



The RCA
Radiotron
Broadcast
Station
Directory

LIST OF BROADCASTING STATIONS
EFFECTIVE 3 A.M. NOVEMBER 11th, 1928

The RCA Radiotron Broadcast Station DIRECTORY

AMERICAN BROADCASTING STATIONS

Call Letters	TRANSMITTER LOCATION	Power	Kilo-cycles	Meters
WAAD	Cincinnati, Ohio Divides time with WSRO	25	1420	211.1
WAAF	Chicago, Ill.	500	920	325.9
WAAM	Newark, N. J. Divides time with WGCP-WODA	250	1250	239.9
WAAT	Jersey City, N. J. Divides with WBMS-WNJ-WIBS-WKBO	300	1070	280.2
WAAW	Omaha, Nebr.	500	660	454.3
WABC	W. of Cross Bay Blvd., Queens Co., L. I., N. Y.	5000	860	348.6
WBOQ				
WABF	Kingston, Pa. Divides time with WRAX	250	1440	208.2
WABI	Bangor, Me.	100	1200	249.9
WABO	See WHEC Divides time with WMAC-WOKO-WHEC			
WABY	Philadelphia, Pa. Divides time with WIAD-WNAT	50	1310	228.9
WABZ	New Orleans, La. Divides time with WJBW	50	1200	249.9
WADC	Akron, Ohio Divides time with WFJC	1000	1320	227.1
WAFD	Detroit, Mich. Divides time with WMBC	100	1500	199.9
WAGM	Royal Oak, Mich. Divides time with WBMH	50	1310	228.9
WAIU	Columbus, Ohio	5000	640	468.5
WALK	Willow Grove, Pa. Divides time with WHBW-WOO-WPSW	50	1500	199.9
WAPI	Auburn, Ala. Divides time with KVOO	1000	1140	263.0
WASH	Grand Rapids, Mich. Divides time with WOOD	250	1270	236.1
WBAA	Lafayette, Ind. Divides time with WCMA-WKBF	500	1400	214.2

The Importance of a High Quality Vacuum Tube



RCA Radiotrons are primarily instruments of precision—the most sensitive ever manufactured and sold on a large scale. They might well be called electrical eyes; for they “see” waves to which our living retinas are unresponsive—the waves which carry broadcasting and speech.

The amount of energy received by a radio set may be only a few millionths of a millionth of that broadcast, but Radiotrons respond to it and amplify it millions, even billions, of times. Despite its sensitivity this extraordinary artificial sense organ is so sturdy that it withstands ordinary usage and it is made in large quantities, so that its price is low.

One of the functions of a Radiotron is to control the flight of billions of Electrons—invisible bits of electricity, so small that they bear the same size-relation to atoms that a football bears to a large dirigible balloon. A stream of electrons speeding from filament to plate is instantly and automatically influenced by the waves from the broadcasting station which affect the grid. What we hear is a duplicate of what is broadcast.

A few years ago high capacity storage batteries were required for satisfactory heating of the filament. Radiotrons of today contain improved filaments for operation from inexpensive trickle charge storage batteries,

AMERICAN BROADCASTING STATIONS (Continued)

Call Letters	TRANSMITTER LOCATION	Power	Kilo-cycles	Meters
WBAK	Harrisburg, Pa.	500	1120	267.7
WBAL	Baltimore, Md.	5000	1060	282.8
WBAO	Decatur, Ill.	100	1120	267.7
	Divides time with WJBL			
WBAP	Fort Worth, Tex.	5000	800	374.8
	Divides time with WTHS			
WBAW	Nashville, Tenn.	5000	1490	201.6
	Divides time with WLAC			
WBAX	Wilkes-Barre, Pa.	100	1210	247.8
WBBC	Brooklyn, N. Y.	500	1400	214.2
	Divides with WSGH-WSDA-WCGU-WLTH			
WBBL	Richmond, Va.	100	1370	218.8
WBBM } WJBT }	Glenview, Ill.	25000	770	389.4
	Divides time with KFAB			
WBBR	Rossville, N. Y.	1000	1300	230.6
	Divides time with WHAZ-WHAP-WEVD			
WBBW	Norfolk, Va.	100	1200	249.9
WBBY	Charleston, S. C.	75	1200	249.9
WBBZ	Ponca City, Okla. (Temporarily located)	100	1200	249.9
WBET	Medford, Mass.	500	1360	220.4
	Divides time with WMAF			
WBIS	See WNAC			
WBMH	Detroit, Mich.	100	1310	228.9
	Divides time with WAGM			
WBMS	Union City, N. J.	250	1450	206.8
	Divides time with WAAT-WIBS-WKBO			
WBNY	New York, N. Y.	250	1350	222.1
	Divides time with WCDA-WKBQ-WMSG			
WBOQ	See WABC			
WBOW	Terre Haute, Ind.	100	1310	228.9
WBRC	Birmingham, Ala.	500	930	322.4
WBRE	Wilkes-Barre, Pa.	100	1310	228.9
WBRL	Tilton, N. H.	500	1430	209.7
	Divides time with WICC			
WBSO	Wellesley Hills, Mass.	100	780	384.4
WBT	Charlotte, N. C.	10000	1080	277.6
WBZ	East Springfield, Mass.	15000	990	302.8
	Divides time with WBZA			
WBZA	Boston, Mass.	500	990	302.8
	Divides time with WBZ			
WCAC	Storrs, Conn.	500	1330	225.4
	Divides time with WDRG			
WCAD	Canton, N. Y.	500	1220	245.8

compact dry cells, and, more economical, AC supply from the lighting mains.

These improvements result from ceaseless research conducted to make Radiotrons more and more efficient. More electrons are emitted from the improved Radiotron filaments in spite of the fact that less power is required to heat them.

An air or gas molecule is immense compared with an electron; it would stop an electron in its flight from the filament to the plate. Even the finest vacuum pumps will not remove all air molecules. Research showed how obstructing air molecules could be swept out of the bulb—a triumph of the laboratories that stand behind the Radio Corporation of America.

Research has made Radiotrons what they are today—made them not only sense-organs of radio but made them so inexpensive that they can be sold over the counter like scores of other products much more easily manufactured.

The manufacture of Radiotrons is exacting. Each Radiotron must pass through many stages, and at each stage it must be rigorously inspected and tested. If it fails to measure up to RCA standards it is rejected. For this reason every Radiotron leaves the factory a faultless and matchless radio detector or amplifier—a supreme achievement of research, engineering, and manufacturing.

That is why the leading makers of radio sets sold on a quality basis use Radiotrons throughout and specify them for replacement.

AMERICAN BROADCASTING STATIONS (Continued)

Call Letters	TRANSMITTER LOCATION	Power	Kilo-cycles	Meters
WCAE	Pittsburgh, Pa.	500	1220	245.8
WCAH	Columbus, Ohio Divides time with WMBS	250	1430	209.7
WCAJ	Lincoln, Nebr. Divides time with WOW	500	590	508.2
WCAL	Northfield, Minn. Divides time with KFMX-WRHM-WLB	1000	1250	239.9
WCAM	Camden N. J. Divides time with WOAX-WCAP	500	1280	234.2
WCAO	Baltimore, Md.	250	600	499.7
WCAP	Asbury Park, N. J. Divides time with WCAM-WOAX	500	1280	234.2
WCAT	Rapid City, S. D.	100	1200	249.9
WCAU	Byberry, Pa.	5000	1170	256.3
WCAX	Burlington, Vt. Divides time with WNBX	100	1200	249.9
WCAZ	Carthage, Ill.	100	1070	280.2
WCBA	Allentown, Pa. Divides time with WSAN	100	1500	199.9
WCBD	Zion, Ill. Divides time with WMBI	5000	1080	277.6
WCBM	Baltimore, Md.	100	1370	218.8
WCBS	Springfield, Ill. Divides time with WTAX	100	1210	247.8
WCCO	Anoka, Minn.	10000	810	370.2
WCDA	Cliffside Park, N. J. Divides time with WBNY-WKBQ-WMSG	250	1350	222.1
WCFL	Chicago Ill. Divides time with WJJD-WRM	1000	620	483.6
WCGU	Coney Island, N. Y. Divides with WSGH-WSDA-WLTH-WBBC	500	1400	214.2
WCLB	Long Beach, N. Y. Divides time with WMBQ-WLBX-WWRL	100	1500	199.9
WCLO	Kenosha, Wis. Divides time with WRJN	100	1200	249.9
WCLS	Joliet, Ill. Divides with WEHS-WKBB-WKBI-WHFC	100	1310	228.9
WCMA	Culver, Ind. Divides time with WBAA-WKBF	500	1400	214.2
WCOA	Pensacola, Fla.	500	1120	267.7
WCOC	Columbus, Miss.	500	880	340.7
WCOH	Greenville, N. Y. Divides time with WJBI-WGBB-WINR	100	1210	247.8
WCRW	Chicago, Ill. Divides time with WSBC-WEDC	100	1210	247.8

An RCA Radiotron for Every Purpose



RCA Radiotrons are classified in six distinct groups and the prospective user may, without any confusion, select the tube that is just suited for any particular function.

Special Detector: Extremely sensitive Radiotrons designed particularly for detection and not to be used for other purposes.

Special Amplifier: Under this heading will be found the new four electrode Radiotron for use as radio-frequency or resistance coupled audio frequency-amplifiers.

Detector-Amplifiers: In this group may be found the Radiotrons that can be used interchangeably as detectors or amplifiers with excellent results.

"AC" Radiotrons: Detectors and amplifiers that require no "A" batteries. The filaments of these Radiotrons are operated from the alternating current lighting socket by means of small stepdown transformers.

Power Amplifiers: These Radiotrons will handle, without distortion, extraordinary volume built up by preceding stages of amplification and are advantageous in the last audio stage only.

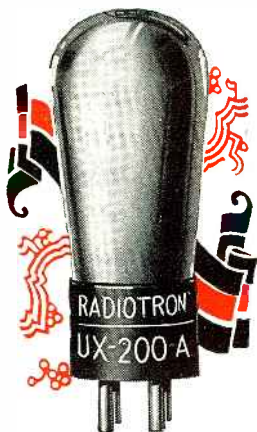
Rectifiers: These Radiotrons are the tubes that are used to supply uni-directional current, from an alternating current source, for the elimination of radio batteries.

Special Radiotrons: This group contains the Radiotrons that are designed for the automatic regulation of voltage and current.

AMERICAN BROADCASTING STATIONS (Continued)

Call Letters	TRANSMITTER LOCATION	Power	Kilo-cycles	Meters
WCSH	Portland, Me.	500	940	219.0
WCSO	Springfield, Ohio	500	1380	217.3
	Divides time with KQV			
WCWK	Ft. Wayne, Ind.	500	1230	243.8
	Divides time with WSBT-WFBM			
WCX	See WJR			
WDAE	Tampa, Fla.	1000	620	483.6
	Divides time with WDBO			
WDAF	Kansas City, Mo.	1000	610	491.5
	Divides time with WOQ			
WDAG	Amarillo, Tex.	1000	1410	212.6
	Divides time with KGRS			
WDAH	El Paso, Tex.	100	1310	228.9
WDAY	Fargo, N. Dak.	1000	1280	234.2
	Divides time with WEBC			
WDBJ	Roanoke, Va.	500	930	322.4
WDBO	Orlando, Fla.	1000	620	483.6
	Divides time with WDAE			
WDEL	Wilmington, Del.	250	1410	212.6
WDGY	Minneapolis, Minn.	500	1410	212.6
	Divides time with KFLV-WHDI-WHBL			
WDOD	Chattanooga, Tenn.	1000	1280	234.2
WDRC	New Haven, Conn.	500	1330	225.4
	Divides time with WCAC			
WDSU	New Orleans, La.	1000	1270	236.1
WDWF	Cranston, R. I.	100	1210	247.8
WLSI	Divides time with WFCI			
WDZ	Tuscola, Ill.	100	1070	280.2
WEAF	Bellmore, N. Y.	50000	660	454.3
WEAI	Ithaca, N. Y.	100	740	405.2
WEAN	Providence, R. I.	500	1160	258.5
WEAO	Columbus, Ohio	750	550	545.1
	Divides time with WKRC			
WEAR	Cleveland, Ohio	1000	1070	280.2
	Divides time with WTAM			
WEBC	Superior, Wis.	1000	1280	234.2
	Divides time with WDAY			
WEBE	Cambridge, Ohio	10	1210	247.8
WEBQ	Harrisburg, Ill.	50	1210	247.8
	Divides time with KFVS			
WEBR	Buffalo, N. Y.	100	1310	228.9
WEBW	Beloit, Wis.	250	600	499.7
WEDC	Chicago, Ill.	100	1210	247.8
	Divides time with WCRW-WSBC			
WEDH	Erie, Pa.	30	1420	211.1

RCA Radiotron UX-200-A *Detector*



Radiotron UX-200-A is the most sensitive and efficient detector ever placed on the market. It is not at all critical to the adjustment of the plate voltage. The use of this Radiotron in the detector socket of a radio set employing Radiotrons UX-201-A will produce additional sensitivity and volume approx-

imately equal to that which would be obtained by the addition of one stage of radio frequency amplification. The advantage becomes readily apparent on receiving signals from *distant* stations. The characteristics of this Radiotron are such that no changes in the set itself are required, when it is used to replace Radiotron UX-201-A. The filament consumption and the plate voltage required are identical to those of Radiotron UX-201-A.

Radiotron UX-200-A . . . \$4.00

AMERICAN BROADCASTING STATIONS (Continued)

Call Letters	TRANSMITTER LOCATION	Power	Kilo-cycles	Meters
WEEI	Boston, Mass.	500	590	599.6
WEHS	Evanston, Ill. Divides with WHFC-WKBI-WCLS-WKBB	100	1310	228.9
WEMC	Berrien Springs, Mich.	1000	680	440.9
WENR	Chicago, Ill. Divides time with WLS	5000	870	344.6
WBCN				
WEPS	Gloucester, Mass. Divides time with WKBE	100	1200	249.9
WEVD	Woodhaven, N. Y. Divides time with WBBR-WHAP-WHAZ	500	1300	230.6
WEW	St. Louis, Mo.	1000	760	394.5
WFAA	Dallas, Tex. Divides time with KRLD	5000	1040	288.3
WFAN	Philadelphia, Pa. Divides time with WIP	500	610	491.5
WFBC	Knoxville, Tenn.	50	1200	249.9
WFBE	Cincinnati, Ohio	100	1200	249.9
WFBG	Altoona, Pa. Divides time with WHBP	100	1310	228.9
WFBJ	Collegeville, Minn.	100	1370	218.8
WFBL	Syracuse, N. Y. Divides time with WMAK	750	900	333.1
WFBM	Indianapolis, Ind. Divides time with WSBT-WCWK	500	1230	243.8
WFBR	Baltimore, Md.	250	1120	267.7
WFCI	Pawtucket, R. I. Divides time with WDFW	100	1210	247.8
WFDF	Flint, Mich. Divides time with WMPC	100	1310	228.9
WFI	Philadelphia, Pa. Divides time with WLIT	500	560	535.4
WFIW	Hopkinsville, Ky.	1000	940	319.0
WFJC	Akron, Ohio Divides time with WJAY	500	1450	206.8
WFKD	Frankford, Pa.	50	1310	228.9
WFLA	Clearwater, Fla.	1000	560	535
WSUN				
WGAL	Lancaster, Pa. Divides time with WRAW-WKJC	15	1310	228.
WGBB	Freeport, N. Y. Divides time with WJBI-WINR-WCOH	100	1210	247.8
WGBC	Memphis, Tenn. Divides time with WNBR	500	1430	209.7
WGBF	Evansville, Ind. Divides time with WOS-KFRU	500	630	475.9

RCA Radiotron UX-222

Radio Frequency Amplifier

Radiotron UX-222 is a new four electrode Screen Grid tube particularly designed for radio frequency amplification. With proper shielding of the radio frequency circuit, neutralizing and stabilizing devices are unnecessary. The shielding "Screen Grid" between the usual or "control grid" and plate not only eliminates the effect of plate to grid feed-back capacity, but also increases the mutual conductance of the tube.



Radiotron UX-222 may also be used in a totally different role as an audio-frequency amplifier in resistance coupled circuits. Higher overall amplification at audio-frequencies is possible with this Radiotron without greater plate resistance than with three electrode high mu tubes.

The filament of the UX-222 operates at 3.3 volts and .132 amperes, but with a series resistor of 15 ohms it can be connected in parallel with the 5 volt filaments of other Radiotrons. Thus it may be used in either dry or storage battery receivers of correct design.

Radiotron UX-222 \$6.50

AMERICAN BROADCASTING STATIONS (Continued)

Call Letters	TRANSMITTER LOCATION	Power	Kilo-cycles	Meters
WGBI	Scranton, Pa. Divides time with WQAN	250	880	340.7
WGBS	Astoria, L. I., N. Y.	500	1180	254.1
WGCM	Gulfport, Miss.	100	1210	247.8
WGCP	Newark, N. J. Divides time with WODA-WAAM	500	1250	239.9
WGES	Chicago, Ill. Divides time with WJKS-WPCC	500	1360	220.4
WGHP	Fraser, Mich.	750	1240	241.8
WGMS	See WLB			
WGN	Elgin, Ill.	15000	720	416.4
WLIB				
WTAS				
WGR	Buffalo, N. Y.	750	550	545.1
WGST	Atlanta, Ga. Divides time with WMAZ	500	890	336.9
WGY	South Schenectady, N. Y.	50000	790	379.5
WHA	Madison, Wis. Divides time with WTMJ	750	570	526.0
WHAD	Milwaukee, Wis. Divides time with WLBL	500	900	333.1
WHAM	Victor Township (Rochester), N. Y.	5000	1150	260.7
WHAP	Carlstadt, N. J. Divides time with WBBR-WEVD-WHAZ	1000	1300	230.6
WHAS	Louisville, Ky.	5000	820	365.6
WHAZ	Troy, N. Y. Divides time with WBBR-WHAP-WEVD	500	1300	230.6
WHB	Kansas City, Mo. Divides time with KMBC-KLDS	1000	950	315.6
WHBC	Canton, Ohio	10	1200	249.9
WHBD	Bellefontaine, Ohio	100	1370	218.8
WHBF	Rock Island, Ill.	100	1210	247.8
WHBL	Sheboygan, Wis. Divides time with WDGY-KFLV-WHDI	500	1410	212.6
WHBP	Johnstown, Pa. Divides time with WFBG	100	1310	228.9
WHBQ	Memphis, Tenn.	100	1370	218.8
WHBU	Anderson, Ind.	100	1210	247.8
WHBW	Philadelphia, Pa. Divides time with WALK-WOO-WPSW	100	1500	199.9
WHBY	West De Pere, Wis.	50	1200	249.9
WHDI	Minneapolis, Minn. Divides time with WDGY-WHBL-KFLV	500	1410	212.6

RCA Radiotron UX-201-A

Detector Amplifier



Radiotron UX-201-A is the equivalent of the well-known UV-201-A equipped with the new standard UX base. UX-201-A will fit both the old Navy socket and the new Push Type socket. This sturdy Radiotron has long been the accepted standard of every radio engineer, amateur and broadcast listener. It is the

standard, all-around, flexible storage-battery tube of radio, good in detector and radio or audio frequency amplifier circuits, and sure to give the best results at the lowest operating cost.

The experimenter is referred to the data on pages 23 and 24 of this booklet in which is set forth the characteristics of Radiotron UX-201-A to serve as a guide to its proper use in a circuit.

All the results of modern electron-tube research are embodied in UX-201-A. Thus its filament has an electron emission which is not simply high, but extraordinarily high; and this at low current consumption and with long life.

Radiotron UX-201-A . . . \$1.50

AMERICAN BROADCASTING STATIONS (Continued)

Call Letters	TRANSMITTER LOCATION	Power	Kilo-cycles	Meters
WHEC } WABO }	Rochester, N. Y. Divides time with WMAC-WOKO	500	1440	208.2
WHFC	Chicago, Ill. Divides with WCLS-WKBB-WKBI-WEHS	100	1310	228.9
WHK	Cleveland, Ohio Divides time with WJAY	1000	1390	215.7
WHN	New York, N. Y. Divides time with WRNY-WQAO-WPAP	250	1010	296.9
WHO	Des Moines, Iowa Divides time with WOC	5000	1000	299.8
WHPP	Englewood Cliffs, N. J. Divides time with WLBH-WMRJ	10	1420	211.1
WHT	Deerfield, Ill. Divides time with WJAZ-WORD-WIBO	5000	1480	202.6
WIAD	Philadelphia, Pa. Divides time with WABY-WNAT	100	1310	228.9
WIAS	Ottumwa, Iowa Divides time with KICK	100	1420	211.1
WIBA	Madison, Wis.	100	1210	247.8
WIBG	Elkins Park, Pa.	50	930	322.4
WIBM	Temporarily located at Jackson, Mich.	100	1370	218.8
WIBO	Desplaines, Ill. Divides time with WJAZ-WHT-WORD	5000	1480	202.6
WIBR	Steubenville, Ohio Divides time with WQBZ	50	1420	211.1
WIBS	Elizabeth, N. J. Divides with WBMS-WNJ-WKBO	250	1450	206.8
WIBU	Boynette, Wis.	100	1310	228.9
WIBW	Near Topeka, Kans. Divides time with KFH	1000	1300	230.6
WIBX	Utica, N. Y.	100	1200	249.9
WIBZ	Montgomery, Ala.	15	1500	199.9
WICC	Easton, Conn. Divides time with WERL	500	1430	209.7
WIL	St. Louis, Mo. Divides time with KWK	1000	1350	222.1
WINR	Bay Shore, N. Y. Divides time with WJBI-WGBB-WCOH	100	1210	247.8
WIOD	Miami Beach, Fla. Divides time with WQAM	1000	1240	241.8
WIP	Philadelphia, Pa. Divides time with WFAN	500	610	491.5
WISN	Milwaukee, Wis.	250	1120	267.7

RCA Radiotron WX-12

Detector Amplifier

The WD-11 and the WX-12 differ only in their bases. Both have coated filaments and the electrical characteristics of these Radiotrons are exactly the same. Hence what is said about WD-11 applies in a radio sense to WX-12. But Radiotron WD-11 fits only a WD-11 socket, while WX-12 fits the standard Push Type socket and the Navy socket as well.



RCA Radiotron WD-11

Detector Amplifier

The "WD-11" was the first dry-cell Radiotron ever introduced and although many different types of Radiotrons have since been developed, this pioneer is still very popular and widely used both as detector and amplifier.



Radiotrons WD-11 or WX-12...\$2.50

AMERICAN BROADCASTING STATIONS (Continued)

Call Letters	TRANSMITTER LOCATION	Power	Kilo-cycles	Meters
WJAD	Waco, Tex. Divides time with KFQB	1000	1240	241.8
WJAG	Norfolk, Nebr.	500	1060	282.8
WJAK	Kokomo, Ind. Divides time with WLBC	50	1310	228.9
WJAM	Waterloo, Iowa. Divides time with KFJB	100	1200	249.9
WJAR	Providence, R. I.	250	890	336.9
WJAS	Pittsburgh, Pa.	1000	1290	232.4
WJAX	Jacksonville, Fla. Divides time with WAPI	1000	1260	238.0
WJAY	Cleveland, Ohio Divides time with WFJC	500	1450	206.8
WJAZ	Mt. Prospect, Ill. Divides time with WHT-WORD-WIBO	5000	1480	202.6
WJBB	Sarasota, Fla.	250	1010	296.9
WJBC	La Salle, Ill. Divides time with WJBL	100	1200	249.9
WJBI	Red Bank, N. J. Divides time with WGBB-WINR-WCOH	100	1210	247.8
WJBK	Ypsilanti, Mich.	50	1370	218.8
WJBL	Decatur, Ill. Divides time with WJBC	100	1200	249.9
WJBO	New Orleans, La.	100	1370	218.8
WJBT	See WBBM			
WJBU	Lewisburg, Pa.	100	1210	247.8
WJBW	New Orleans, La. Divides time with WABZ	30	1200	249.9
WJBY	Gadsden, Ala.	50	1210	247.8
WJJD	Mooseheart, Ill. Divides time with WCFL-WRM	1000	620	483.6
WJKS	Gary, Ind. Divides time with WGES	500	1360	220.4
WJR } WCX }	Pontiac, Mich.	5000	750	399.8
WJZ	New York, N. Y.	30000	760	394.5
WKAQ	San Juan, P. R.	500	580	516.9
WKAR	E. Lansing, Mich.	500	1040	288.3
WKAU	Laconia, N. H.	50	1310	228.9
WKBB	Joliet, Ill. Divides with WEHS-WCLS-WKBI-WHFC	100	1310	228.9
WKBC	Birmingham, Ala.	10	1310	228.9
WKBE	Webster, Mass. Divides time with WEPS	100	1200	249.9

RCA Radiotron UX-199



Detector Amplifier

Radiotron UX-199 is adaptable to either portable or home dry battery operated sets. It is equally serviceable as a detector or as a high-efficiency radio or audio frequency amplifier. Economy of operation is particularly pronounced when it is used in circuits having more than three tubes.

RCA Radiotron UV-199

Detector Amplifier

UV-199 and UX-199 are electrically identical, differing only in their bases. UV-199 will fit only the UV-199 socket and UX-199 will fit only the standard Push Type socket.

Both Radiotrons have filaments which emit electrons abundantly at low temperature so that the dry cells of the "A" battery are subjected to very slight drain.



Radiotron UV-199 or UX-199... \$2.25

AMERICAN BROADCASTING STATIONS (Continued)

Call Letters	TRANSMITTER LOCATION	Power	Kilo-cycles	Meters
WKBF	Indianapolis, Ind. Divides time with WBAA-WCMA	500	1400	214.2
WKBH	La Crosse, Wis. Divides time with KSO	1000	1380	217.3
WKBI	Chicago, Ill. Divides with WCLS-WKBB-WHFC-WEHS	50	1310	228.9
WKBN	Youngstown, Ohio Divides time with WMSK	500	570	526.0
WKBO	Jersey City, N. J. Divides with WBMS-WNJ-WIBS	250	1450	206.8
WKBP	Battle Creek, Mich.	50	1420	211.1
WKBQ	New York, N. Y. Divides time with WBNY-WMSG-WCDA	250	1350	222.1
WKBS	Galesburg, Ill. Divides time with WLBO	100	1310	228.9
WKBT	New Orleans, La.	50	1420	211.1
WKBV	Brookville, Ind.	100	1500	199.9
WKBW	Amherst, N. Y.	5000	1470	204.0
WKBZ	Ludington, Mich.	50	1500	199.9
WKEN	Grand Island, N. Y. Divides time with WKBW	750	1040	288.3
WKJC	Lancaster, Pa. Divides time with WPRC	50	1200	249.9
WKRC	Cincinnati, Ohio Divides time with WEAO	500	550	545.1
WKY	Oklahoma City, Okla.	1000	900	333.1
WLAC	Nashville, Tenn. Divides time with WBAW	5000	1490	201.6
WLAP	Okalona, Ky.	30	1200	249.9
WLB WGMS }	Minneapolis, Minn. (Call WGMS used by WCCO when broad- casting over WLB) Divides time with WCAL-KFMX-WRHM	1000	1250	239.9
WLBC	Muncie, Ind. Divides time with WJAK	50	1310	228.9
WLBF	Kansas City, Kans.	100	1420	211.1
WLBG	Petersburg, Va.	100	1200	249.9
WLBH	Farmingdale, N. Y. Divides time with WHPP-WMRJ	30	1420	211.1
WLBL	Stevens Pt., Wis. Divides time with WHAD	1000	900	333.1
WLBO	Galesburg, Ill. Divides time with WKBS	100	1310	228.9
WLBV	Mansfield, Ohio	100	1210	247.8
WLBW	Oil City, Pa.	500	1260	238.0

RCA Radiotron UX-112-A

Power Amplifier and Detector Amplifier

Radiotron UX-112-A is an improved general purpose storage battery tube. While it was primarily designed as a power amplifier for use in the last audio stage, it may also be used for detection or amplification as evidenced by its characteristics which will be found on pages 23 and 24.

It is extremely sensitive as a detector and is an excellent radio frequency or audio-frequency amplifier.

Radiotron UX-112-A has a coated filament which operates at such a low temperature that only a dull red glow is visible. Its low current consumption of only one quarter ampere permits very economical operation.

Radiotron UX-112-A is unique in the general purpose class. Never before has a single tube been capable of such all around use.



Radiotron UX-112-A.....\$2.75

AMERICAN BROADCASTING STATIONS (Continued)

Call Letters	TRANSMITTER LOCATION	Power	Kilo-cycles	Meters
WLBX	Long Island City, N. Y. Divides time with WCLB-WWRL-WMBQ	100	1500	199.9
WLBZ	Dover-Foxcroft, Me.	250	570	526.0
WLCI	Ithaca, N. Y.	50	1210	247.8
WLEX	Lexington, Mass. Divides time with WSSH	50	1420	211.1
WLIB	See WGN-WTAS			
WLIT	Philadelphia, Pa. Divides time with WFI	500	560	535.4
WLOE	Chelsea, Mass. Divides time with WMES	100	1500	199.9
WLS	Crete, Ill. Divides time with WENR-WBCN	5000	870	344.6
WLSI	See WDFW			
WLTH	Brooklyn, N. Y. Divides with WCGU-WSGH-WSDA-WBBC	500	1400	214.2
WLW	Mason, Ohio	5000	700	428.3
WLWL	Kearny, N. J. Divides time with WPG	5000	1100	272.6
WMAC	Cazenovia, N. Y. Divides time with WOKO-WHEC-WABO	500	1440	208.2
WMAF	S. Dartmouth, Mass. Divides time with WBET	500	1360	220.4
WMAK	Martinsville, N. Y. Divides time with WFBL	750	900	333.1
WMAL	Washington, D. C.	250	630	475.9
WMAN	Columbus, Ohio	50	1210	247.8
WMAQ	Chicago, Ill.	5000	670	447.5
WMAZ	St. Louis, Mo. Divides time with KFWF	100	1200	249.9
WMAZ	Macon, Ga. Divides time with WGST	500	890	336.9
WMBA	Newport, R. I.	100	1500	199.9
WMBC	Detroit, Mich. Divides time with WAFD	100	1420	211.1
WMBD	Peoria Heights, Ill. Divides time with WTAD	500	1440	208.2
WMBF	Miami Beach, Fla.	500	560	535.4
WMBG	Richmond, Va. Divides time with WTAZ	100	1210	247.8
WMBH	Joplin, Mo.	100	1420	211.1
WMBI	Addison, Ill. Divides time with WOWO-KTNT-WCBD	5000	1080	277.6
WMBL	Lakeland, Fla.	100	1310	228.9
WMBM	Memphis, Tenn.	10	1500	199.9

RCA Radiotron UX-240

High-Mu Detector Amplifier



Radiotron UX-240 is designed for use in resistance or impedance-coupled amplifier circuits as either detector or amplifier.

Having an Amplification Factor (Mu) of 30, Radiotron UX-240 will be welcomed, particularly by set builders who prefer resistance coupled amplification. Where

tubes of the general purpose type have heretofore been used in resistance coupled circuits, improved amplification may now be obtained by the use of one or two Radiotrons UX-240.

The UX-240 may be used in the popular types of resistance coupled amplifier circuits without change in plate coupling resistances, but with superior results. The best performance is obtained, however, when resistance values recommended in the instruction sheet are employed.

Radiotron UX-240 consumes less than one tenth the plate current of the average general purpose tube. The filament is identical to that of Radiotron UX-201-A.

Radiotron UX-240 \$2.00

AMERICAN BROADCASTING STATIONS (Continued)

Call Letters	TRANSMITTER LOCATION	Power	Kilo-cycles	Meters
WMBO	Auburn, N. Y.	100	1370	218.8
WMBQ	Brooklyn, N. Y. Divides time with WCLB-WWRL-WLBX	100	1500	199.9
WMBR	Tampa, Fla.	100	1210	247.8
WMBS	Lemoyne, Pa. Divides time with WCAH	500	1430	209.7
WMC	Memphis, Tenn.	500	780	384.4
WMCA	Hoboken, N. J. Divides time with WNYC	500	570	526.0
WMES	Boston, Mass. Divides time with WLOE	50	1500	199.9
WMMN	Fairmont, W. Va.	250	890	336.9
WMPC	Lapeer, Mich. Divides time with WFDF	30	1310	228.9
WMRJ	Jamaica, N. Y. Divides time with WLBH-WHPP	10	1420	211.1
WMSG	New York, N. Y. Divides time with WBNY-WCDA-WKBQ	250	1350	222.1
WNAC } WBIS }	Boston, Mass.	500	1230	243.8
WNAD	Norman, Okla. Divides time with KGGF	500	1010	296.9
WNAT	Philadelphia, Pa. Divides time with WIAD-WABY	100	1310	228.9
WNAX	Yankton, S. D. Divides time with KFNF-KUSD	500	890	336.9
WNBF	Endicott, N. Y.	50	1500	199.9
WNBH	New Bedford, Mass. Divides time with WSAR	250	1450	206.8
WNBK	Knoxville, Tenn.	50	1310	228.9
WNBO	Washington, Pa.	15	1200	249.9
WNBQ	Rochester, N. Y.	15	1500	199.9
WNBR	Memphis, Tenn. Divides time with WGBC	500	1430	209.7
WNBW	Carbondale, Pa.	5	1200	249.9
WNBX	Springfield, Vt. Divides time with WCAX	10	1200	249.9
WNBZ	Saranac Lake, N. Y.	10	1290	232.4
WNEW	Newport News, Va.	100	1310	228.9
WNJ	Newark, N. J. Divides time with WBMS-WIBS-WKBO	250	1450	206.8
WNOX	Knoxville, Tenn.	1000	560	535.4
WNRC	Greensboro, N. C.	500	1440	208.2

RCA Radiotron UX-226

Amplifier

Radiotron UX-226 is an amplifier tube, the AC filament of which is operated from alternating current. It can be used for radio or transformer coupled audio frequency amplification. It is not, however, ordinarily suited for detection.



Radiotron UX-226 contains a plate, a grid, and a heavy filament of the coated type designed to operate at a relatively low filament voltage, which is one of the outstanding features of this tube. Except for the fact that its filament is designed to be AC operated and the fact that it is not generally suitable for use as detector, Radiotron UX-226 possesses characteristics very similar to those of Radiotron UX-201-A, as may be seen from a comparison of their characteristics as found on pages 23 and 24.

Radiotron UX-226 is equipped with the large standard UX base.

Radiotron UX-226 \$2.25

AVERAGE CHARACTERISTICS

DETECTORS AND AMPLIFIERS

POWER AMPLIFIERS

RECTIFIERS

MISCELLANEOUS

GENERAL									
MODEL	USE	CIRCUIT REQUIREMENTS	BASE	MAXIMUM OVERALL HEIGHT	MAXIMUM OVERALL DIAMETER	"A" SUPPLY	FILAMENT TERMINAL VOLTAGE	FILAMENT CURRENT (AMPERES)	OF GRID ELEMENTS
RADIONOR WD-11	Detector or Amplifier	Transformer Coupling	WD-11 Base	4 $\frac{3}{16}$ "	1 $\frac{1}{16}$ "	Dry Cell 1 1/2 V. Storage 3 V	1.1	.25	
RADIONOR WX-12	Detector or Amplifier	Transformer Coupling	Large Standard UX Base	4 $\frac{11}{16}$ "	1 $\frac{1}{16}$ "	Dry Cell 3 V Storage 3 V	1.1	.25	
RADIONOR UX-112-A	Detector or Amplifier	Transformer Coupling	Large Standard UX Base	4 $\frac{11}{16}$ "	1 $\frac{11}{16}$ "	Storage 6 V.	5.0	.25	
RADIONOR UX-199	Detector or Amplifier	Transformer Coupling	UX 199 Base	3 $\frac{1}{2}$ "	1 $\frac{11}{16}$ "	Dry Cell 4 1/2 V Storage 4 V	3.0	.060	
RADIONOR UX-199	Detector or Amplifier	Transformer Coupling	Small Standard UX Base	4 $\frac{1}{8}$ "	1 $\frac{11}{16}$ "	Dry Cell 4 1/2 V Storage 4 V	3.0	.060	
RADIONOR UX-200-A	Detector	Tuned Res. Coupling	Large Standard UX Base	4 $\frac{11}{16}$ "	1 $\frac{11}{16}$ "	Storage 6 V.	5.0	.25	
RADIONOR UX-201-A	Detector or Amplifier	Transformer Coupling	Large Standard UX Base	4 $\frac{11}{16}$ "	1 $\frac{11}{16}$ "	Storage 6 V.	5.0	.25	
RADIONOR UX-222	Aud. Freq. Amplifier	Screen Shielding (See Test Sheet)	Large Standard UX Base	5 $\frac{3}{8}$ "	4 $\frac{13}{16}$ "	Dry Cell 4 1/2 V Storage 4 1/2 V	3.3	.132	
RADIONOR UX-222	Aud. Freq. Amplifier	Screen Shielding (See Test Sheet)	Large Standard UX Base	5 $\frac{3}{8}$ "	4 $\frac{13}{16}$ "	Dry Cell 4 1/2 V Storage 4 1/2 V	3.3	.132	
RADIONOR UX-225	Amplifier A-C Filament Type	Transformer Coupling	Large Standard UX Base	4 $\frac{11}{16}$ "	1 $\frac{11}{16}$ "	Transformer 1.5 V.	1.5	1.05	
RADIONOR UX-227	Amplifier	Transformer Coupling	5 Phong Standard UX Base	4 $\frac{11}{16}$ "	1 $\frac{11}{16}$ "	Transformer 2.5 V.	2.5	1.75	
RADIONOR UX-240	Detector or Amplifier	Resistance Coupling	Large Standard UX Base	4 $\frac{11}{16}$ "	1 $\frac{11}{16}$ "	Storage 6 V.	5.0	.25	
RADIONOR UX-112-A	Power Amplifier	No L. S. C. Required	Large Standard UX Base	4 $\frac{11}{16}$ "	1 $\frac{11}{16}$ "	Storage 6 V. Transformer 5 V	5.0	.25	
RADIONOR UX-120	Power Amplifier	No L. S. C. Required	Small Standard UX Base	4 $\frac{1}{8}$ "	1 $\frac{11}{16}$ "	Dry Cell 4 1/2 V Storage 4 V	3.3	.132	
RADIONOR UX-171-A	Power Amplifier	L. S. C. Except at 90 V.	Large Standard UX Base	4 $\frac{11}{16}$ "	1 $\frac{11}{16}$ "	Storage 6 V. Transformer 5 V	5.0	.25	
RADIONOR UX-210	Power Amplifier	L. S. C.	Large Standard UX Base	5 $\frac{3}{8}$ "	2 $\frac{1}{16}$ "	Transformer 7.5 V	7.5	1.25	
RADIONOR UX-250	Power Amplifier	L. S. C.	Large Standard UX Base	6 $\frac{1}{4}$ "	2 $\frac{11}{16}$ "	Transformer 7.5 V.	7.5	1.25	
MODEL	USE	CIRCUIT REQUIREMENTS	BASE	MAXIMUM OVERALL HEIGHT	MAXIMUM OVERALL DIAMETER	PURPOSE			
RADIONOR UX-213	Full-Wave Rectifier	Full-Wave Circuit	Large Standard UX Base	5 $\frac{3}{8}$ "	2 $\frac{3}{16}$ "	Rectification in Detuners particularly Designed for this Radionor	Filament Terminal Current A. C. Plate Volt (Max. per plate)		
RADIONOR UX-216-B	Half-Wave Rectifier	Half or Full Wave Circuit	Large Standard UX Base	5 $\frac{5}{8}$ "	2 $\frac{11}{16}$ "	Rectification in Eliminators particularly Designed for this Radionor	Filament Terminal Current A. C. Plate Volt (Maximum)		
RADIONOR UX-280	Full-Wave Rectifier	Full-Wave Circuit	Large Standard UX Base	5 $\frac{3}{8}$ "	2 $\frac{3}{16}$ "	Rectification in Eliminators Designed for this Radionor or Repron UX 213*	Filament Terminal Current A. C. Plate Volt (Max. per plate)		
RADIONOR UX-281	Half-Wave Rectifier	Half or Full Wave Circuit	Large Standard UX Base	6 $\frac{1}{4}$ "	2 $\frac{3}{16}$ "	Rectification in Eliminators Designed for this Radionor or Radionor UX-216-B	Filament Terminal Current A. C. Plate Volt (Maximum)		
RADIONOR UX-874	Voltage Regulator	Series Resistance	Large Standard UX Base	5 $\frac{3}{8}$ "	2 $\frac{3}{16}$ "	Constant Voltage Device	Designed to keep off 8 eliminators different values if are supplied		
RADIONOR UX-876	Current Regulator (Ballast Tube)	Transformer Primary of 65 volts for use on 115 Volt Line	Standard Mogul Type Screw Base	8"	2 $\frac{1}{16}$ "	Constant Current Device	Designed to ir to power oper despite fluctu		
RADIONOR UX-896	Current Regulator (Ballast Tube)	Transformer Primary of 65 volts for use on 115 Volt Line	Standard Mogul Type Screw Base	8"	2 $\frac{1}{16}$ "	Constant Current Device	Designed to ir to power oper despite fluctu		

- † (1) Note other use of this Radionor above (below)
- Inner Grid - 1 1/2 Volts; Outer Grid + 45 Volts, .15 Milliamperes
 - Outer Grid - 1 1/2 Volts; Inner Grid + 22 1/2 Volts, .6 Milliamperes
 - ! Applied thru plate coupling resistance of 250,000 Ohms
 - △ Grid voltage is given with respect to mid-point of filament, unless otherwise noted

Note: All grid voltages are given with respect to cathode or negative filament terminal unless otherwise noted

RADIO CORPORA

EASTERN DISTRICT OFFICE
233 Broadway
New York City

CENTRAL DISTRICT OFFICE
100 West Monroe Street
Chicago, Ill.

OF RECEIVING RADOTRONS

DETECTION			AMPLIFICATION						
GRID LEAK (MEG OHMS)	DETECTOR "B" BATTERY VOLTAGE	DETECTOR PLATE CURRENT (MILLIAMPERES)	AMPLIFIER "B" BATTERY VOLTAGE	AMPLIFIER "C" BATTERY VOLTAGE	AMPLIFIER PLATE CURRENT (MILLIAMPERES)	A.C. PLATE RESISTANCE (OHMS)	MUTUAL CONDUCTANCE (MICROMHMS)	VOLTAGE AMPLIFICATION FACTOR	MAXIMUM VOLTAGE (VOLTS)
3 to 5	22 1/2 to 45	1.5	90 135	4 1/2 10 1/2	2.5 3.5	15,500 15,000	425 440	6.6 6.6	7 35
3 to 5	22 1/2 to 45	1.5	90 135	4 1/2 10 1/2	2.5 3.5	15,500 15,000	425 440	6.6 6.6	7 35
3 to 5	45	1.5	90 135	4 1/2 9	5.5 7	5,300 5,000	1,500 1,600	8 8	30 120
2 to 9	45	1	90	4 1/2	2.5	15,500	425	6.6	7
2 to 3	45	1.5	Following UX-200A Characteristics apply only for Detector Connection			30,000	666	20	---
2 to 9	45	1.5	90 135	4 1/2 9	2.5 3	11,000 10,000	725 800	8 8	15 55
---	---	---	135	1 1/2 ^M	1.5	850,000	350	300	---
---	---	---	180	1 1/2 ^D	3	150,000	400	60	---
---	---	---	90 135 180	6 9 13 1/2	3.7 ^A 6 7.5	9,400 7,400 7,000	875 1100 1170	8.2 8.2 8.2	20 70 160
2-9 1-1	45 90	2 7	135 180	1 1/2 1 1/2	2 2	150,000 150,000	200 200	30 30	---
---	---	---	115 125	3 3 1/2	2 1/2	2000 2000	400 400	1 1	25 25
---	---	---	135	2 1/2	6.5	6600	500	3.3	110
---	---	---	90 135 180	15 1/2 22 1/2 45 1/2	10 13 20	2,500 2,200 2,000	1,200 1,100 1,000	3.0 3.0 3.0	130 130 700
---	---	---	250 300 350 400 475	18 22 1/2 27 31 1/2 35	10 13 16 18 18	6000 5600 5150 5000 5000	1310 1450 1550 1600 1600	8 8 8 8 8	240 600 925 1325 1340
---	---	---	275 300 350 400 450	45- 54 63 70 84	28 35 45 55 55	2100 2300 1900 1800 1800	1800 1900 2000 2100 2100	3.8 3.8 3.8 3.8 3.8	300 1900 2350 3250 4650

0.5 Volts
2 Amperes } RMS Max. D.C. Output Current (both plates) 65 Milliamperes
.220 Volts } D.C. Output Voltage at max current as applied to filter of typical rectifier circuit.... 170 Volts

1.25 Volts
1.25 Amperes } RMS Max. D.C. Output Current 65 Milliamperes
.950 Volts } D.C. Output Voltage at max current as applied to filter of typical rectifier circuit. 470 Volts

1.5 Volts
2 Amperes } RMS Max. D.C. Output Current (both plates)..... 125 Milliamperes
300 Volts } D.C. Output Voltage at max current as applied to filter of typical rectifier circuit.... 260 Volts

1.75 Volts
1.25 Amperes } RMS A.C. Plate Voltage 650
.700 Volts } D.C. Output Current 65
D.C. Output Voltage as applied to filter of typical rectifier circuit..... 620

Operating Voltage..... 90 Volts D.C.
Starting Voltage..... 125 Volts D.C.
Operating Current..... 10-50 Milliamperes

Instant input for receivers
line voltage Operating Current..... 1.7 Amperes
Mean Voltage Drop..... 50 Volts
Permissible Variation..... 10 Volts

Instant input for receivers
line voltage Operating Current..... 2.05 Amperes
Mean Voltage Drop..... 50 Volts
Permissible Variation..... 10 Volts

Values to be used
A. Except for half ampere filament, UX 112 and UX 171 characteristics are identical respectively to UX 112-A and UX 171-A.
C. Cathode.
H. Heater Voltage.
L.S.C. Lead-Speaks Coupling, consisting of either Choke Coil and By-Pass Condenser or Output Transformer of 1:1 or step down ratio, recommended whenever plate current (D.C.) exceeds 10 milliamperes.
M. With a screen grid tube, on account of current limitations, the actual voltage amplification obtainable does not bear as high a relation to the voltage amplification factor as in the case of three electrode tubes.

OF AMERICA

PACIFIC DISTRICT OFFICE
235 Montgomery Street
San Francisco, Calif.

SOUTHWESTERN DISTRICT OFFICE
Sanra Fe Bldg., Unit No. 1
Dallas, Texas

OCTOBER 1, 1928

AMERICAN BROADCASTING STATIONS (Continued)

Call Letters	TRANSMITTER LOCATION	Power	Kilo-cycles	Meters
WNYC	New York, N. Y. Divides time with WMCA	500	570	526.0
WOAI	San Antonio, Tex. Divides time with WRR	5000	1190	252.0
WOAN	Lawrenceburg, Tenn. Divides time with WREC	500	600	499.7
WOAX	Trenton, N. J. Divides time with WCAM-WCAP	500	1280	234.2
WOBT	Union City, Tenn.	15	1310	228.9
WOBV	Charleston, W. Va. Divides time with WSAZ	250	580	516.9
WOC	Davenport, Iowa Divides time with WHO	5000	1000	299.8
WOCL	Jamestown, N. Y.	25	1210	247.8
WODA	Paterson, N. J. Divides time with WGCP-WAAM	1000	1250	239.9
WOI	Ames, Iowa	3500	560	535.4
WOK	See WMBB			
WOKO	Mt. Beacon, N. Y. Divides time with WHEC-WABO-WMAC	500	1440	208.2
WOMT	Manitowoc, Wis.	100	1210	247.8
WOO	Philadelphia, Pa. Divides time with WPSW-WHBW-WALK	100	1500	199.9
WOOD	Furnwood, Mich. Divides time with WASH	500	1270	236.1
WOQ	Kansas City, Mo. Divides time with WDAF	1000	610	491.5
WOR	Kearny, N. J.	5000	710	422.3
WORD	Batavia, Ill. Divides time with WJAZ-WHT-WIBO	5000	1480	202.6
WOS	Jefferson City, Mo. Divides time with WGBF-KFRU	500	630	475.9
WOV	Secaucus, N. J.	1000	1130	265.3
WOW	Omaha, Nebr. Divides time with WCAJ	1000	590	508.2
WOWO	Ft. Wayne, Ind. Divides time with WWVA	5000	1160	258.5
WPAP	See WQAO			
WPCC	Chicago, Ill. Divides time with WRM-WHA	500	570	526.0
WPCH	Hoboken, N. J.	500	810	370.2
WPG	Atlantic City, N. J. Divides time with WLWL	5000	1100	272.6
WPOR	See WTAR			
WPRC	Harrisburg, Pa.	100	1200	249.9

RCA Radiotron UY-227

Detector-Amplifier



Radiotron UY-227—A general purpose tube containing a heater element which permits operation from alternating current. It is especially recommended for detection in sets using Radiotron UX-226 in the radio and first audio stages of amplification.

In the usual three electrode tube the filament serves two purposes. First it converts energy received from the "A" Battery into heat which brings the filament itself to an incandescent temperature. Second it forms a mechanical support for, and an electrical connection to, the electron emitting surface layer.

In Radiotron UY-227 these two functions are accomplished by two different elements. The heater, consisting of a plain tungsten wire, serves only to raise the cathode to emitting temperature. The cathode serves as a mechanical support and electrical connection to the coating.

Radiotron UY-227 \$4.00

AMERICAN BROADCASTING STATIONS (Continued)

Call Letters	TRANSMITTER LOCATION	Power	Kilo-cycles	Meters
WPSC	State College, Pa.	500	1230	243.8
WPSW	Philadelphia, Pa. Divides time with WALK-WHBW-WOO	50	1500	199.9
WPTF	Raleigh, N. C.	5000	1080	277.6
WQAM	Miami, Fla. Divides time with WIOD	750	1240	241.8
WQAN	Scranton, Pa. Divides time with WGBI	250	880	340.7
WQAO } WPAP }	Cliffside, N. J. Divides time with WHN-WRNY	250	1010	296.9
WQBC	Utica, Miss.	300	1360	220.4
WQBJ	Clarksburg, W. Va.	65	1200	249.9
WQBZ	Weirton, W. Va. Divides time with WIBR	60	1420	211.1
WRAF	La Porte, Ind. Divides time with WWAE	100	1200	249.9
WRAK	Erie, Pa.	50	1370	218.8
WRAW	Reading, Pa. Divides time with WGAL-WKJC	100	1310	228.9
WRAX	Philadelphia, Pa. Divides time with WABF	250	1440	208.2
WRBC	Valparaiso, Ind.	500	1240	241.8
WRBI	Tifton, Ga. Divides time with WTHS	20	1310	228.9
WRBJ	Hattiesburg, Miss.	10	1500	199.9
WRBL	Columbus, Ga.	50	1200	249.9
WRBQ	Greenville, Miss.	100	1210	247.8
WRBT	Wilmington, N. C.	50	1370	218.8
WRBU	Gastonia, N. C.	50	1210	247.8
WRBW	Columbia, S. C.	15	1310	228.9
WRC	Washington, D. C.	500	950	315.6
WREC	Whitehaven, Tenn. Divides time with WOAN	500	600	499.7
WREN	Lawrence, Kans. Divides time with KFKU	1000	1220	245.8
WRHF	Washington, D. C.	150	1270	236.1
WRHM	Fridley, Minn. Divides time with WCAL-KFMX-WLB	1000	1250	239.9
WRJN	Racine, Wis. Divides time with WCLO	100	1200	249.9
WRK	Hamilton, Ohio	100	1310	228.9
WRM	Urbana, Ill. Divides time with WPCC-WHA	500	570	526.0

RCA Radiotron UX-120

Power Amplifier

This dry-cell Power Amplifier Radiotron is to be used in the last stage of audio-frequency amplification.

Owners of Radiola Super-Heterodyne (semi-portable), Super VIII, Radiolas 25 and 28, and practically all dry battery operated receivers may enjoy greatly increased loud-speaker volume and clarity with Radiotron UX-120.

This Radiotron is manufactured with the small standard UX base. Adapters are available which permit its use in practically any tube socket and which provide connections in many cases for the additional plate and grid voltages so that changes in wiring within the receiver are unnecessary.

All dry battery operated set owners should avail themselves of the advantage of improved quality at high volume which is provided by this efficient but low priced amplifier. The high emission filament is one of the features of this Radiotron.



Radiotron UX-120 \$2.50

AMERICAN BROADCASTING STATIONS (Continued)

Call Letters	TRANSMITTER LOCATION	Power	Kilo-cycles	Meters
WRNY	Coytesville, N. J. Divides time with WQAO-WPAP-WHN	250	1010	296.9
WRR	Dallas, Tex. Divides time with WOAI	5000	1190	252.0
WRUF	Gainesville, Fla.	5000	1470	204.0
WRVA	Richmond, Va.	1000	1110	270.1
WSAI	Mason, Ohio.	5000	800	374.8
WSAJ	Grove City, Pa.	100	1310	228.9
WSAN	Allentown, Pa. Divides time with WCBA	100	1500	199.9
WSAR	Fall River, Mass. Divides time with WNBH	250	1450	206.8
WSAZ	Huntington, W. Va. Divides time with WOBV	250	580	516.9
WSB	Atlanta, Ga.	1000	740	405.2
WSBC	Chicago, Ill. Divides time with WEDC-WCRW	100	1210	247.8
WSBT	South Bend, Ind. Divides time with WFBM-WCWK	500	1230	243.8
WSDA	See WSGH			
WSEA	Portsmouth, Va. Divides time with WTAR-WPOR	500	780	384.4
WSGH } WSDA }	Brooklyn, N. Y. Divides time with WCGU-WLTH-WBBC	500	1400	214.2
WSIX	Springfield, Tenn. Divides time with WREC	100	1210	247.8
WSKC	Bay City, Mich.	500	1410	212.6
WSM	Nashville, Tenn.	5000	650	461.3
WSMB	New Orleans, La.	750	1320	227.1
WSMD	Salisbury, Md.	100	1310	228.9
WSMK	Dayton, Ohio Divides time with WKBN	200	570	526.0
WSPD	Toledo, Ohio.	500	1340	223.7
WSRO	Middletown, Ohio	100	1420	211.1
WSSH	Boston, Mass. Divides time with WLEX	100	1420	211.1
WSUI	Iowa City, Iowa Divides time with KSAC	500	580	516.9
WSUN	See WFLA			
WSVS	Buffalo, N. Y.	50	1370	218.8
WSYR	Syracuse, N. Y.	250	570	526.1
WTAD	Quincy, Ill. Divides time with WMBD	500	1440	208.2

RCA Radiotron UX-171-A

Power Amplifier



Radiotron UX-171-A is a power amplifier tube of extremely low output impedance for use in the last audio stage only. It employs a coated low temperature filament.

Since the plate current of Radiotron UX-171-A is exceptionally high at maximum voltage, as can be seen from the characteristics

table, some form of loud-speaker coupling such as an output transformer or a choke coil and by-pass condenser should be used to prevent DC from passing through the loudspeaker.

The output of the UX-171-A at 90 volts is exceptionally high, but at this voltage the usual direct connection to the loudspeaker may be used, omitting the loudspeaker coupling mentioned above.

UX-171-A was designed to handle great volume without distortion. This is accomplished very economically since the filament consumption is only .25 ampere.

Radiotron UX-171-A \$ 2.75

AMERICAN BROADCASTING STATIONS (Continued)

Call Letters	TRANSMITTER LOCATION	Power	Kilo-cycles	Meters
WTAG	Worcester, Mass.	250	580	516.9
WTAM	Cleveland, Ohio	3500	1070	280.2
	Divides time with WEAR			
WTAQ	Eau Claire, Wis.	1000	1330	225.4
	Divides time with KSCJ			
WTAR } WPOR }	Norfolk, Va.	500	780	384.4
	Divides time with WSEA			
WTAS	See WGN-WLIB			
WTAW	College Station, Tex.	500	1120	267.7
	Divides time with KUT			
WTAX	Streator, Ill.	50	1210	247.8
	Divides time with WCBS			
WTAZ	Chesterfield Hills, Va.	15	1210	247.8
	Divides time with WMBG			
WTFE	Mt. Vernon Hills, Va.	10000	1460	205.4
WTFI	Toccoa, Ga.	500	1450	206.8
WTHS	Atlanta, Ga.	100	1310	228.9
	Divides time with WRBI			
WTIC	Hartford, Conn.	250	600	499.7
	Divides time with WBAL			
WTMJ	Brookfield, Wis.	1000	570	526.0
	Divides time with WHA			
WWAE	Hammond, Ind.	100	1200	249.9
	Divides time with WRAF			
WWJ	Detroit, Mich.	1000	820	365.6
WWL	New Orleans, La.	500	850	352.7
	Divides time with KWKH			
WWNC	Asheville, N. C.	1000	570	526.0
WWRL	Woodside, N. Y.	100	1500	199.9
	Divides time with WMBQ-WLBX-WCLB			
WWVA	Wheeling, W. Va.	250	1160	258.5
	Divides time with WOWO			
KDKA	E. Pittsburgh, Pa.	50000	980	305.9
KDLR	Devils Lake, N. D.	100	1210	247.8
KDYL	Salt Lake, Utah	1000	1290	232.4
KEJK	Beverly Hills, Cal.	500	1250	239.9
	Divides time with KFON			
KELW	Burbank, Cal.	500	780	384.4
	Divides time with KNRC			
KEX	Portland, Ore.	5000	1180	254.1
	Divides time with KOB			
KFAB	Lincoln, Nebr.	5000	770	389.4
	Divides time with WBBM-WJBT			
KFAD	Phoenix, Ariz.	500	620	483.6

RCA Radiotron UX-210

Power Amplifier

Radiotron UX-210 is a high power amplifying tube. It is capable of handling far greater volume without distortion than any receiving vacuum tube on the market except Radiotron 250.

The filament of the UX-210 is normally operated from the 7.5 volt winding of a transformer, and its plate supply is usually obtained from a high voltage B eliminator.

The high plate current of this Radiotron makes a loudspeaker coupling device, such as described for use with the UX-171-A, a necessity. This device should be so connected as to prevent the high plate voltage from reaching the loudspeaker leads.



Radiotron UX-210 \$9.00

AMERICAN BROADCASTING STATIONS (Continued)

Call Letters	TRANSMITTER LOCATION	Power	Kilo-cycles	Meters
KFAU	Boise, Idaho Divides time with KXL	1000	1250	239.9
KFBB	Havre, Mont. Divides time with KGIR	250	1360	220.4
KFBK	Sacramento, Cal.	100	1310	228.9
KFBL	Everett, Wash. Divides time with KUJ-KVL	50	1500	199.9
KFBU	Laramie, Wyo.	500	600	499.7
KFCB	Phoenix, Ariz.	100	1310	228.9
KFCR	Santa Barbara, Cal.	100	1500	199.9
KFDM	Beaumont, Tex.	500	560	535.4
KFDX	Shreveport, La. Divides time with KWEA	100	1210	247.8
KFDY	Brookings, S. Dak. Divides time with KFJR-KFJM	500	550	545.1
KFEC	Portland, Ore. Divides time with KFJI	100	1370	218.8
KFEL	Denver, Colo. Divides time with KF XF	250	940	319.0
KFEQ	St. Joseph, Mo.	2500	560	535.4
KFEY	Kellogg, Idaho	10	1210	247.8
KFGQ	Boone, Iowa	10	1310	228.9
KFH	Wichita, Kans. Divides time with WIBW	1000	1300	230.6
KFHA	Gunnison, Colo.	50	1200	249.9
KFI	Los Angeles, Cal.	5000	640	468.5
KFIF	Portland, Ore.	50	1420	211.1
KFIO	Spokane, Wash.	100	1230	243.8
KFIZ	Fonddu Lac, Wis.	100	1420	211.1
KFIU	Juneau, Alaska	10	1310	228.9
KFJB	Marshalltown, Iowa Divides time with WJAM	100	1200	249.9
KFJF	Oklahoma City, Okla.	5000	1470	204.0
KFJI	Astoria, Ore. Divides time with KFEC	50	1370	218.8
KFJM	Grand Forks, N. Dak. Divides time with KFDY-KFYR	500	550	545.1
KFJR	Portland, Ore. Divides time with KTBR	500	1300	230.6
KFJY	Fort Dodge, Iowa. Divides time with KWCR	100	1310	228.9
KFJZ	Fort Worth, Tex.	100	1370	218.8
KFKA	Greeley, Colo. Divides time with KPOF	500	880	340.7

RCA Radiotron UX-250

Power Amplifier

Radiotron UX-250 is the largest and most powerful amplifier Radiotron for radio reception. It is capable of handling over three times as much undistorted energy as the UX-210, long the favorite power amplifier tube for maximum volume and tone quality of home reception.



Obviously, while the new tube is capable of enormous volume it may be employed at but a fraction of its full capacity, thus securing undistorted output at all times with ample reserve power.

The output of the UX-250 cannot be led directly to the ordinary loudspeaker. It is necessary to utilize some form of loudspeaker coupling system either in the form of an output transformer or a choke and by-pass filter.

Radiotron UX-250.....\$11.50

AMERICAN BROADCASTING STATIONS (Continued)

Call Letters	TRANSMITTER LOCATION	Power	Kilo-cycles	Meters
KFKB	Milford, Kans.	5000	1130	265.3
KFKU	Lawrence, Kans. Divides time with WREN	1000	1220	245.8
KFKX	See KYW			
KFKZ	Kirksville, Mo.	50	1200	249.9
KFLV	Rockford, Ill. Divides time with WHDI-WDGY-WHBL	500	1410	212.6
KFLX	Galveston, Tex.	100	1210	247.8
KFMX	Northfield, Minn. Divides time with WCAL-WRHM-WLB	1000	1250	239.9
KFNF	Shenandoah, Iowa Divides time with WNAX-KUSD	500	890	336.9
KFOA	Seattle, Wash. Divides time with KTW	1000	1270	236.1
KFON	Long Beach, Cal. Divides time with KEJK	1000	1250	239.9
KFOR	Lincoln, Nebr.	100	1210	247.8
KFPL	Dublin, Tex.	15	1310	228.9
KFPM	Greenville, Tex.	15	1310	228.9
KFPW	Sulphur Springs, Ark.	50	1340	223.7
KFPY	Spokane, Wash. Divides time with KWSC	500	1390	215.7
KFQB	Ft. Worth, Tex. Divides time with WJAD	1000	1240	241.8
KFQD	Anchorage, Alaska	100	1230	243.8
KFQU	Holy City, Cal. Divides time with KGTT	100	1420	211.1
KFQW	Seattle, Wash. Divides time with KGY-KKP	100	1420	211.1
KFQZ	Hollywood, Cal.	250	850	352.7
KFRC	San Francisco, Cal.	1000	610	491.5
KFRU	Columbia, Mo. Divides time with WOS-WGBF	500	630	475.9
KFSD	San Diego, Cal.	500	600	499.7
KFSG	Los Angeles, Cal. Divides time with KMIC	500	1120	267.7
KFUL	Galveston, Tex. Divides time with KTSA	500	1290	232.4
KFUM	Colorado Springs, Colo.	1000	1270	236.1
KFUO	St. Louis, Mo. Divides time with KSD	500	550	545.1
KFUP	Denver, Colo. Divides time with KFXJ	100	1500	199.9
KFUR	Ogden, Utah	50	1370	218.8

RCA Radiotron UX-281

Half Wave Rectifier



Radiotron UX-281 is a half wave rectifier tube of the coated ribbon filament type. As in the case of Radiotron UX-280 the filament of UX-281 is very sturdy and gives unusually high emission.

As in the case of Radiotron UX-280 the plate of this Radiotron has a specially treated surface which

causes rapid dissipation of heat. While the maximum rated output of the UX-281 is 85 milliamperes a value of 65 milliamperes is recommended to insure the greatest possible period of usefulness.

Radiotron UX-281 \$7.50

AMERICAN BROADCASTING STATIONS (Continued)

Call Letters	TRANSMITTER LOCATION	Power	Kilo-cycles	Meters
KFVD	Culver City, Cal.	250	700	428.3
KFVS	Cape Girardeau, Mo. Divides time with WEBQ	50	1210	247.8
KFWB	Los Angeles, Cal. Divides time with KPSN	1000	950	315.6
KFWC	Ontario, Cal. Divides time with KPCC	100	1200	249.9
KFWF	St. Louis, Mo. Divides time with WMAY	100	1200	249.9
KFWI	San Francisco, Cal. Divides time with KFWM	500	930	322.4
KFWM	Oakland, Cal. Divides time with KFWI	500	930	322.4
KFWO	Avalon, Cal. Divides time with KWTC	100	1500	199.9
KFXD	Jerome, Idaho	50	1420	211.1
KFXF	Denver, Colo. Divides time with KFEL	250	940	319.0
KFXJ	Edgewater, Colo. Divides time with KFUP	50	1500	199.9
KFXR	Oklahoma City, Okla.	50	1310	228.9
KFX Y	Flagstaff, Ariz.	100	1420	211.1
KFYO	Breckenridge, Tex.	100	1500	199.9
KFYR	Bismarck, N. D. Divides time with KFDY-KFJM	500	550	545.1
KGA	Spokane, Wash.	5000	1470	204.0
KGAR	Tucson, Ariz.	100	1370	218.8
KGB	San Diego, Cal.	250	1360	220.4
KGBU	Ketchikan, Alaska	500	900	333.1
KGBX	St. Joseph, Mo. Divides time with KWKC	100	1370	218.8
KGBY	See KGBZ			
*KGBZ	York, Nebr. Divides time with KMA *Stations KGBZ, KGES, KGBY, KGCH, K GEO, and KGDW to combine as KGBZ	500	930	322.4
KGCA	Decorah, Iowa Divides time with KWLC	50	1270	236.1
KGCB	Enid, Okla.	50	1210	247.8
KGCH	See KGBZ			
KGCI	San Antonio, Tex.	100	1370	218.8
KGCN	Concordia, Kans.	50	1420	211.1
KGCR	Brookings, S. Dak.	100	1210	247.8
KGCU	Mundan, N. Dak.	100	1200	249.9
KGCX	Vida, Mont.	10	1420	211.1

RCA Radiotron UX-280

Full Wave Rectifier

Radiotron UX-280 is a new and improved full wave rectifying tube that contains a coated ribbon filament. This filament is extremely sturdy both electrically and mechanically and gives exceptionally high emission.

The plate of this Radiotron has a specially treated surface (to be noted by its dark appearance) which causes rapid dissipation of heat.

Radiotron UX-280 is highly evacuated and has many advantages over the gas type rectifiers. The maximum output of Radiotron UX-280 is 125 milliamperes.



Radiotron UX-280 \$4.25



AMERICAN BROADCASTING STATIONS (Continued)

Call Letters	TRANSMITTER LOCATION	Power	Kilo-cycles	Meters
KGDA	Dell Rapids, S. Dak.	15	1370	218.8
KGDE	Barrett, Minn.	50	1200	249.9
KGDM	Stockton, Cal.	50	1150	260.7
KGDP	Pueblo, Colo.	10	1210	247.8
KGDR	San Antonio, Tex.	100	1500	199.9
KGDW	See KGBZ			
KGDY	Oldham, S. Dak.	15	1200	249.9
KGEF	Los Angeles, Cal. Divides time with KBBI	1000	1300	230.6
KGEK	Yuma, Colo. Divides time with KGEW	50	1200	249.9
KGEN	El Centro, Cal.	100	1200	249.9
KGEO	See KGBZ			
KGER	Long Beach, Cal.	100	1370	218.8
KGES	See KGBZ			
KGEW	Fort Morgan, Colo. Divides time with KGEK	100	1200	249.9
KGEZ	Kalispell, Mont.	100	1310	228.9
KGFF	Alva, Okla.	100	1420	211.1
KGFG	Oklahoma City, Okla.	50	1370	218.8
KGFH	Glendale, Cal.	250	1000	299.8
KGFI	San Angelo, Tex.	15	1310	228.9
KGFJ	Los Angeles, Cal.	100	1420	211.1
KGFK	Hallock, Minn.	50	1200	249.9
KGFL	Raton, N. M.	50	1370	218.8
KGFW	Ravenna, Nebr.	50	1420	211.1
KGFX	Pierre, S. Dak.	200	580	516.9
KGGF	Picher, Okla. Divides time with KRMD	500	1010	296.9
KGGH	Cedar Grove, La. Divides time with KWEA	50	1310	228.9
KGGM	Albuquerque, N. M.	100	1370	218.8
KGHB	Honolulu, Hawaii	250	1320	227.1
KGHD	Missoula, Mont.	5	1420	211.1
KGHF	Pueblo, Colo.	250	1320	227.1
KGHG	McGehee, Ark.	50	1310	228.9
KGHI	Little Rock, Ark.	15	1500	199.9
KGHL	Billings, Mont.	500	950	315.6
KGHX	Richmond, Tex.	50	1500	199.9
KGIO	Idaho Falls, Idaho Divides time with KGIQ	250	1320	227.1
KGIQ	Twin Falls, Idaho	250	1320	227.1

Special RCA Radiotrons**Special Purpose Radiotrons**

This group contains the Radiotrons that are designed for uses quite different from those of the vacuum tubes listed on the previous pages. The following Radiotrons are designed for the automatic regulation of voltage and current respectively. They are the "Electrical Brains" of modern super-power radio receivers and radio power devices.

RCA Radiotron**UX-874****Voltage Regulator**

Radiotron UX-874 is a voltage regulator tube designed to maintain constant voltages supplied by "B" eliminators at different current drains.

UX-874 is so made that when properly connected it maintains a constant potential of 90 volts to the radio receiver.

Radiotron UX-874. . \$4.75

**RCA Radiotrons
UV-876 and UV-886****Ballast Tubes**

Radiotron UV-876 is a current regulator used in the rectifier-power-amplifier unit of Model 104 Loudspeaker and Radiola 30 and 30A when operated from 50 to 75 cycle Alternating current. Radiotron UV-886 is for use in the same equipment when operated from 40 to 45 cycle alternating current and in Radiola 32 when operated from 60 cycle AC.

Radiotron UV-876 or
UV-886..... \$6.50



AMERICAN BROADCASTING STATIONS (Continued)

Call Letters	TRANSMITTER LOCATION	Power	Kilo-cycles	Meters
KGIR	Butte, Mont.	250	1360	220.4
KGJF	Little Rock, Ark.	250	890	336.9
KGKB	Goldthwaite, Tex.	100	1500	199.9
KGKL	Georgetown, Tex.	100	1370	218.8
KGKO	Wichita Falls, Tex.	250	570	526.0
KGO	Oakland, Cal.	10000	790	379.5
KGRC	San Antonio, Tex.	100	1310	228.9
KGRS	Amarillo, Tex.	1000	1410	212.6
	Divides time with WDAG			
KGTT	San Francisco, Cal.	50	1420	211.1
	Divides time with KFQU			
KGU	Honolulu, Hawaii	500	940	319.0
KGW	Portland, Ore.	1000	620	483.6
KGY	Lacey, Wash.	50	1440	208.2
	Divides time with KKP-KFQW			
KHJ	Los Angeles, Cal.	1000	900	333.1
KHQ	Spokane, Wash.	1000	590	508.2
KICK	Red Oak, Iowa	100	1420	211.1
	Divides time with WIAS			
KJBS	San Francisco, Cal.	100	1100	272.6
KJR	Seattle, Wash.	5000	970	309.1
KKP	Seattle, Wash.	15	1420	211.1
	Divides time with KGY-KFQW			
KLCN	Blytheville, Ark.	50	1290	232.4
KLDS	See KMBC			
KLRA	Little Rock, Ark.	1000	1390	215.7
	Divides time with KUOA			
KLS	Oakland, Cal.	250	1440	208.2
	Divides time with KWG			
KLX	Oakland, Cal.	500	880	340.7
KLZ	Dupont, Colo.	1000	560	535.4
KMA	Shenandoah, Iowa	500	930	322.4
	Divides time with KGBZ			
KMBC	Independence, Mo.	1000	950	315.6
KLDS	Divides time with WHB			
KMED	Medford, Ore.	50	1420	211.1
KMIC	Inglewood, Cal.	500	1120	267.7
	Divides time with KFSG			
KMJ	Fresno, Cal.	100	1200	249.9
KMMJ	Clay Center, Nebr.	1000	740	405.2
KMO	Tacoma, Wash.	500	1340	223.7
	Divides time with KVI			
KMOX	Kirkwood, Mo.	5000	1090	275.1

AMERICAN BROADCASTING STATIONS (Continued)

Call Letters	TRANSMITTER LOCATION	Power	Kilo-cycles	Meters
KMTR	Hollywood, Cal. Divides time with KPLA	1000	570	526.0
KNRC	Santa Monica, Cal. Divides time with KELW	500	780	384.4
KNX	Hollywood, Cal.	5000	1050	285.5
KOA	Denver, Colo.	12500	830	361.2
KOAC	Corvallis, Ore.	1000	560	535.4
KOB	State College, N. Mex. Divides time with KEX	10000	1180	245.1
KOCW	Chickasha, Okla.	100	1420	211.1
KOIL	Council Bluffs, Iowa	1000	1260	238.0
KOIN	Portland, Ore.	1000	940	319.0
KOMO	Seattle, Wash.	1000	920	325.9
KORE	Eugene, Ore.	100	1420	211.1
KOW	Denver, Colo.	500	1390	215.7
KPCB	Seattle, Wash. Divides time with KPQ	100	1210	247.8
KPJM	Prescott, Ariz.	15	1500	199.9
KPLA	Los Angeles, Cal. Divides time with KMTR	1000	570	526.0
KPO	San Francisco, Cal.	5000	680	440.9
KPOF	Denver, Colo. Divides time with KFKA	500	880	340.7
KPPC	Pasadena, Cal. Divides time with KFWC	50	1200	249.9
KPQ	Seattle, Wash. Divides time with KPCB	100	1210	247.8
KPRC	Houston, Tex.	1000	920	325.9
KPSN	Pasadena, Cal. Divides time with KFVB	1000	950	315.6
KQV	Pittsburgh, Pa. Divides time with WCSO	500	1380	217.3
KQW	San Jose, Cal.	500	1010	296.9
KRE	Berkeley, Cal. Divides time with KZM	100	1370	218.8
KRGV	Harlingen, Tex. Divides time with KWWG	500	1260	238.0
KRLD	Dallas, Tex. Divides time with WFAA	5000	1040	288.3
KRMD	Shreveport, La. Divides time with KGGH	50	1310	228.9
KRSC	Seattle, Wash.	50	1120	267.7
KSAC	Manhattan, Kans. Divides time with WSUI	500	580	516.9

AMERICAN BROADCASTING STATIONS (Continued)

Call Letters	TRANSMITTER LOCATION	Power	Kilo-cycles	Meters
KSBA	Shreveport, La.	1000	1450	206.8
KSCJ	Sioux City, Iowa	1000	1330	225.4
	Divides time with WTAQ			
KSD	St. Louis, Mo.	500	550	545.1
	Divides times with KFUD			
KSEI	Pocatello, Idaho	250	900	333.1
KSL	Salt Lake City, Utah	1000	1130	265.3
KSMR	Santa Maria, Cal.	100	1200	249.9
KSO	Clarinda, Iowa	1000	1380	217.3
	Divides time with WKBH			
KSOO	Sioux Falls, S. Dak.	1000	1110	270.1
KSTP	Westcott, Minn.	10000	1460	205.4
KTAB	Oakland, Cal.	500	1280	234.2
KTAP	San Antonio, Tex.	100	1210	247.8
KTBI	Los Angeles, Cal.	1000	1300	230.6
	Divides time with KGEF			
KTBR	Portland, Ore.	500	1300	230.6
	Divides time with KFJR			
KTHS	Hot Springs, Ark.	1000	800	374.8
	Divides time with WBAP			
KTNT	Muscatine, Iowa	5000	1170	256.3
KTSA	San Antonio, Tex.	1000	1290	232.4
	Divides time with KFUL			
KTUE	Houston, Tex.	5	1370	218.8
KTW	Seattle, Wash.	1000	1270	236.1
	Divides time with KFOA			
KUJ	Longview, Wash.	10	1500	199.9
	Divides time with KFBL-KVL			
KUOA	Fayetteville, Ark.	1000	1390	215.7
	Divides time with KLRA			
KUOM	Missoula, Mont.	500	570	526.0
	Divides time with KXA			
KUSD	Vermilion, S. Dak.	500	890	336.9
	Divides time with WNAX-KFNF			
KUT	Austin, Tex.	500	1120	267.7
	Divides time with WTAW			
KVI	Tacoma, Wash.	1000	1340	223.7
	Divides time with KMO			
KVL	Seattle, Wash.	100	1500	199.9
	Divides time with KFBL-KUJ			
KVOO	Tulsa, Okla.	1000	560	535.4
	Divides time with WAPI			
KVOS	Bellingham, Wash.	250	570	526.0
	Divides time with KXA-KWSC			
KWBS	Portland, Ore.	15	1500	199.9

AMERICAN BROADCASTING STATIONS (Continued)

Call Letters	TRANSMITTER LOCATION	Power	Kilo-cycles	Meters
KWCR	Cedar Rapids, Iowa Divides time with KFJY	100	1310	228.9
KWEA	Shreveport, La. Divides time with KFDX	100	1210	247.8
KWG	Stockton, Cal. Divides time with KLS	100	1200	249.9
KWJJ	Portland, Ore.	500	1060	282.8
KWK	St. Louis, Mo. Divides time with WIL	1000	1350	222.1
KWKC	Kansas City, Mo.	100	1370	218.8
KWKH	Kennonwood, La. Divides time with WWL	20000	850	362.7
KWLC	Decorah, Iowa Divides time with KGCA	50	1270	236.1
KWSC	Pullman, Wash. Divides time with KFPY	500	1390	215.7
KWTC	Santa Ana, Cal. Divides time with KFWO	100	1500	199.9
KWWG	Brownsville, Tex. Divides time with KRGV	500	1260	238.0
KXA	Seattle, Wash. Divides time with KUOM	500	570	526.0
KXL	Portland, Ore. Divides time with KFAU	500	1250	239.9
KXRO	Aberdeen, Wash.	50	1210	247.8
KYA	San Francisco, Cal.	1000	1230	243.8
KYW } KFKX }	Chicago, Ill.	5000	1020	293.9
KZM	Hayward, Cal. Divides time with KJBS	100	1370	218.8

License Notice

The apparatus and devices which, or the use of which, are covered by patents are sold only under certain specified licenses set forth in a notice attached permanently to the said apparatus and devices, or if this is impracticable on account of size, then on tags or wrappers attached to the said apparatus and devices or on the cartons containing the same. This license notice is as follows:

"In connection with devices it sells, Radio Corporation of America has rights under patents having claims (a) on the devices themselves and (b) on combinations of the devices with other devices or elements, as for example in various circuits and hook-ups.

"The sale of this device carries a license under the patent claims of (a), but only for (1) talking machine uses, (2) radio amateur uses, (3) radio experimental uses and (4) radio broadcast reception; and only where no business features are involved.

"The sale does not carry a license under patent claims of (b) except only (1) for legitimate renewals and repairs in apparatus and systems already licensed for use under such patent claims on combinations, (2) for assembling by amateurs and experimenters, and not by others, with other licensed parts or devices, or with parts or devices made by themselves, but only for their own amateur and experimental radio uses where no business features are involved, and not for sale to or for use by others, and (3) for use with licensed talking machines and licensed radio broadcast receiving devices; and only where no business features are involved.

"This device is licensed for no other use unless, by special written contract of sale with Radio Corporation of America, the purchaser has agreed to use it in some other special manner only, as set forth in the contract of sale. The right to employ the device in such special manner is non-transferable except by special agreement with Radio Corporation of America."