RADIO SERVICE BULLETIN

ISSUED MONTHLY BY BUREAU OF NAVIGATION, DEPARTMENT OF COMMERCE

Washington, September 1, 1922—No. 65

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:
PU=General public.
PR=Limited public.
RC=Radio compass station.
P=Private.
G=Government business exclusively.
Hours =Hours of operation.
N=Continuous service.
X=No regular hours.
m=a. m. (12 m=midday).
s=p. m. (12s=midnight).
Rates =Ship or coast charges in cents: c=cents. (The rates in the international list are given in francs and centimes.)
I. W. T. Co. =Independent Wireless Telegraph Co.
R. C. A. =Radio Corporation of America.
S. O. R. S. =Ship Owners' Radio Service.
C. w. =Continuous wave.
I. c. w. =Interrupted continuous wave.
V. t. =Vacuum tube.
FX. =Fixed station.

CERTIFICATE: By direction of the Secretary of Commerce this publication is issued as an administrative report and is required for the proper transaction of the public business.

9161—22

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, 1922, and to the International List of Radiotelegraph Stations published by the Berne bureau.]

Station.	Call signal.	Wave lengths.	Service.	Hours.	Station controlled by—
Cuba, P. R.[1]	WKK	300, 600, 1800	PG & PR		Bureau of Insular Telegraph.
Chicago, Ill.[2]	WBU	450	P	X	City of Chicago.
Cleveland, Ohio[3]	WGO	300, 450, 600	PG		RCA.
Cranston, R. I.[4]	WKAP	300, 475, 600	P	X	Lester W. Flint.
Los Angeles, Calif.[5]	KFR	300, 326, 600	P	X	Airline Transportation Co.
Pearl Creek Dome, Cold Bay oil district, Alaska[6]	KFU	1700	P	X	Standard Oil Co. of Calif.
Princeton, Ind.[7]	WJAV	1620	P	X	Indian Pipe Line Corp.
Raleigh, N. C.[8]	WLAC	700	P	X	North Carolina State College.
San Francisco, Calif.[9]	KUO	300, 525, 600	P	X	Examiner Printing Co.
Vieques, P. R.[10]	WGW	300, 600, 1800	PG & PR		Bureau of Insular Telegraph.

[1] Loc. (approximately) 0° 65' 39" 00", N. 18° 16' 07"; range, 150; system, De Forest v. t. telephone and telegraph; hours, 8 a. m.–12 noon, 1–4 and 7–8 p. m.; rates, ship service, 6 c. per word, Cuba to Vieques 5 c. per word, minimum 40 c. for 10 words.

[2] Loc. 0° 87' 57" 21", N. 41° 52' 20"; range, 200; system, De Forest v. t. telegraph and telephone; rates, none.

[3] Range, 100; system, RCA (c. w., I. C. w., and v. t. telephone); hours, 23 hours during every 24; rates, ship service, 3 c. per word.

[4] Range, 100; system, composite v. t. telephone; rates, none.

[5] Loc. (approximately) 1° 0' 04" 02", N. 57° 42' 03"; range, 300; system, RCA, 1,000; rates, none.

[6] Loc. (approximately) 0° 87' 28" 07", N. 55° 17' 00"; range, 200; system, De Forest v. t. telegraph and telephone; rates, none.

[7] Loc. 0° 75' 39" 45", N. 38° 47' 38"; range, 300; system, composite v. t. telegraph and telephone; rates, none.

[8] Range, 150; system, composite v. t. telephone; rates, none.

[9] Loc. (approximately) 0° 87' 20" 33", N. 18° 00' 02"; range, 150; system, De Forest v. t. telegraph and telephone; hours, 8 a. m.–12 noon, 1–5 and 7–8 p. m.; rates, ship service, 6 c. per word; Vieques to Cuba, 5 c. per word, minimum, 40 c. for 10 words.

Commercial ship stations, alphabetically by names of vessels.

[Additions to the List of Radio Stations of the United States, edition of June 30, 1922, and to the International List of Radiotelegraph Stations published by the Berne bureau.]

Name of vessel.	Call signal.	Kilos.	Service.	Hours.	Owner of vessel.	Station controlled by—
Ara[1]	KFBO	8	PG	X	Wm. K. Vanderbilt	Owner of vessel.
Chillicothe	KFAX		PG	X	Alaska-Portland Packers Association.	
Commercial Scout	KFDT		PG	X	Moore & McCormack Co.	
Moldegaard[2]	KFBP	8	PG	X	A. H. Bull S. S. Co.	I. W. T. Co.

[1] Range, 250; system, composite v. t. telephone and composite spark, 1000; w. l., 300, 450, 600.

[2] Range, 100; system, Marconi, 2000; w. l., 300, 450, 600.

Commercial land and ship stations, alphabetically by call signals.

[b=ship station; c=land station.]

Call signal.	Name.		Call signal.	Name.	
KFAX	Chillicothe	b	WBU	Chicago, Ill	c
KFBO	Ara	b	WGO	Cleveland, Ohio	c
KFBP	Moldegaard	b	WGW	Vieques, P. R	c
KFDT	Commercial Scout	b	WJAV	Princeton, Ind	c
KFR	Los Angeles, Calif	c	WKAP	Cranston, R. I	c
KFU	Pearl Creek Dome, Cold Bay oil district, Alaska	c	WKK	Cuba, P. R	c
KUO	San Francisco, Calif	c	WLAC	Raleigh, N. C	c

Commercial aeroplane stations, alphabetically by names of stations.

[Additions to the List of Radio Stations of the United States, edition of June 30, 1922, and to the International List of Radiotelegraph Stations published by the Berne bureau.]

Station.	Call signal.	Wave lengths.	Service.	Hours.	Station controlled by—
Airline Arrow No. 1	KFBI	300, 525, 600	P	X	Airline Transportation Co., Stillwell Hotel, Los Angeles, Calif.

Broadcasting stations, alphabetically by names of cities.

[Additions to the List of Radio Stations of the United States, edition June 30, 1922.]

City.	Call signal.	City.	Call signal.
Astoria, Oreg.	KFBM	Louisville, Ky.	WKAG
Beaumont, Tex.	WMAM	Marshall, Mo.	WJAT
Beloit, Wis.	WEAW	Marshfield, Oreg.	KFBH
Boise, Idaho	KFBJ	Miami, Fla.	WIAZ
Bridgeport, Conn.	WKAX	Montgomery, Ala.	WKAN
California (portable)	KFBN	Okemah, Okla.	WKAK
Carrollton, Mo.	WLAB	Omaha, Nebr.	WNAL
Central Point, Oreg.	KFAY	Orange, Tex.	WKAL
Chicago, Ill.	WJAZ	Peoria, Ill.	WJAN
Cleveland, Ohio	WJAX	Pittsburgh, Pa.	WJAS
Cranston, R. I.	WKAP	Providence, R. I.	WJAR
Duluth, Minn.	WJAP	Raleigh, N. C.	WLAC
East Lansing, Mich.	WKAR	Rock Port, Mo.	WMAD
East Providence, R. I.	WKAD	Sacramento, Calif.	KFBK
Everett, Wash.	KFBL	San Francisco, Calif.	KFDB
Fargo, N. Dak.	WKAJ	San Juan, P. R.	WKAQ
Frankfort, Ind.	WKAT	Springfield, Mo.	WKAS
Gainesville, Ga.	WKAY	Syracuse, N. Y.	WLAH
Hastings, Nebr.	WKAM	Topeka, Kans.	WJAQ
Hastings, Nebr.	WLAD	Waco, Tex.	WLAJ
Laconia, N. H.	WKAV	West Palm Beach, Fla.	WKAH
Lincoln, Nebr.	WLAF	Wilkes-Barre, Pa.	WKAZ
Lincoln, Nebr.	WMAH	Yankton, S. Dak.	WJAU

Lists of stations broadcasting market or weather reports (485 meters) and music, concerts, lectures, etc. (360 meters), alphabetically by call letters.

[Additions to the List of Radio Stations of the United States, edition June 30, 1922.]

Call signal.	Station operated and controlled by—	Location of station.	Wave lengths.
KFAY	W. J. Virgin Milling Co.	Central Point, Oreg.	360
KFBH	Thomas Musical Co.	Marshfield, Oreg.	360
KFBJ	Idaho Radio Supply Co.	Boise, Idaho	360
KFBK	Kimball-Upson Co.	Sacramento, Calif.	360
KFBL	Leese Bros.	Everett, Wash.	360
KFBM	Cook & Foster	Astoria, Oreg.	360
KFBN	Beech Radio Corp.	California (portable)	360
KFDB	John D. McKee	San Francisco, Calif., 464 California Street.	360
WIAZ	Electric Supply Sales Co.	Miami, Fla.	360
WJAN	Peoria Star-Peoria Radio Sales Co.	Peoria, Ill.	360
WJAP	Kelley-Duluth Co.	Duluth, Minn.	360
WJAQ	Capper Publications	Topeka, Kans.	360
WJAR	The Outlet Co. (J. Samuels & Bro.)	Providence, R. I.	360
WJAS	Pittsburgh Radio Supply House	Pittsburgh, Pa.	360
WJAT	Kelly-Vawter Jewelry Co.	Marshall, Mo.	360
WJAU	Yankton College	Yankton, S. Dak.	360
WJAX	Union Trust Co.	Cleveland, Ohio	360
WJAZ	Chicago Radio Laboratory	Chicago, Ill.	360
WKAD	Charles Lacoff (Crescent Park)	East Providence, R. I.	360
WKAG	Edwin T. Bruce, M. D.	Louisville, Ky., 1300 South Third Street.	360

Lists of stations broadcasting market or weather reports (485 meters) and music, concerts, lectures, etc. (360 meters), alphabetically by call letters—Continued.

Call signal.	Station operated and controlled by—	Location of station.	Wave lengths.
WKAH	Planet Radio Co.	West Palm Beach, Fla.	360
WKAI	Fargo Plumbing & Heating Co.	Fargo, N. Dak.	360
WKAK	Okfuskee County News.	Okemah, Okla.	360
WKAL	Gray & Gray.	Orange, Tex.	360
WKAM	Hastings Daily Tribune.	Hastings, Nebr.	360
WKAN	Alabama Radio Mfg. Co.	Montgomery, Ala.	360
WKAP	Dotson W. Flint.	Cranston, R. I., Alicia Avenue.	360
WKAQ	Radio Corp. of Porto Rico	San Juan, P. R.	360
WKAR	Michigan Agriculture College.	East Lansing, Mich.	360
WKAS	L. E. Linse Music Co.	Springfield, Mo.	360
WKAT	Frankfort Morning Times.	Frankfort, Ind.	360, 485
WKAV	Laconia Radio Club.	Laconia, N. H.	360
WKAW	Turner Cycle Co.	Beloit, Wis.	360
WKAX	William A. MacFarlane.	Bridgeport, Conn.	360
WKAY	Brenau College.	Gainesville, Ga.	360
WKAZ	Landau's Music & Jewelry Co.	Wilkes Barre, Pa.	360
WLAB	George F. Grossman.	Carrollton, Mo.	360
WLAC	North Carolina State College.	Raleigh, N. C.	360
WLAD	Avenarius Radio Supply Co.	Hastings, Nebr.	360
WLAF	Johnson Radio Co.	Lincoln, Nebr.	360
WLAH	Samuel Woodworth.	Syracuse, N. Y., 625 Brownell Street.	360
WLAJ	Waco Electrical Supply Co.	Waco, Tex.	360
WMAD	Atchinson County Mail.	Rock Port, Mo.	360
WMAH	General Supply Co.	Lincoln, Nebr.	360
WMAM	Beaumont Radio Equipment Co.	Beaumont, Tex.	360
WNAL	R. J. Rockwell.	Omaha, Nebr., 5019 Capital Avenue.	360

Government land stations, alphabetically by names of stations.

[Additions to the List of Radio Stations of the United States, edition of June 30, 1922, and to the International List of Radiotelegraph Stations published by the Burne bureau.]

Station.	Call signal.	Wave lengths.	Service.	Hours.	Station controlled by—
Bolling Field, D. C. (Anacostia).	WYB		O		U. S. Army.
Fairfield, Ohio	WYD		O		Do.
Kelly Field, Tex. (San Antonio)	WYG		O		Do.
Langley Field, Va. (Hampton).	WYC		O		Do.
Mitchell Field, N. Y. (Mineola, L. I.).	WYA		O		Do.
Port Ends, La. (RC) [1]	NBX	800	RC	N	U. S. Navy.
Rockwell Field, Calif. (Coronado).	WYH		O		U. S. Army.
Scott Field, Ill. (Belleville).	WYF		O		Do.

[1] Lee. 0.89° 09' 32", N. 29° 00' 45"; system, U. S. Navy. All of the above-named Army stations are equipped with U. S. Army apparatus; other particulars lacking at this time.

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.
NBX	Port Ends, La. c	WYD	Fairfield, Ohio. c
WYA	Mitchell Field, N. Y. (Mineola, L. I.). c	WYF	Scott Field, Ill. (Belleville). c
WYB	Bolling Field, D. C. (Anacostia). c	WYG	Kelly Field, Tex. (San Antonio). c
WYC	Langley Field, Va. (Hampton). c	WYH	Rockwell Field, Calif. (Coronado). c

Special land stations, alphabetically by names of stations.

[Additions to the List of Radio Stations of the United States, edition of June 30, 1922.]

Station.	Call signal.	Wave lengths.	Station controlled by—
Altadena, Calif.	6XR	150, 275, 375	Altadena Radio Laboratory.
Beeville, Tex.	5ZAI	360, 375	Rialto Theater.
Chicago, Ill.	9XN	variable	Leroy M. E. Clausing, 4545 North Whipple Street.
Columbus, Ohio	8XC	360, 375	Ernst & Hopkins Co.
Kalamazoo, Mich.	8XF	360, 375	Kalamazoo College (physics department).
Los Angeles, Calif.	6XJ	200-550	Dean Farran, 1410 South Van Ness Avenue.
New York, N. Y.	2XU	420	American Radio News Corp., 21 Spruce Street.
Oakland, Calif.	6XA	variable	Radio Specialty Shop.
Philadelphia, Pa.	3XAI	250, 275	Roberts' Bros. Electric Co., 426 South Fifty-second Street.
Plainview, Tex.	5XAH	360, 375	James G. McIntosh.
Rockford, Ill.	9XF	variable	A. V. Transke.
San Francisco, Calif.	6XB	variable	John D. McKee, 484 California Street.

Special land stations, grouped by districts.

Call signal.	District and station.	Call signal.	District and station.
2XU	Second district: New York, N. Y.		Eighth district:
3XAI	Third district: Philadelphia, Pa.	8XC	Columbus, Ohio.
	Fifth district:	8XF	Kalamazoo, Mich.
5XAH	Plainview, Tex.		Ninth district:
5ZAI	Beeville, Tex.	9XF	Rockford, Ill.
	Sixth district:	9XN	Chicago, Ill.
6XA	Oakland, Calif.		
6XB	San Francisco, Calif.		
6XJ	Los Angeles, Calif.		
6XR	Altadena, Calif.		

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, 1922, and to the International List of Radiotelegraph Stations, published by the Berne bureau.]

CAGAYAN DE SULU, P. I.—Loc. (approximately) 0.118° 30′ 00″ E., N. 07° 00′ 00″; system, composite, w. l., 750; service PG; hours, 8 a. m.–12 noon, 2–5.30 p. m.; Sunday and holiday, 8–10 a. m., 4–5.30 p. m.; ship schedule last 10 minutes of each hour; rates, 12 c. per word.

EVERETT, WASH. (KFT).—Service PG and PR.

KAWAIHAE, HAWAII.—Ship rate through Wahiawa, Hawaii, 10 c. per word.

LARAMIE, WYO.—Read Casper, Wyo.—Loc. (approximately) 0.106° 20′ 00″, N. 42° 52′ 00″; system, De Forest v. t. telephone and telegraph.

NEW LONDON, CONN. (WST).—Loc. 0.72° 06′ 02″, N. 41° 18′ 01″; system, composite, 400; all ship services 10 c. per word.

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, 1922, and to the International List of Radiotelegraph Stations, published by the Berne bureau.]

ARANGAREZ.—System, composite, 1000.

ARROW.—Station operated and controlled by RCA (U. S. L.).

ASSAROKA.—Range, 300; system, Navy-Lowenstein, 1000; w. l., 300, 450, 600.

ADMIRAL SIMS.—Strike out all particulars.

ANVIL.—Rates, 8 c. per word; station operated and controlled by I. W. T. Co.

AUSABLE.—Range, 200; w. l., 300, 450, 600.

BERLIN.—Strike out all particulars.

CARIBBEAN.—Range, 300; service, P.

CASEY.—Range, 300; system, Navy-Wireless Specialty Apparatus Co., 1000; w. l., 300, 450, *600*.

CASTLE LODGE.—Henry Hencken owner of vessel.

CHARLES BRALEY.—Strike out all particulars.

CITY OF EUREKA.—System, Navy-Liberty, 1000; w. l., 300, 450, *600*.

CITY OF FREEPORT.—Steamer, Freeport Corp. owner of vessel.

COCKAPONSET.—Station operated and controlled by S. O. R. S. (U. S. L.).

COLUMBIA.—Range, 300; system, Cutting & Washington, 1000; w. l., 300, 450, *600*.

CORCORAN.—Name changed to Nancy Weems.

COULEE.—James Davidson owner of vessel.

COVALT.—Morton Salt owner of vessel.

COWBOY.—Name changed to Makena; Matson Navigation Co. owner of vessel.

CRISFIELD.—Station operated and controlled by I. W. T. Co. (U. S. L.).

CRISTOBAL.—Rates, 6 c. per word.

DARIEN.—Range, 300.

EASTERN CROWN.—W. l., 300, 450, *600*.

EASTERN GLEN.—Station operated and controlled by I. W. T. Co. (U. S. L.).

EASTERN KING.—Station operated and controlled by RCA (U. S. L.).

EASTERN MERCHANT.—Name changed to Robert Luckenbach.

EASTERN SHORE.—Station operated and controlled by RCA (U. S. L.).

ELDRIDGE.—Station operated and controlled by I. W. T. Co.

ELETON.—System, Navy-Kilbourne & Clark, 1000; w. l., 300, 450, *600*.

ELLENOR.—W. l., 300, 450, *600*.

ENTERPRISE.—Range, 150; system, RCA, 1000.

FLORIDA.—Strike out all particulars.

FREEMAN.—Range, 200; system, Navy-Wireless Specialty Apparatus Co. 1000; w. l., 300, 450, *600*.

GORDONA.—W. l., *600*.

GOVERNOR JOHN LIND.—Baltimore S. S. Co. owner of vessel.

GUARDIAN.—Range, 300; All American Cable Co. owner of vessel.

HALCYON.—Range, 150; system, composite v. t. and i. c. w., 1000; w. l., 300, 450, 475, *600*; rates, North and South American services 4 c. per word.

HONOLULU.—Honolulu S. S. Co. owner of vessel.

INVINCIBLE.—Station operated and controlled by RCA (U. S. L.).

IRAGES.—Range, 200; system, Hammon v. t.; w. l., 300, 500, *600*; rates, 4 c. per word; station operated and controlled by owner of vessel.

LAKE ARTHUR.—Name changed to Virginia Limited; w. l., 300, 450, *600*.

LAKE FORNEY.—Hjalmer Buvig owner of vessel.

LAKESHORE.—E. K. Wood Lumber Co. owner of vessel.

LAS VEGAS.—Station operated and controlled by RCA (U. S. L.).

MAJOR WHEELER.—Baltimore S. S. Co. owner of vessel.

MEMNON.—Range, 300; system, Federal arc.; w. l., 300, *600*, 1800.

MENOMINEE.—Station operated and controlled by S. O. R. S. (U. S. L.).

MONTROLITE.—Strike out all particulars.

NARCISSUS.—Station operated and controlled by S. O. R. S. (U. S. L.).

OSAGE.—Name changed to Commercial Pathfinder; Osage S. S. Co. owner of vessel.

PERE MARQUETTE 8.—Station operated and controlled by RCA.

PIONEER (KUSL)—Call signal changed to KUSS.

POCAHONTAS.—Strike out all particulars.

PRESIDENT ADAMS.—W. l., 300, 450, *600*, 1800.

PRESIDENT CLEVELAND.—Range, 150-500.

PRESIDENT HARDING.—Range, 500; system, Federal arc; w. l., 300, 450, *600*, 1800.

PRESIDENT LINCOLN.—Range, 500.

QUAKER CITY.—W. l., 300, 450, *600*.

RAINIER.—Rates, 4 c. per word.

RELAY.—All America Cable Co. owner of vessel; station operated and controlled by I. W. T. Co.

REMUS.—System, Navy-Kilbourne & Clark, 1000; w. l., 300, 450, *600*.

SAGAPORACK.—Station operated and controlled by I. W. T. Co. (U. S. L.).

SAN FRANCISCO.—System, RCA, 1000.

SCANTIC.—Station operated and controlled by I. W. T. Co. (U. S. L.).

SPRAY (KDYB).—Service, P.

STEEL VOYAGER—Station operated and controlled by RCA.

TAVERNILLA.—W. l., 400, *600*.

TRONTOLITE.—Strike out all particulars.

VENETIA.—System, composite, 1000.

VESTA.—Standard Transpn. Co. owner of vessel.

VIKING.—Range, 150; system, RCA, 1000; w. l., 300, 450, *600*; rates, 8 c. per word; station operated and controlled by owner of vessel.

WEST CARTER.—Strike out all particulars.

WEST ESCASCO.—Station operated and controlled by S. O. R. S. (U. S. L.).

WESTERN GLEN.—Station operated and controlled by I. W. T. Co. (U. S. L.).

WEST GOTOMSKA.—System, Navy-Marconi, 1000; hours, X.

WEST HARLAN.—Range, 300; system, Navy, 1000; w. l., 300, 450, *600*.

WEST HEMATITE.—Range, 300; system, Navy-Liberty, 1000; w. l., 300, 450, *600*.

WEST HESSELTINE.—Station operated and controlled by S. O. R. S. (U. S. L.).

WEST ISLAY.—Garland S. S. Corp. owner of vessel.

WEST NOHNO.—W. l., 300, 450, *600*.

WEST PROSPECT.—Station operated and controlled by S. O. R. S.

WEST TACOOK.—Station operated and controlled by I. W. T. Co. (U. S. L.).

WILLIAM CAMPION.—Range, 300; system, Navy-Kilbourne & Clark, 1000; w. l., 300, 450, *600*.

YORBA LINDA.—System, I. W. T. Co., 1000 and Federal arc, with chopper 500; w. l., 300, *600*, 1800, rates, 8 c. per word.

COMMERCIAL LAND AND SHIP STATIONS, ALPHABETICALLY BY CALL SIGNALS.

KUKS, *read* Robert Luckenbach; KUSS, *read* Pioneer; WFL, *read* Virginia Limited; WJU, *read* Commercial Pathfinder; WMAI, *read* Makena; WVAI, *read* Nancy Weems; strike out all particulars following the call signals, KDOX, KESJ, KOM, KVP, KXUO, WEQ, WJJ, and WRB.

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, 1922.]

KDYS (Great Falls, Mont.).—W. l., 360, 485.

KDZH (Fresno, Calif.).—W. l., 360, 485.

KLN (Del Monte, Calif.).—Station operated and controlled by Monterey Electric Shop.

KNR (Los Angeles, Calif.).—Strike out all particulars.

KSD (St. Louis, Mo.).—W. l., 360, 485.

KSV (Wenatchee, Wash.).—W. l., 360, 485.

KVQ (Sacramento, Calif.).—Station operated and controlled by James McClatchy.

KYI (Bakersfield, Calif.).—Station operated and controlled by Bakersfield Californian (Alfred Harrell).

KZI (Los Angeles, Calif.).—Strike out all particulars.

WCAP (Decatur, Ill.).—W. l., 360, 485.

WCAU (Philadelphia, Pa.).—W. l., 360, 485.

WDAF (Kansas City, Mo.).—W. l., 360, 485.

WDAH (El Paso, Tex.).—W. l., 360, 485.

WDAJ (College Park, Ga.).—W. L., 360, 485.
WEAC (Terre Haute, Ind.).—W. L., 360, 485.
WEAP (Mobile, Ala.).—W. L., 360, 485.
WHC (Toledo, Ohio).—W. L., 360, 485.
WJAM (Cedar Rapids, Iowa).—Address 302 3rd Ave. West.
WOO (Philadelphia, Pa.).—W. L., 360, 485.
WSY (Birmingham, Ala.).—W. L., 360, 485.

GOVERNMENT LAND STATIONS, ALPHABETICALLY BY NAMES OF STATIONS.

[Alterations and corrections to be made to the List of Radio Stations of the United States, edition of June 30, 1922, and to the International List of Radiotelegraph Stations, published by the Berne bureau.]

SELFRIDGE FIELD, MICH. (Mount Clemens).—Call signal changed to WYE.
TIENTSIN, CHINA.—Call signal changed to WUQ.
TYBEE ISLAND, GA. (RC).—Temporarily closed.
WASHINGTON, D. C. (WUQ).—Strike out all particulars.

GOVERNMENT 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, 1922, and to the International List of Radiotelegraph Stations, published by the Berne bureau.]

ANDROSCOGGIN.—Strike out all particulars.
CAPTAIN A. M. WETHERILL.—Call signal changed to WYAT.
CAPTAIN CHARLES W. ROWELL.—Call signal changed to WYAI.
CAPTAIN GREGORY BARRETT.—Call signal changed to WYAP.
CAPTAIN JAMES FORNANCE.—Call signal changed to WYAM.
CAPTAIN T. M. MORRISON.—Call signal changed to WYAZ.
COLONEL GEORGE ARMISTEAD.—Call signal changed to WYAG.
GENERAL A. M. RANDALL.—Call signal changed to WYAJ.
GENERAL E. O. C. ORD.—Call signal changed to WYAF.
GENERAL G. W. GETTY.—Call signal changed to WYAS.
GENERAL HARVEY BROWN.—Call signal changed to WYAK.
GENERAL HENRY J. HUNT.—Call signal changed to WYAD.
GENERAL HENRY KNOX.—Call signal changed to WYAE.
GENERAL R. B. AYRES.—Call signal changed to WYAL.
GENERAL R. H. JACKSON.—Call signal changed to WYAW.
GENERAL RICHARD ARNOLD.—Call signal changed to WYAY.
GENERAL ROBERT ANDERSON.—Call signal changed to WYAH.
GENERAL ROBERT W. SWARTOUT.—Call signal changed to WYAU.
GENERAL ROYAL T. FRANK.—Call signal changed to WYAA.
GENERAL S. B. HOLABIRD.—Call signal changed to WYAV.
GENERAL S. M. MILLS.—Call signal changed to WYAB.
ITASCA.—Strike out all particulars.
LIEUT. GRO. M. HARRIS.—Call signal changed to WYAR.
MAJOR ALBERT G. FORSE.—Call signal changed to WYAQ.
MAJOR EVAN THOMAS.—Call signal changed to WYAO.
MAJOR SAMUEL RINGGOLD.—Call signal changed to WYAC.
MOHAVE (NIXB).—*Read* Mojave.
QUIGLEY.—Strike out all particulars.
RENO (WYN).—Call signal changed to WYAN.
STELLENWERF.—Strike out all particulars.

GOVERNMENT LAND AND SHIP STATIONS, ALPHABETICALLY BY CALL SIGNALS.

NIXB *read* Mojave; strike out all particulars following the call signals NIDB, NIDC, NRD, NRI, and WUQ (Washington, D. C.).

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, 1922.)

BALTIMORE, MD. (3XX).—Address 219 West Mulberry Street.
BIRMINGHAM, ALA. (5XC).—W. L., *200*, 375.
GRAND COTEAU, LA. (5XZ).—W. L., *200*, 250, 375, 450.
HONOLULU, HAWAII (6XAP).—W. L., variable.
KOUNTZE, TEX. (5ZAJ).—Address Box 139.
LOS ANGELES, CALIF. (6ZR).—Address 637 South Hope Street.
NORFOLK, VA. (3XY).—Strike out all particulars.
NORRISTOWN, PA. (3ZV).—Address 622 Strawbridge Street.
OAKLAND, CALIF. (6XAL).—Strike out all particulars.
PHILADELPHIA, PA. (3XB).—W. L., 375, 1300.
PHILADELPHIA, PA. (3XK).—W. L., 250, 275, 1500.
PHILADELPHIA, PA. (3XS).—Address 1134 South Fifty-sixth Street.
RICHFIELD, UTAH (6ZAJ).—Strike out all particulars.
ROSELLE PARK, N. J. (2XR).—*Read* New York, N. Y.
SAN FRANCISCO, CALIF. (6ZW).—Strike out all particulars.
SAN JOSE, CALIF. (6XF).—Address 467 South First Street.
SAN DIEGO, CALIF. (6ZB).—Address Timken Building.
SPRING GLEN, FLA. (4ZE).—*Read* Jacksonville, Fla.
ST. LOUIS, MO. (9YK).—W. L., 225, 375.
WASHINGTON, D. C. (3YL).—W. L., *200*, 375.
WICHITA, KANS. (9XAE).—W. L., variable.
WILKES-BARRE, PA. (8ZS).—Address 66 Gildersleeve Street.
YANKTON, S. DAK. (9YAK).—W. L., *200*, 375, 425.

MISCELLANEOUS.

STATIONS CLOSED IN ALASKA.

The following-named Alaskan stations have been closed for the season.
Chignik (KNP), closed September 1.
Clarks Point (KHG), closed August 18.
Daly (KDJT), closed August 18.
False Pass (KJL), closed August 9.
Ikatan (KXW), closed July 26.
Koggiung (KUXB) (moored vessel), closed July 28.
Koggiung (KVV), closed August 15.
Metha Nelson (KMP) (moored vessel), closed August 5.
Nelson Lagoon (KXV), closed August 12.
Nushagak (KKAE), closed August 14.
Pilot Point (KUDT), closed August 18.
Pirate Cove (KOXX), closed August 30.
Port Moller (KWR), closed August 14.
Becharof (KUDV), closed August 18.
Egegik (KMF), closed August 21.
Hawk Inlet (KKAI), closed August 21.
Kvichak (KHB), closed August 21.
Libbyville (KMT), closed August 21.
Naknek (KMK), closed August 22.
Snag Point (KHF), closed August 20.
Ugashik (KMU), closed August 21.

ST. ELMO'S FIRE.

At 12.40 a. m., July 24, 1922, in (approximately) latitude 52° 29′ N., longitude 32° 01′ W., during heavy rain squalls accompanied by heat lightning, observed the port wire of the radio aerial illuminated for its entire length with a glowing white light, giving the wire a fuzzy appearance. This continued for about 10 minutes, after which the light gradually faded from the ends of the wire and finally disappeared from the center of the aerial. The compasses were not affected.—*From S. S. Wheeling Mold-Hydrographic Bulletin, August 16, 1922.*

INFORMATION REQUESTED REGARDING J. RAY ATKINS.

The bureau has been requested by Mrs. J. R. Atkins, Box 253, Midlothian, Tex., to locate her son, J. Ray Atkins, radio operator, 23 years old.

Anyone having knowledge of this man's present address should advise this office or furnish the information to his mother.

NEW BERNE LIST.

The International Bureau of the Telegraph Union, Berne, Switzerland, advises that they will publish a new edition of the alphabetical list of call letters (7th edition).

The price of this document and subscription, with the supplements for 1922 and 1923, is 6 francs (Swiss) postage included. Persons desiring to receive this list should forward the price in Swiss francs to the Berne bureau.

NEW LIST OF COMMERCIAL AND GOVERNMENT RADIO STATIONS AND AMATEUR RADIO STATIONS.

The new list of Commercial and Government Radio Stations of the United States will be ready for distribution some time during the present month unless something unforeseen should delay its publication. The price will be about 15 cents per copy although no definite price can be set at this time.

The list of Amateur Radio Stations of the United States will probably cost at least 25 cents per copy due to the increased size of the list. This list will not be ready for distribution until some time in October.

When it is definitely known when these publications are ready for distribution and the price determined notice will be given in the Bulletin.

POINT-TO-POINT SERVICE DISCONTINUED.

The point-to-point service between the radio stations at Rockland, Me. (WME), and Swans Island, Me. (WTI), has been discontinued.

AMENDMENTS TO REGULATIONS.

Regulation 57, page 55 (Radio Communication Laws of the United States), amended August 8, 1922, to read:

Class 2.—Limited commercial stations are not open to public service and are licensed for a specific commercial service or services defined in the license. Stations of this class must not transmit to or accept public messages from other stations. No rates are authorized. Licenses of this class are required for all transmitting radio stations used for broadcasting news, concerts, lectures, and such matter. A wave length of 360 meters is authorized for such service, and a wave length of 485 meters is authorized for broadcasting crop reports and weather forecasts, provided the use of such wave lengths does not interfere with ship to shore or ship to ship service.

Class B, radiotelephone broadcasting stations.

A new class of radiotelephone broadcasting station license is hereby established to be known as class B.

A license will not be issued for a station in this class which does not comply in every respect with the specifications hereunder.

Specifications covering the requirements governing the construction, licensing, operating and service of class B radiotelephone broadcasting stations:

Station.

WAVE LENGTH.—The wave length of 400 meters only will be assigned for the use of stations of this class which must be reasonably free from harmonics.

POWER.—The power supply must be dependable and nonfluctuating. The minimum required will be 500 watts in the antenna and the maximum shall not exceed 1,000 watts in the antenna.

MODULATION.—The system must be so arranged as to cause the generated radio frequency current to vary accurately according to the sound impressed upon the microphone system.

SPARE PARTS.—Sufficient tubes and other material must be readily available to insure continuity and reliability of the announced schedule of service.

ANTENNA.—The antenna must be so constructed as to prevent swinging.

SIGNALING SYSTEM.—Some dependable system must be provided for communication between the operating room and the studio.

STUDIO.—The radio equipment in the studio must be limited to that essential for use in the room. The room shall be so arranged as to avoid sound reverberation and to exclude external and unnecessary noises.

Service.

PROGRAMS.—The programs must be carefully supervised and maintained to insure satisfactory service to the public.

MUSIC.—Mechanically operated musical instruments may be used only in an emergency and during intermission periods in regular program.

DIVISION OF TIME.—Where two or more stations of class B are licensed in the same city or locality a division of time will be required if necessary.

Forfeiture of 400 meters privilege.

Licenses issued for the use of the 400 meters wave length shall specifically provide that any failure to maintain the standards prescribed for such stations may result in the cancelation of the license and requiring the station to use the 360 meters wave length.

D. B. CARSON,
Commissioner of Navigation.

Approved:
HERBERT HOOVER,
Secretary of Commerce.

REFERENCES TO CURRENT RADIO PERIODICAL LITERATURE.

The following list of references is 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. Abstracts and articles which are essentially of amateur or novice interest are not noted.

For about two years these lists have been prepared in mimeographed form, and a very limited number of copies have been available for distribution. Recently there has arisen a very considerably increased demand, and it has seemed desirable to publish the lists in the Radio Service Bulletin. The publication of these references will be continued if the readers find them useful. The bureau will be pleased to receive suggestions from readers as to the desirability of continuing their publication.

A complete file of the previous mimeographed lists can be consulted at the Bureau of Standards in Washington. Files of earlier lists can also be consulted at the Library of Congress in Washington, the Engineering Societies Library in New York, and the John Crerar Library in Chicago.

These references are classified according to a decimal system outlined in a report prepared at the radio laboratory of the Bureau of Standards, An Extension of the Dewey Decimal Classification Applied to Radio. It is expected that this classification will be published later.

In this list the subjects corresponding to the 10 principal classes of the radio classification are given, and preceding each reference is given a number which corresponds to the classification of the reference. The subjects corresponding to the various decimal divisions of the 10 principal classes are not given in these lists, but can be found in the classification. In case a reference could properly be assigned to two or

more of the numbers of the classification, it appears only once in this list, with the number corresponding to the subject in connection with which the reference is of greatest importance.

In this list, under the first eight principal classes the numbers assigned to the references are preceded by the letter "R," which is an abbreviation for the number 621.384, which is assigned to radio communication, in the regular Dewey decimal classification. Under the class "R 800—Nonradio subjects," the numbers shown in this list are not preceded by an "R," but are the numbers assigned to the subject of the reference in the regular complete Dewey classification.

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R000 Marconi, Guglielmo, Radio telegraphy, Jour. American Institute of Electrical Engineers, **41**, pp. 561–571, August, 1922.

R007.4 Radio fees change (revision by Dominion Government), The Electrical News (Toronto), **31**, p. 49, August 1, 1922.

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R020 Lacault, R. E., How to make a radiophone receiving set (book). Published by Electro Importing Co., New York, 1922. Price, 25 cents prepaid. Noted in Radio News, **4**, p. 504, September, 1922.

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R055 Some sources of elementary radio information, Circular No. 122, Bureau of Standards, Government Printing Office, Washington, D. C. Price, 5 cents. Noted in Telephony, **83**, p. 28, August 19, 1922.

R100—*Radio principles.*

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R113.2 Bouthillon, L., La propagation des ondes électro-magnetiques à la surface de la terre, Radioélectricité, **3**, pp. 289–294, July, 1922.

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R125.1 Kolster, F. A. and Dunmore, F. W., Navigation by radio (direction finding), Radio News of Canada, **1**, pp. 33–35, August, 1922.

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R134.7 Cockaday, L. M., How to build the new Armstrong circuit receiving set, Popular Radio, **2**, pp. 18–25, September, 1922.

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R201.7 Meyer, M. J., Remarque sur la théorie de l'oscillographe, Rev. Generale Électricité, **11**, p. 232, February 18, 1922; Radioélectricité, **3**, p. 64 D, July, 1922.

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R281.49 Five hundred tests on the dielectric strength of oil, Jour. Amer. Inst. Elec. Engrs., **41**, pp. 600–604, August, 1922.

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R342 Kendall, G. P., An amplifier for the broadcasting, Wireless World and Radio Review, **10**, pp. 554–557, July 29, 1922.

R342.7 Lowell, P. D., Operation of an electron tube amplifier, Jour. Amer. Inst. Elec. Engrs., July, 1922; Electrical World, **80**, p. 386, August 19, 1922.

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R411 Lea, N., The performance of a radio-telegraphic transmitter (1½ kw. spark transmitter), Electrician, **89**, pp. 154–156, August 11, 1922.

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R599 Mouromtzeff, I., Radio communication in Russia, Wireless Age, 55–58, August, 1922.

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R610 Outillage actuel de la grande station radiotélégraphique de Nauen, Germany, Jour. Télégraphique, **46**, pp. 121–124, July 25, 1922.

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621.382.8 Submarine cable telegraphy, Jour. American Inst. Elec. Engrs., **41**, pp. 596–597, August, 1922.

GENERAL CALL FOR UNITED STATES LINE VESSELS.

Call signal KUSL has been assigned as a general call for all vessels of the United States Line (Moore & McCormack and Roosevelt S. S. Co.) to be used only for broadcasting general instructions to all their vessels within range of a coast station.

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