480		WLIB	See WGN		
WDAE	Tampa, Fla	620	0000000	WLS	Chicago, Ill	870	
WDAF	Kansas City, Mo	610		WLW	Cincinnati, Ohio	700	
WDAY	Fargo, N. D Orlando, Fla	1280 620		WLWL	New York City Buffalo, N. Y	1100 900	
WDGY	Minneapolis, Minn	1180		WMAQ	Chicago, Ill.	447	
WDOD	Chattanooga, Tenn	1280		WMBI	Chicago III (day)	1080	
WDSU	Chattanooga, Tenn New Orleans, La	1270		WNAC	Boston, Mass	1230	
WEAF	New York City	660		WNAX	Yankton, S. D	570	
WEAN WEAO	Providence, R. I. (day).	550 550		WNOX	Knoxville, Tenn	560 1190	
WEAR	Cleveland Ohio	1070		WOBU	San Antonio, Texas Charleston, W. Va	580	*******
WEBC	Cleveland, Ohio Superior, Wis	1280		WOC	Davenport, Iowa	1000	
WEBW	Beloit, Wis, (day)	600		WODA	Paterson, N. J	1250	
WEEL	Boston, Mass	590		WOI	Ames, Iowa, (day)	560	
WENR	Berrien Springs, Mich	590 870		WOO	Kansas City, Mo Newark, N. J.	610 710	
WEW	Chicago, Ill St. Louis, Mo. (day)	760		WORD	Chicago, Ill	1480	
WFAA	Dallas, Texas	800	111111111	wov	New York City (day)	1130	
WFBL	Syracuse, N. Y	900	******	wow	Omaha, Neb	590	
WFBM	Indianapolis, Ind. (Ltd.)	1230		wowo	Fort Wayne, Ind	1160 1100	
WFLA	Hopkinsville, Ky Clearwater, Fla	940 900		WPG WPTF	Atlantic City, N. J Raleigh, N. C	680	
WGHP	Detroit, Mich	1240		WOAM	Miami, Florida	880	
WGMS	St. Paul, Minn	1250		WREN	Lawrence Kansas	1220	
WGN	Chicago, Ill	720		WRHM	Minneapolis, Minn	1250	
WGR	Buffalo, N. Y Schenectady, N. Y	550	*******	WRUF	Minneapolis, Minn Gainesville, Fla Richmond, Va	1470	
WGY	Madison, Wis	790 940		WRVA	Cincinnati, Ohio	1110	
WHAM	Rochester, N. Y	1150		WSAZ	Huntington, W. Va	580	
WHAP	New York City	1300		WSB	Atlanta, Ga	740	
WHAS	Louisville, Ky	820		WSM	Nashville, Tenn	650	
WHDH	Gloucester, Mass. (day). Cleveland, Ohio	830		WSMK	Dayton, Ohio	570 1480	
WHK WHO	Des Moines, Iowa	1390 1000		WSOA WSSH	Chicago, Ill Boston, Mass	1420	
WIBO	Chicago III	570		WSUN	St. Petersburg, Fla	900	
WIBW	Topeka, Kans	1300		WSYR	Syracuse, N. Y	570	
WJAD	Topeka, Kans Waco, Texas	1240		WTAG	Worcester, Mass	580	
WJAG	Norfolk, Neb. (day)	1060		WTAM	Cleveland, Ohio	1070 1330	
WJAS	Pittsburgh, Pa Jacksonville, Fla	1290 1260		WTAQ	Eau Claire, Wis Hartford, Conn	600	
WJAZ	Chicago, Ill	1480		LMTW	Milwaukee, Wis	620	
WJBT	See WBBM	-100		WWJ	Milwaukee, Wis Detroit, Mich	920	
MIID	Mooseheart, Ill. (Ltd.)	1130		WWL	New Orleans, La	850	
WJR	Detroit, Mich	750		WWNC	Asheville, N. C Wheeling, W Va	570 1160	
WJSV	Washington, D. C	1460	orone.	WWW	wheeling, w va	1 1100	1

Wherever you are -

TUNE IN ON

"THE NATION'S STATION"

and WSAI

The Crosley Radio Corporation : Powel Crosley, Jr., President