DEPARTMENT OF COMMERCE

RADIO SERVICE BULLETIN

ISSUED MONTHLY BY BUREAU OF NAVIGATION

Washington, August 1, 1925—No. 100

CONTENTS

ABBREVIATIONS

The necessary corrections to the List of Radio Stations of the United States and to the International List of Radiotelegraph Stations, appearing in this bulletin under the heading "Alterations and corrections," are published after the stations affected in the following order:

Name = Name of station.
Loc. = Geographical location. O = west longitude. N = north latitude. S = south latitude.
Call = Call letters assigned.
System = Radio system used and sparks per second.
Range = Normal range in nautical miles.
W. l. = Wave lengths assigned; normal wave lengths in italics.
Service = Nature of service maintained.
- PG = General public.
- PR = Limited public.
- RC = Radiocompass station.
- FS = Fog signal.
- P = Private.
- O = Government business exclusively.

Hours = Hours of operation:
- N = Continuous service.
- X = No regular hours.

E. T. Co. = Federal Telegraph Co.
I. R. T. Co. = Intercity Radio Telegraph Co.
I. W. T. C. = Independent Wireless Telegraph Co.
K. & C. = Kilbourne & Clark Manufacturing Co.
R. C. A. = Radio Corporation of America.
S. O. R. S. = Ship Owners' Radio Service.
U. R. Corp. = Universal Radio Corp.
W. S. A. Co. = Wireless Specialty Apparatus Co.
C. w. = Continuous wave.
I. c. w. = Interrupted continuous wave.
V. t. = Vacuum tube.
FX = Fixed station.
U. S. L. = After operating company denotes that the change applies only to the List of Radio Stations of the United States.
Kc. = Kilocycles.
Fy. = Frequency.
A. c. = Alternating current.

This edition is the first supplement to the new edition of the list of Commercial and Government Radio Stations June 30, 1925, which will be ready for distribution by the Superintendent of Documents about October 1 next. For exact date of distribution and price see future editions of Bulletin.

56352°—25†——1

NEW STATIONS

Commercial land stations, alphabetically by names of stations

[Additions to the List of Radio Stations of the United States, edition of June 30, 1924, and to the International List of Radiotelegraph Stations published by the Berne bureau]

Station	Call signal	Wave lengths	Service	Hours	Station controlled by—
Brownsville, Tex.[1]	KFWS	140	FX	X	Rio Grande Radio Supply House.
San Benito, Tex.[1]	KFWR	140	FX	X	Do.
Zachar Bay, Alaska (Azalea, moored vessel).[2]	KFWQ	600, 700	P	X	Robinson Packing Corp.

[1] Range, 25, system, composite v. t. telephone and telegraph.
[2] Loc. (approximately) O 152° 30' 00", N 58°, 07' 00"; range, 150; system, R. C. A., 1000.

Commercial ship stations, alphabetically by names of vessels

[Additions to the List of Radio Stations of the United States, edition of June 30, 1924, and to the International List of Radiotelegraph Stations published by the Berne bureau]

Name of vessel	Call signal	Rates	Service	Hours	Owner of vessel	Station controlled by—
Mackinac [1]	KFWT		P	X	Mackinac Co.	
Seminole	WAK	8	PG	N	Cherokee-Seminole S. S. Corp.	
South American [1]	WJW		PG	N	Chicago, Duluth & Georgian Bay S. S. Co.	R. C. A.

[1] Range, 150; system, Navy, 1000; w. l., 600, 706.
[2] Range, 150; system, R. C. A. v. t. telegraph; w. l., 714, 800, 875; rates, Great Lakes service, 4 cents per word.

Commercial land and ship stations, alphabetically by call signals

[b=ship station; c=land station]

Call signal	Name of station	Call signal	Name of station
KFWQ	Zachar Bay, Alaska (Azalea, moored vessel) c	KFWT	Mackinac b
KFWR	San Benito, Tex. c	WAK	Seminole b
KFWS	Brownsville, Tex. c	WJW	South American b

Broadcasting stations, alphabetically by names of States and cities

[Additions to the List of Radio Stations of the United States, edition of June 30, 1924]

State and city	Call signal	State and city	Call signa
California:		Montana: Helena	KFCC
Avalon	KFWO	New York: Utica	WIRX
Oakland	KFWM	North Carolina: Henderson	WIBV
Do.	KTAB	Oregon: Hood River	KQP
Pasadena	KFSN	Texas: Brownsville	KFWP
Illinois: Carthage	WTAD	Wisconsin: Poynette	WIBU
Indiana: Logansport	WIBW	Portable:	

Stations broadcasting market or weather reports, music, concerts, lectures, etc., alphabetically by call signals

Call signal	Location of station (address)	Station operated and controlled by—	Power (watts)	Wave length	Frequency (kilocycles)
KFCC	Helena, Mont.	First Congregational Church	10	348	1,210
KFWM	Oakland, Calif., 1126 Bella Vista Avenue.	Oakland Education Society	500	308.8	1,430
KFWO	Avalon, Calif.	Lawrence Mott	250	311.1	1,420
KFWP	Brownsville, Tex.	Rio Grande Radio Supply House	10	214.2	1,400
KFWU	Pineville, La.	Louisiana College	100	238	1,260
KOIL	Council Bluffs, Iowa.	Monarch Manufacturing Co.	500	278	1,080
KPSN	Pasadena, Calif.	Pasadena Star-News	1,000	315.6	950
KQP	Hood River, Oreg.	Apple City Radio Club	100	270	1,110
KTAB	Oakland, Calif.	Tenth Avenue Baptist Church		215.7	1,390
WIBT	New York, N. Y. (portable), 504 Carnegie Hall.	Orlando E. Miller	100	211.1	1,420
WIBU	Poynette, Wis.	The Electric Farm	20	222	1,350
WIBV	Henderson, N. C.	Jewell Radio Co.	25	263	1,140
WIBW	Logansport, Ind., Barnes Building.	L. L. Dill	100	220	1,360
WIBX	Utica, N. Y., 236 Genesee Street.	Grid-Lesk (Inc.)	5	265.4	1,460
WRMU	MU-1 (yacht), Richmond Hill, N. Y.	A. H. Grebe & Co.	100	236	1,270
WTAD	Carthage, Ill.	Robert E. Compton	50	236	1,270

Government land stations, alphabetically by names of stations

[Additions to the List of Radio Stations of the United States, edition of June 30, 1924, and to the International List of Radiotelegraph Stations published by the Berne bureau]

Station	Call signal	Wave length	Service	Hours	Station controlled by—
Concord, Calif.	KWH		O		Post Office Department.
Sacramento, Calif. (Mather Field)	KDQC		O		Do.

Government ship stations, alphabetically by names of stations

[Additions to the List of Radio Stations of the United States, edition of June 30, 1924, and to the International List of Radiotelegraph Stations published by the Berne bureau]

Station	Call signal	Wave length	Service	Hours	Station controlled by—
Wolcott	NUVQ		O	X	United States Coast Guard.

Government land and ship stations, alphabetically by call signals

[b=ship station; c=land station]

Call signal	Name of station	Call signal	Name of station
KDQC	Sacramento, Calif. (Mather Field) c	NUVQ	Wolcott.....b
KWH	Concord, Calif.....c		

Special land stations, alphabetically by names of stations

[Additions to the List of Radio Stations of the United States, edition of June 30, 1924]

Station	Call signal	Station controlled by—
Dearborn, Mich.	8XAQ	Ford Motor Co.
Hartford, Conn.	1XG	Travelers Insurance Co.
New York, N. Y.	2XAO	Missionary Society of St. Paul the Apostle.
Do.	2XAS	American Radio News Corporation, 246 West Fifty-ninth Street.
Do.	2XAT	Do.
Do.	2XAX	Frances P. Houdina, 1476 Broadway.
Do.	2XU	American Radio News Corporation, 246 West Fifty-ninth Street.
Oakland, Calif.	6XBG	Allen H. Babcock, 19 Tanglewood Drive.
Philadelphia, Pa.	8XB	Winfield W. Knight, 1318 South Broad Street.
Pontiac, Mich.	8XB	Jewett Radio & Phonograph Co.

Special land stations, grouped by districts

Call signal	District and station	Call signal	District and station
1XG	First district: Hartford, Conn.	8XB	Third district: Philadelphia, Pa.
	Second district:	6XBG	Sixth district: Oakland, Calif.
2XAO	New York, N. Y.		Eighth district:
2XAS	Do.	8XAQ	Dearborn, Mich.
2XAT	Do.	8XB	Pontiac, Mich.
2XAX	Do.		
2XU	Do.		

ALTERATIONS AND CORRECTIONS

COMMERCIAL LAND STATIONS.

[Alterations and corrections to be made to the List of Radio Stations of the United States, edition of June 30, 1924, and to the International List of Radiotelegraph Stations, published by the Berne bureau]

ALPENA, MICH.—W. l., *715*, 1790.
LAGUNA BELL SUBSTATION, CALIF.—W. l., 1585, 1635, 1675.
MANITOWOC, WIS.—W. l., strike out *600* and 718, add *715*.
MATI, P. I.—W. l., *600*, 1050.
MIAMI BEACH, FLA.—W. l., *600*, 625, 1599, 1800.
NEW YORK, N. Y. (WNY).—System, General Electric Co. v. t. telegraph.
PORT ARTHUR, TEX.—W. l., *600*, 750, 2050.
ROGERS, MICH.—W. l., strike out *600* and 670, add *715*.
SALTCHUCK, ALASKA.—Station operated and controlled by Alaska Palladium Co.
SPRINGFIELD, MASS.—System, Westinghouse v. t. telegraph; w. l., 50.
UNION BAY, ALASKA.—Station operated and controlled by A. & P. Products Corporation.
VESTAL SUBSTATION, CALIF.—W. l., 1585, 1635, 1675.
WILMINGTON, CALIF. (KSE).—W. l., *600*, 735.

COMMERCIAL SHIP STATIONS, ALPHABETICALLY BY NAMES OF VESSELS

[Alterations and corrections to be made to the List of Radio Stations of the United States, edition of June 30, 1924, and to the International List of Radiotelegraph Stations, published by the Berne bureau]

APACHE.—W. l., *600*, 706, 800.
ASTRAL.—W. l., *600*, 706, 800.
BELLFLOWER.—Station operated and controlled by R. C. A.
BERKSHIRE.—W. l., *600*, 706, 800.
BETTY R.—W. l., 115, *600*.
BIRD CITY.—W. l., 450, *600*, 706, 800; station operated and controlled by R. C. A.
BLAIR.—System, Navy-W. S. A. Co., 1000; w. l., 450, *600*, 706, 800.

BROOKDALE.—System, Navy-K. & C., 1000; w. l., *600*, 706, 800; Wm. W. Mitchell & Co. owner of vessel.
BYLAYL.—W. l., *600*, 706, 800.
CAMAGUEY.—W. l., 450, *600*, 706, 800.
CHEROKEE.—Station operated and controlled by I. W. T. Co.
CHILORE.—W. l., *600*, 706, 800.
CHINA ARROW.—W. l., *600*, 706, 800.
CHRISTOPHER COLUMBUS.—System, R. C. A., 1000; w. l., *715*.
CIRCINUS.—W. l., 450, *600*, 706, 800.
COMMONWEALTH.—W. l., *600*, 706, 800, 875.
CONCHO.—W. l., *600*, 706, 800.
CORINTO.—Panama Mail S. S. Co. owner of vessel.
DEGO.—Range, 150; system, R. C. A. v. t. telegraph; w. l., *600*, 706, 800, 875.
DELECTO.—W. l., *600*, 706, 800.
EASTERN GALE.—System, Navy-R. C. A., 1000; w. l., *600*, 706, 800.
ELKTON.—Station operated and controlled by R. C. A.
EVELYN.—W. l., *600*, 706, 800.
EVERETT (KUQR).—W. l., *600*, 706, 800.
FAVORITE (KIFG).—W. l., *715*, 800, 875.
FAYETTE BROWN.—W. l., *715*, 800, 875.
FINLAND.—W. l., *600*, 706, 800.
FIRE BOAT No. 47.—W. l., 119, *600*.
GOOD WILL.—W. l., *600*, 706, 800.
GRIFFDU.—W. l., *600*, 706, 800; rates, 8 cents per word.
GULFKING.—W. l., *600*, 706, 800.
HAGAN.—W. l., *600*, 706, 800.
HALO.—W. l., *600*, 706, 800, 1800, 2100, 2400.
HARRY W. CROFT.—W. l., *715*, 800, 875; Stewart Furnace Co. owner of vessel.
HARVEY H. BROWN.—W. l., *715*, 800, 875; Stewart Furnace Co. owner of vessel.
HEGIRA.—W. l., 450, *600*, 706, 800.
HOG ISLAND.—System, Navy–W. S. A. Co., 1000; w. l., 450, *600*, 706, 800.
H. W. BAXTER.—W. l., *600*, 706.
J. L. LUCKENBACH.—W. l., *600*, 706, 800.
J. M. GUFFEY.—W. l., *600*, 706, 800.
J. W. VAN DYKE.—W. l., *600*, 706, 800.
KEARNEY.—W. l., 450, *600*, 706, 800; hours, N.
KROONLAND.—W. l., *600*, 706, 800.
LEVIATHAN LIFEBOAT No. 68.—W. l., 450, *600*.
MALACCA.—W. l., *600*, 706, 800.
METAPAN.—W. l., *600*, 706, 800.
MEVANIA.—W. l., *600*, 706, 800, 1800, 2100, 2400.
MEXICAN.—W. l., *600*, 706, 800.
MILLER COUNTY.—W. l., *600*, 706, 800.
MONGOLIA.—W. l., *600*, 706, 800; International Mercantile Marine Co. owner of vessel.
MUNEASTERN.—W. l., *600*, 706, 800.
MUNWOOD.—W. l., *600*, 706, 800.
NEW HAMPSHIRE.—System, Lowenstein, 1000; w. l., *600*, 706, 875.
NORTH AMERICAN.—System, R. C. A. v. t. telegraph; w. l., *715*, 800, 875.
OAKWOOD.—W. l., *600*, 706, 800.
PANAMA.—W. l., *600*, 706, 800.
PEACOCK.—Station operated and controlled by R. C. A.
PENOBSCOT.—W. l., *600*, 706, 800.
PIONEER (KIG).—W. l., *600*, 706, 800.
PRESIDENT PIERCE.—W. l., *600*, 706, 800, 875, 1800, 2100, 2400, 2500.
PRESIDENT WILSON.—System, Federal arc and Navy-Simon, 1000; w. l., 450, *600*, 706, 1800, 2100, 2400; Dollar S. S. Line owner of vessel; station operated and controlled by owner of vessel.
PRICE MCKINNEY.—W. l., *715*, 800, 875; station operated and controlled by I. R. T. Co.
PRISCILLA (KXI).—System, Lowenstein, 1000; w. l., *600*, 706, 800, 875.
SANTA CECILIA.—System, R. C. A. v. t. telegraph; w. l., *600*, 706, 800, 875.
SANTA TERESA.—System, R. C. A. v. t. telegraph; w. l., *600*, 706, 800.
SANTA VERONICA.—System, Navy-Lowenstein, 1000; w. l., 450, *600*, 706, 800.
SAUCON (WBK).—W. l., *600*, 706, 800.
SEINER.—W. l., *600*, 706, 800.

SHENANDOAH.—W. l., *600*, 706, 800.
SHICKSHINNY.—Morecraft Transportation Corporation owner of vessel.
SINSINAWA.—W. l., 450, *600*, 706, 800.
SOUTHLANDS.—W. l., *600*, 706, 800.
SPEEJACKS.—Range, 50; system, R. C. A. v. t. telephone & telegraph; w. l. 115, *600*, 706, 800, 1800, 2100, 2400; rates, 8 cents per word; station operated and controlled by R. C. A.
SPRAY (KDWJ).—System, Telefunken, 1000; w. l., *600*, 706.
STANDARD ARROW.—System, R. C. A. v. t. telegraph; w. l., *600*, 706, 800.
STEEL ENGINEER.—W. l., 450, *600*, 706, 800.
STEEL VOYAGER.—W. l., 450, *600*, 706, 800.
TULSAGAS.—W. l., *600*, 706, 800, 2100, 2400; station operated and controlled by F. T. Co.
TRUSTEM.—W. l., *600*, 800, 1800, 2100, 2400.
TRACY BROTHERS.—System, R. C. A. v. t. telegraph; w. l., *600*, 706, 800, 875; M. & J. Tracy (Inc.) owner of vessel.
UNITED STATES.—Station operated and controlled by R. C. A.
VANADIS.—Name changed to Warrior; Harrison Williams owner of vessel.
WAIMEA.—W. l., *600*, 706, 800.
WALLINGFORD.—W. l., *600*, 706, 800.
WAUKEGAN.—W. l., 450, *600*, 706, 800.
WEST NIVARIA.—System, Navy-R. C. A., 1000; w. l., *600*, 706, 800, 875.
WM. BOYCE THOMPSON.—W. l., 450, *600*, 706, 800.
ZAPORA.—Station operated and controlled by owner of vessel.
ZULIA.—Strike out all particulars.

COMMERCIAL LAND AND SHIP STATIONS, ALPHABETICALLY BY CALL SIGNALS

KFSX, *read* Warrior; strike out all particulars following the call signal KDZ.

BROADCASTING STATIONS, BY CALL SIGNALS

[Alterations and corrections to be made to the List of Radio Stations of the United States, edition of June 30, 1924]

KFAB (Lincoln, Nebr.).—W. l., 340, fy. kc. 880.
KFFP (Moberly, Mo.).—W. l., 242, fy. kc. 1240.
KFI (Los Angeles, Calif.).—Power, 3000.
KFVF (Hollywood, Calif.).—Power, 250.
KFWM (Oakland, Calif.).—W. l., 206.8, fy. kc. 1430.
KGO (Oakland, Calif.).—Power, 3000.
KHQ (Seattle, Wash.).—Station operated and controlled by Louis Wasmer.
KJS (Los Angeles, Calif.).—Call signal changed to KTBI.
KMJ (Fresno, Calif.).—Station operated and controlled by the Fresno Bee.
KOCH (Omaha, Nebr.).—Power, 100.
KQW (San Jose, Calif.).—Station operated and controlled by First Baptist Church (Charles D. Herrold).
KTW (Seattle, Wash.).—Power, 1000.
WAAM (Newark, N. J.).—Power, 500.
WCAO (Baltimore, Md.).—Station operated and controlled by Albert A. and A. Stanley Brager.
WCEE (Elgin, Ill., near).—Power, 1000.
WEAA (Flint, Mich.).—Call signal changed to WFDF.
WEAF (New York, N. Y.).—Power, 5000.
WGES (Oak Park, Ill.).—Station operated and controlled by Oak Leaves Broadcasting Station (Coyne Electrical School).
WJBI (Joliet, Ill.).—Call signal changed to WCLS.
WKAA (Cedar Rapids, Iowa).—Power, 500.
WKAR (East Lansing, Mich.).—Power, 1000.
WKBE (Webster, Mass.).—Power, 100.
WKY (Oklahoma, Okla.).—Station operated and controlled by E. C. Hull and H. S. Richards.
WMAF (Dartmouth, Mass.).—Power, 1000; w. l., 440.9, fy. kc. 680.
WOAI (San Antonio, Tex.).—Power, 1500.
WOK (Chicago Heights, Ill.).—Power, 500.
WSBF (St. Louis, Mo.).—Power, 250.

Strike out all particulars of the following-named stations: KFER (Fort Dodge, Iowa); KFOC (Whittier, Calif.); KFOJ (Moberly, Mo.); KFPV (San Francisco, Calif.); KFQR (Oklahoma, Okla.); KFRH (Grafton, N. Dak.); KFVJ (San Jose, Calif.); WBBV (Johnstown, Pa.); WCAG (New Orleans, La.); WCAY (Milwaukee, Wis.); WFBK (Hanover, N. H.); WFBY (Fort Benjamin Harrison, Ind.); WGBH (Fall River, Mass.—portable); WHBO (Pawtucket, R. I.); WHBS (Mechanicsburg, Ohio); WHBX (Punxsutawny, Pa.); WIAK (Omaha, Nebr.); WIBF (Wheatland, Wis.); WPAZ (Charleston, W. Va.); WQAS (Lowell, Mass.); WRAA (Houston, Tex.).

SPECIAL LAND STATIONS, BY NAMES OF STATIONS

[Alterations and corrections to be made to the List of Radio Stations of the United States, edition of June 30, 1924]

Strike out all particulars of the following-named stations: Atlanta, Ga. (4XA); Batavia, Ill. (9XB); Columbus, Ohio, (8XAF); East Lansing, Mich. (8XAJ); East Lansing, Mich. (8XBU); Newark, N. J. (2XAK); Newark, N. J. (2XAR); New York, N. Y. (2XBC); New York, N. Y. (2XBH); New York, N. Y. (2XBJ); Northville, Mich. (8XL); Rossville, N. Y. (2XBI); Tarrytown, N. Y. (2XL).

MISCELLANEOUS

BROADCASTING STATIONS OF CANADA

[Alphabetically by call signal up to June 27, 1925]

Call signal	Owner of station	Location of station	Wave length	Power input
			Meters	*Watts*
CFAC	The Calgary Herald	Calgary, Alberta	434.5	2,000
CFCA	Star Publishing & Printing Co.	18 King Street West, Toronto, Ontario	356.9	2,000
CFCF	Marconi Wireless Telegraph Co. of Canada (Ltd.).	Canada Cement Building, Phillips Square, Montreal, Quebec.	410.7	7,500
CFCH	Ahitibi Power & Paper Co. (Ltd.)	Iroquois Falls, Ontario	460.7	500
CFCK	Radio Supply Co. (Ltd.)	10229 One hundred and first Street, Edmonton, Alberta.	516.9	400
CFCN	W. W. Grant Radio (Ltd.)	708 Crescent Road NW., Calgary, Alberta.	434.5	3,000
CFCQ	Radio Specialties (Ltd.)	791 Dunsmuir Avenue, Vancouver, British Columbia.	410.7	40
CFCU	Jack V. Elliott (Ltd.)	123 King Street W., Hamilton, Ontario.	340.7	2,000
CFKC	D. J. Fendell	Patricia Theatre Building, Thorold, Ontario.	248.0	150
CFQC	The Electric Shop (Ltd.)	144 Second Avenue N., Saskatoon, Saskatchewan.	329.5	500
CFRC	Queen's University (department of electrical engineering).	Fleming Hall, Queen's University, Kingston, Ontario.	(9)	.....
CFXC	Westminster Trust Co.	Columbia and Begbie Streets, New Westminister, British Columbia.	291.1	50
CFYC	Radio Corporation of Vancouver (Ltd.).	Royal Oak Avenue, Municipality of Burnaby, British Columbia.	410.7	2,000
CHNC	Toronto Radio Research Society	48 Lauder Avenue, Toronto, Ontario	356.9	2,000
CHUC	International Bible Students' Association.	Corner Main and Second Streets, Saskatoon, Saskatchewan.	329.5	200
CHXC	J. R. Booth, jr	28 Range Road, Ottawa, Ontario	434.5	1,200
CHYC	Northern Electric Co. (Ltd.)	121 Shearer Street, Montreal, Quebec	410.7	2,400
CJCA	The Edmonton Journal (Ltd.)	Journal Building, Edmonton, Alberta	516.9	5,000
CJCD	The T. Eaton Co. (Ltd.)	Queen Street West, Toronto, Ontario	356.9	100
CJCF	The News Record	39 South Cameron Street, Kitchener, Ontario.	329.5	300
CJGC	London Free Press Printing Co.	449 Richmond Street, London, Ontario.	329.5	200
CKAC	La Presse Publishing Co. (Ltd.)	Corner St. James Street and St. Lawrence Boulevard, Montreal, Quebec.	410.7	7,500
CKCD	Vancouver Daily Province	142 Hastings Street West, Vancouver, British Columbia.	410.7	6,000
CKCK	Leader Publishing Co. (Ltd.)	Regina, Saskatchewan	375.0	2,000
CKCL	The Dominion Battery Co. (Ltd.)	20 Trinity Street, Toronto, Ontario	356.9	2,000
CKCO	Dr. G. M. Geldert	282 Somerset Street West, Ottawa, Ontario.	434.5	400
CKFC	First Congregational Church	Vancouver, British Columbia	410.7	200
CKLC	Wilkinson Electric Co. (Ltd.)	2119 Seventh Avenue NW, Calgary, Alberta.	434.5	200
CKOC	Wentworth Radio Supply Co. (Ltd.).	Hamilton, Ontario	340.7	200

BROADCASTING STATIONS OF CANADA—continued

Call signal	Owner of station	Location of station	Wave length	Power input
			Meters	*Watts*
CKY	Manitoba Telephone System	Sherbrooke Street, Winnepeg, Manitoba.	384.4	2,000
CNRA	Canadian National Railways	Moncton, New Brunswick	312.3	2,000
CNRC	do	Calgary, Alberta	434.5	1,000
CNRE	do	Edmonton, Alberta	516.9	5,000
CNRM	do	Montreal, Quebec	410.7	7,500
CNRO	do	Ottawa, Ontario	434.5	2,000
CNRR	do	Regina, Saskatchewan	475.9	2,000
CNRS	do	Saskatoon, Saskatchewan	329.5	500
CNRT	do	Toronto, Ontario	356.9	2,000
CNRV	do	Vancouver, British Columbia	291.1	2,000
CNRW	do	Winnipeg, Manitoba	384.4	2,000
CHIC	Northern Electric Co. (Ltd.)	Toronto, Ontario	356.9	2,000
CJYC	De Forest Radio Corporation (Ltd.), Toronto, Ontario.	Scarboro Station, Ontario	291.1	2,000
CFCT	George W. Deaville	Victoria, British Columbia	329.5	2,000

COMPASS STATION ESTABLISHED IN BRITISH GUIANA

A radio compass station has been established at Georgetown, British Guiana in latitude 6° 49′ 12″ N., longitude 58° 08′ 48″ W. Bearings will be furnished for 5 shillings each to any vessel. Payments must be made at the office of the Harbor Board, Georgetown. The station has been calibrated from 330 to 26°. Bearings given eastward of 26° must be considered approximate until calibration has been completed.—*Hydrographic N. M. 30, 1925.*

WEATHER BULLETINS BY BRITISH STATIONS

On and from June 1, this year, the broadcasting of weather bulletins from Valentia at 0918 and 2118 and from Malin Head at 0930 and 2130 were discontinued. Wireless weather bulletins for shipping are broadcast from the undermentioned British coast stations at the following times: Valentia, 0948 and 2048; Seaforth, 0930 and 2030; Niton, 0930 and 2030; Cullercoats, 0948 and 2048.

LANDS END STATION OPERATING HOURS

Between the hours 0800 and 2300, G. M. T., Lands End is open to receive calls and work traffic on either 600 meters or 800 meters, but it can not transmit and receive simultaneously. The object of the 800-meter wave is to provide an alternative means of communication for ships wishing to transmit traffic to Lands End when the circumstances preclude the use of the 600-meter wave. On such occasions ship operators should always endeavor to establish communication on the 800-meter wave.

USE OF RADIO APPARATUS ON MERCHANT VESSELS IN HARBORS OF THE UNITED KINGDOM

The use of radio on ships in all harbors and estuaries in Great Britain may be permitted subject to the following exceptions: (*a*) The naval harbors of Portsmouth, Plymouth, Chatham, Sheerness, and Rosyth; and (*b*) The port of London above Cross Ness; that is, the lower extremity of Barking Beach.

The arrangement is subject to the following conditions: (1) That the use of the apparatus is restricted to urgent communications between the captains of ships and owners, agents, or dock officials concerning the berthing or departure of a vessel and the handling of her cargo; (2) that such communications shall be exchanged only with the nearest post office coast station, the charges to be at the usual rates; (3) that no interference with other traffic is caused, and that in particular the minimum power necessary for establishing communication is used; (4) that the communication is at once discontinued on receipt of a request to the effect from a Government or commercial station; (5) that the permission may be withdrawn at any time at the discretion of the Postmaster General.

Merchant vessels may use their wireless installation in the ports specified in (*a*) and (*b*) for the transmission of urgent ships' service messages when they are unable to communicate with the shore by other means [illegible]

NITON (BRITISH) COMPASS STATION RECALIBRATED

Modifications have been made which have reduced in extent the unreliable sectors obtained in the previous calibration, and now over the sectors 60–80° and 110–290° an accuracy within 2° may be expected.

USE OF THE SAFETY SIGNAL (TTT) IN BRITISH WATERS

A case has been brought to the attention of the Mercantile Marine Department of the Board of Trade, London, where the safety signal (TTT) was used by a ship when broadcasting a message indicating that the ship was in fog and giving her position. The object of the safety signal is to prepare vessels to receive a message concerning some danger to navigation of which they may be unaware. As the master of every vessel knows whether or not there is fog in his immediate neighborhood, the use of this signal in such circumstances is unnecessary. It would, moreover, lead to confusion if it were used by all ships in fog, as the signal might be heard by and thus cause unnecessary disturbance to ships at a distance where the weather was clear. The use of the safety signal as a preliminary signal is subject in every case to a specific order from the master of the vessel.

COMPASS STATION ESTABLISHED AT KARACHI, INDIA

A compass station has been opened at Karachi, call letters VWK, and is now available for giving bearings to ships. For the present the service will be regarded as experimental, and no charge for bearings will be made. The method of calling for bearings is as follows: The ship calls VWK (Karachi station) in the usual manner and then gives QTE. VWK then replies, giving QTE. The ship then gives CT VWK DE (the ship's call repeated for two minutes). VWK will then call the ship and give the bearing as observed on the direction finder. Owing to inherent errors occurring in bearings obtained during sunrise and sunset periods, the station will be closed from 0530 to 0830 and from 1730 to 2030, Indian standard time. Position, latitude 24° 50′ 55″ N., longitude 67° 03′ 29″ E.

REQUIREMENTS, CONSTRUCTION, AND OPERATION OF APPARATUS FOR MEASUREMENT OF THE FREQUENCIES OF DISTANT RADIO TRANSMITTING STATIONS

The increasing use of radio for broadcasting and other purposes and the necessarily small separation in frequency of transmitting stations have created a demand for information on methods of measurement of the frequencies of waves from radio transmitting stations. Measurements of this character are required in utilizing the standard frequency signals transmitted by the Bureau of Standards twice a month and also in taking advantage of the standard frequency stations which are in operation every day and which are listed each month in the RADIO SERVICE BULLETIN. A discussion of this subject is given in letter circular of the above title, a mimeographed publication of the Bureau of Standards. That letter circular gives a detailed description of the construction, calibration, and use of apparatus for such measurements. This apparatus is designed for greatest simplicity consistent with the making of reliable measurements, and the descriptions are given in sufficient detail to be understandable by persons having limited experience in radio measurement work. A copy of this letter circular can be obtained by a person having actual use for it upon application to the Bureau of Standards, Department of Commerce.

STANDARD FREQUENCY STATIONS

As a result of measurements by the Bureau of Standards upon the transmitted waves of a limited number of radio transmitting stations, data are given in each month's RADIO SERVICE BULLETIN on such of these stations as have been found to maintain a sufficiently constant frequency to be useful as frequency standards. There may be many other stations maintaining their frequency just as constant as these, but these are the only ones among those observed. There is, of course, no actual guaranty that the stations named below will maintain the constancy shown, but the data indicate the high degree of confidence that can be placed in them. The transmitted frequencies from these stations can be utilized for standardizing frequency meters (wave meters) and other apparatus by the pro-

Standard Frequency and Their Utilization. A copy of that letter circular can be obtained by a person having actual use for it upon application to the Bureau of Standards, Department of Commerce, Washington, D. C.

Station	Owner	Location	Assigned frequency (kilocycles)	Period covered by measurements (months)	Number of times measured	Deviations from assigned frequency noted in measurements	
						Average	Greatest since June 20, 1925
						Per cent	*Per cent*
WQL	Radio Corporation of America.	Coram Hill, Long Island, N. Y.	17.13	7	43	0.1	0.3
NSS	U. S. Navy	Annapolis, Md.	17.80	23	181	.2	.3
WCI	Radio Corporation of America.	Barnegat, N. J.	17.95	5	23	.2	.2
WGG	do	Tuckerton, No. 1, N. J.	18.86	23	179	.1	.1
WII	do	New Brunswick, N. J.	21.80	3	22	.1	.1
WRT	do	do	22.60	3	14	.1	.3
WVA	U. S. Army	Annapolis, Md.	100	4	50	.1	.4
WEAF	American Telephone & Telegraph Co.	New York, N. Y.	610	7	62	.0	.0
WCAP	Chesapeake & Potomac Telephone Co.	Washington, D. C.	640	22	90	.1	.3
WRC	Radio Corporation of America.	do	640	19	87	.1	.3
WSB	Atlanta Journal	Atlanta, Ga.	702	22	90	.1	.1
WGY	General Electric Co.	Schenectady, N. Y.	790	25	132	.1	.0
WBZ	Westinghouse Electric & Manufacturing Co.	Springfield, Mass.	909	35	49	.1	.2
KDKA	do	East Pittsburgh, Pa.	970	22	160	.1	.3

References to Current Radio Periodical Literature

This is a monthly list of references prepared by the Radio Laboratory of the Bureau of Standards and is intended to cover the more important papers of interest to the professional radio engineer which have recently appeared in technical periodicals. The number at the left of each reference classifies the reference by subject, in accordance with the scheme presented in A Decimal Classification of Radio Subjects—An Extension of the Dewey System, Circular No. 138, a copy of which may be obtained for 10 cents from the Superintendent of Documents, Government Printing Office, Washington, D. C. Further information about these lists, availabilities of previous lists, and of the several periodicals is contained in the extended statement preceding the early lists and published in the Radio Service Bulletin prior to April, 1923, and also in May and September, 1923.

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