

RADIO SERVICE BULLETIN

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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=Radio compass station.
 P=Private.
 O=Government business exclusively.
Hours —Hours of operation.
 X=Continuous service.
 N=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. of 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 deemed as an administrative report and is required for the proper transmission of the public business.

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, 1921, and to the International List of Radiotelegraph Stations published by the Bureau.]

| Station. | Call signal. | Wave lengths. | Service. | Hours. | Station controlled by— |
|-----------------------------|--------------|--------------------|----------|--------|------------------------|
| Everett, Wash. ¹ | KFT | 300, 440, 520, 690 | PG | N | American Tugboat Co. |
| Tulsa, Okla. ² | WEH | 160, 485, 1619 | PH (PX) | X | Midland Refining Co. |

¹ Loc. O. 132° 45' 00", N. 48° 00' 00"; range, 300; system, Kilbourn & Clark, 1600; rates, ship service, 10 c. per word (approximately).

² Loc. (approximately) O. 51° 29' 40", N. 89° 29' 00"; range, 150; system, composite (v. t.), telephone, and telegraph; rates, none.

Commercial ship stations, alphabetically by names of vessels.

[Additions to the List of Radio Stations of the United States, edition of June 30, 1921, and to the International List of Radiotelegraph Stations published by the Bureau.]

| Name of vessel. | Call signal. | Rates | | Service. | Hours. | Owner of vessel. | Station controlled by— |
|------------------|--------------|-----------------------------------|-------------------------|----------|--------|---------------------------------|------------------------|
| | | North and South American service. | Trans-Atlantic service. | | | | |
| Alberta..... | KFAK | | | | | | |
| Bayonna..... | KFAO | | | PG | X | Varum Oil Co. | R. C. O.A. |
| Dolly C..... | KFAI | | | PG | X | Cary Davis Tug & Barge Co. | |
| G. S. Allyn..... | KDZY | | | PH | X | C. E. Davis Packing Co. | Owner of vessel |
| Guarima..... | KDZS | | | | | P. E. Fansler..... | |
| Hamilton..... | KFAM | | | PG | X | Old Dominion Transportation Co. | |
| Missouriau..... | KFAA | 8 | 8 | PG | X | American Hawaiian S. S. Co. | United American lines. |
| Pacific..... | KDZY | | | PH | X | Argonaut S. S. Co. | |
| Pilgrina..... | KFAH | | | | | William T. Ekin..... | |

¹ Range, 150; system, Navy Simon, 1000; w. l., 300, 450, 690; rates, none.

Commercial land and ship stations, alphabetically by call signals.

[b—ship station; e—land station.]

| Call signal. | Name. | Call signal. | Name. |
|--------------|------------------|--------------|--------------------|
| KDZS | Guarima..... | b | Alberta..... |
| KDZY | Pacific..... | b | Dolly C..... |
| KDZY | G. S. Allyn..... | b | Hamilton..... |
| KFAA | Missouriau..... | b | Everett, Wash..... |
| KFAI | Bayonna..... | b | Tulsa, Okla..... |
| KFAH | Pilgrina..... | b | |

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

| Call signal | Station operated and controlled by | Location of station. | Wave lengths. |
|-------------|--|---|---------------|
| KHIZW | Claude W. Gordon | San Francisco, Calif., 2108 9 th Farwell St. | 360 |
| KHIZX | Glad Tidings Tabernacle | San Francisco, Calif., 1535 Ellis St. | 360 |
| KHIZZ | Kinney Bros. & Siggel | Everett, Wash., 1435 Horwitz Ave. | 360 |
| KFAA | Pacific Radio Co. | Portland, Oreg., 105 N. Broadway | 360 |
| KFAC | Glendale Daily Press | Glendale, Calif., 2278 Brand Boulevard | 360 |
| KFAD | McArthur Bros. Mercantile Co. | Phoenix, Ark., 134 E. Central St. | 360 |
| KFAE | State College of Washington | Pullman, Wash. | 360 |
| KFAF | Western Radio Corp. | Denver, Colo., 737 Lincoln St. | 360 |
| KFAJ | University of Colorado | Boulder, Colo. | 360 |
| WEAN | Shepard Co. | Providence, R. I. | 360 |
| WEAD | Ohio State University | Columbus, Ohio | 360, 485 |
| WEAP | Mobile Radio Co. | Mobile, Ala., 107 Winn Building | 360 |
| WEAQ | Young Men's Christian Association | Burling, N. H. | 360 |
| WEAR | Baltimore American & News Publishing Co. | Baltimore, Md., Munsey Building | 360 |
| WEAS | Hochs Co. | Washington, D. C., Seventh and F Sts. NW. | 360 |
| WEAT | John J. Pootary | Tampa, Fla., 207 Azule St. | 360 |
| WEAJ | Davidson Bros. Co. | Stux City, Iowa | 360 |
| WEAV | Sheridan Electric Service Co. | Rushville, Neb. | 360 |
| WEAX | T. J. M. Daly | Little Rock, Ark., P. O. Box 614 | 360, 485 |
| WEAY | W. H. Harwitz, Jr. | Houston, Tex., 812 Travis St. | 360 |
| WEAZ | Donald Richmond | Waterloo, Iowa, 1120 Birch Ave. | 360 |
| WEH | Midland Refining Co. | Tulsa, Okla., 500 S. Main St., Eldorado, Kans. | 360, 485 |
| WEAA | A. H. Bala & Co. | Dallas, Tex. | 360, 485 |
| WEAB | Carl F. Weiss | Syracuse, N. Y., 502 McBride St. | 360 |
| WEAC | Superior Radio Club | Superior, Wis., 232 John Ave. | 360 |
| WEAD | Walsam Weston Meat Supply Co. | Salina, Kans., 217 N. Santa Fe St. | 360 |
| WEAF | H. C. Sprutler Co. | Poughkeepsie, N. Y., 357 Main St. | 360 |
| WEAG | Radio Engineering Laboratory | Waterford, N. Y., Sixth and Broad Sts. | 360 |
| WEAH | Electric Supply Co. | Port Arthur, Tex., 637 Procter St. | 360 |
| WEAI | Holmes & Wilsons Instrument Co. | Asheville, N. C., 47 Zilbena St. | 360 |
| WEAK | Domestic Electric Co. | Brentwood, Mo., 408 Pine St. | 360 |
| WEAL | Houston Chronicle Publishing Co. | Houston, Tex. | 360, 485 |
| WEAM | Times Publishing Co. | St. Cloud, Minn. | 360 |
| WEAN | Hutchinson Electric Service Co. | Hutchinson, Minn. | 360, 485 |
| WEAP | Brown's Business College | Peoria, Ill. | 360 |
| WEAQ | Missouri Wesleyan College and Cameron Radio Co. | Cameron, Mo. | 360 |
| WEAR | Hall & Spahr | Sanford, Me., 1 Bennett St. | 360 |
| WEAS | United Radio Corp. | Fort Wayne, Ind., 107 E. Main St. | 360 |
| WEAT | Daily Agency-Advertiser | Sioux Falls, S. Dak., 169 N. Main Ave. | 360 |
| WEAU | Edwin C. Lewis | Boston, Mass., 121 Federal St. | 360 |
| WEAV | University of Nebraska, department of electrical engineering | Lincoln, Neb. | 360, 485 |
| WEAW | Miami Daily Metropolis | Miami, Fla. | 360 |
| WEAX | Arthur L. Kent | Bechtoltville, N. Y., 195 Court St. | 360 |
| WEAY | Daniels Radio Supply Co. | Independence, Kans. | 360 |
| WEAZ | South Carolina Radio Shop | Charleston, S. C. | 360 |
| WEAB | Q. R. V. Radio Co. | Houston, Tex., 2218 Prairie Ave. | 360 |
| WEAC | Orpheum Radio Sales Co. | Brooklyn, N. Y., 537 Fulton St. | 360 |
| WEAD | Spanish-American School of Radiotelegraphy | Encinitas, P. R. | 360 |
| WEAE | Gaer Radio Service | Tulsa, Okla., 25 E. Eleventh St. | 360 |
| WEAH | New Haven Electric Co. | New Haven, Conn., 296 Elm St. | 360 |
| WEAI | W. H. Cass | Shenandoah, Iowa, 43 Seventh Ave. | 360 |
| WEAK | Mason Electric Co. | Macon, Ga. | 360 |
| WEAL | Lancaster Electric Supply & Construction Co. | Lancaster, Pa., 23 E. Orange St. | 360 |
| WEAM | Orangeburg Radio Equipment Co. | Orangeburg, S. C. | 360 |
| WEAN | Cecil E. Lloyd | Pensacola, Fla., 236 W. Romana St. | 360 |
| WEAQ | W. G. Patterson (Greenwood Radio Corp.) | Shreveport, La. | 360 |
| WEAR | Southwest American | Fort Smith, Ark., 707 Rogers Ave. | 360 |
| WEAS | Ray-Di-Co Organization | Chicago, Ill., 1547 N. Wells St. | 360 |
| WEAT | American Legion, Department of Nebraska | Lincoln, Neb., 314 Richards Block | 360 |
| WEAU | Marcus G. Litz | Wooster, Ohio, 235 E. Liberty St. | 360 |
| WEAV | B-H Radio Co. | Savannah, Ga., 204 W. Broughton St. | 360 |
| WEAW | Ernest C. Albright | Allonsa, Pa., 4918 W. Chestnut St. | 360 |
| WEAY | North Western Radio Co. | Madison, Wis., 230 State St. | 360 |
| WEAZ | South Bend Tribune | South Bend, Ind. | 360 |
| WEAA | St. Joe University of Iowa | Iowa City, Iowa | 360 |
| WEAB | Clark W. Thompson (Fellman's Dry Goods Co.) | Galveston, Tex. | 360, 485 |
| WEAC | Cole Bros. Electric Co. | Waterloo, Iowa | 360 |
| WEAD | Marquette University | Milwaukee, Wis. | 360 |
| WEAE | Automotive Electric Service Co. | Sioux City, Iowa | 360 |
| WEAF | Radio Electric Co. | Pittsburgh, Pa. | 360 |

Government ship stations, alphabetically by names of stations.

[Additions to the List of Radio Stations of the United States, edition of June 30, 1921, and to the International List of Radiotelegraph Stations published by the Bureau.]

| Station. | Call signal. | Station controlled by |
|-----------------|--------------|----------------------------------|
| Cuba..... | WYCA | U. S. Army. |
| Discoverer..... | N1JT | U. S. Coast and Geodetic Survey. |
| Marinduque..... | N1GV | Do. |
| Pioneer..... | N1LL | Do. |

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. |
|--------------|-------------------|--------------|-------------------|
| N1GV | Marinduque..... b | N1JT | Discoverer..... b |
| N1LL | Pioneer..... b | WYCA | Cuba..... b |

Special land stations, alphabetically by names of stations.

(Additions to the List of Radio Stations of the United States, edition of June 30, 1921.)

| Station. | Call signal. | Wave length. | Station controlled by— |
|---------------------------|--------------|---------------|--|
| Abilene, Tex..... | 6XAN | 299,375..... | Eugene W. Wood, 340 Barrern it street. |
| Albany, Ga..... | 4XV | 593,375..... | Technological High School. |
| Belmar, N. J..... | 2XAO | Variable..... | Radio Corporation of America, 233 Broadway, New York, N. Y. |
| Del Rio, Tex..... | 7ZAY | 699,375..... | A. H. Palo & Co. |
| DeLano, N. J..... | 3XP | 250..... | Henry M. Neely. |
| Fayetteville, Ark..... | 2ZAZ | 299,375..... | Lawrence W. Stinson, 354 North West Street. |
| Great Neck, N. Y..... | 2XAN | Variable..... | Harry Alexander, 20 West Thirty-fourth Street, New York, N. Y. |
| Madison, Wis..... | 9XL | 300..... | North Western Radio Co., 250 State Street. |
| Mobile, Ala..... | 4XAF | 299,375..... | Mobile Radio Co., O'Connell Building. |
| New Brunswick, N. J..... | 2XAM | Variable..... | Radio Corporation of America, 233 Broadway, New York, N. Y. |
| Oklahoma City, Okla..... | 5XAF | 299,375..... | Roswell B. Downing. |
| Orange, Tex..... | 4XAD | Variable..... | Gray & Gray. |
| Philadelphia, Pa..... | 3XAU | 250,250..... | Westinghouse Electric & Manufacturing Co., 214 North Twenty-second Street. |
| Pittsburgh, Pa..... | 8XW | Variable..... | Radio Electric Co., 1427 Liberty Avenue. |
| Pittsburgh, Pa..... | 8XN | 250,350..... | Duquesne University. |
| San Francisco, Calif..... | 6XAU | Variable..... | Wilson McQuire Co., 1004 Third Avenue. |
| Tampa, Fla..... | 4XJ | 250,325..... | Thompson Electric Co., 102 West Lafayette Street. |
| Washington, D. C..... | 4XO | 299,375..... | Central High School. |
| Waltham, Conn..... | 4XQ | 250..... | Bristol Co. |
| Winthrop, Mass..... | 1XQ | Variable..... | Lloyd C. Greene, 58 Somerset Avenue. |
| Worcester, Mass..... | 1X8 | Variable..... | Oris C. White, 17 Herman Street. |

Special land stations, grouped by districts.

| Call signal. | District and station. | Call signal. | District and station. |
|--------------|-----------------------|--------------|---------------------------------------|
| 1XQ | First district: | 5XSD | Fifth district: |
| 1X8 | Winthrop, Mass. | 5XAE | Orange, Tex. |
| 1XT | Worcester, Mass. | 5XAF | Mobile, Ala. |
| | Waltham, Conn. | 5XAP | Oklahoma City, Okla. |
| 2XAM | Second district: | 5XAN | Abilene, Tex. |
| 2XAN | New Brunswick, N. J. | 5XAY | Dallas, Tex. |
| 2XAO | Great Neck, N. Y. | 5XAZ | Fayetteville, Ark. |
| | Belmar, N. J. | 6XAU | Sixth district: San Francisco, Calif. |
| 3XAG | Third district: | | Eighth district: |
| 4XO | Philadelphia, Pa. | 8XN | Pittsburgh, Pa. |
| 4XQ | Washington, D. C. | 8XW | Do. |
| 4XP | DeLano, N. J. | 9XL | Ninth district: Madison, Wis. |
| 4XJ | Fourth district: | | |
| 4XJ | Atlanta, Ga. | | |
| | Tampa, Fla. | | |

ALTERATIONS AND CORRECTIONS.

COMMERCIAL LAND STATIONS.

- BOSTON, MASS.—Loc. O. $71^{\circ} 09' 30''$, N. $32^{\circ} 21' 19''$.
 DEARBORN, MICH. (KDFN).—System, composite (v. t. telephone).
 EAST HAMPTON, N. Y.—Station operated and controlled by I. W. T. Co.
 EAST MONTHER, N. Y.—Call changed to WSE.
 FARM RIVER MILLS, CALIF.—Strike out all particulars.
 HARTFORD, CONN. (WQBF).—Strike out all particulars.
 HOLLYWOOD, CALIF.—Strike out all particulars.
 KAUAI, HAWAII (KIE).—System, R. C. of A. (Alexanderson alternator and R. C. of A.); spark, 1000; w. l., 3145, 3155.
 MAHON, MASS. (WCC).—System, R. C. of A., v. t., c. w., and i. c. w.
 NAKNEK, ALASKA (KMK).—Range, 500; w. l., 300, 500, 550, 1800.
 NEW LONDON, CONN. (WLO).—System, Navy-Lowenstein, 1000.
 NEW YORK, N. Y. (WSE).—Call changed to WBC.
 NORTHVILLE, MICH.—System, composite (v. t. telephone); w. l., 425.
 PORT HUDON, MICH.—Range, 150; system, R. C. of A. (v. t. telephone and telegraph); w. l., 300, 400, 600, 1625.
 ROGERS, MICH.—System, U. S. Navy spark, 1000 and composite (v. t., telephone, and telegraph); w. l., 300, 475, 475, 625.
 SAN FRANCISCO, CALIF. (KHTT).—Range, 150; system, composite (v. t., telephone, and composite); spark, 1000.
 SUSANVILLE, CALIF.—Strike out all particulars.
 TUGAHEK, ALASKA.—Range, 200.

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, 1921, and to the International List of Radiotelegraph Stations, published by the Bureau.)

- A. A. DACHIGRETT. — Station operated and controlled by I. W. T. Co.
 ARLTON. — Name changed to City of Los Angeles.
 ALASKAN. — Station operated and controlled by United American Lines.
 AMERICAN. — Station operated and controlled by United American Lines.
 ARBURY. — Range, 300; system, Navy-Liberty, 1000; w. l., 300, 450, 600.
 ARIZONAN. — Station operated and controlled by United American Lines.
 ASCANEO III. — Name changed to Ormidale; Charlton B. Hibbard owner of vessel.
 ASTAURIO IV. — Name changed to Glendarius; Charlton B. Hibbard owner of vessel.
 ATENAS. — United Fruit S. S. Corp. owner of vessel.
 BALBUIDGE. — Strike out all particulars.
 BARRECOLE. — Strike out all particulars.
 BARWOOD. — Station operated and controlled by I. W. T. Co.
 BASCOBEL. — System, Navy-Wireless Specialty Apparatus Co., 1000.
 BAYSERING. — Strike out all particulars.
 BAY STATE. — Name changed to President Madison.
 BELLA. — Strike out all particulars.
 BENSON. — Name changed to Irene; A. H. Bell S. S. Co., owner of vessel.
 BONITA. — Strike out all particulars.
 BYFIELD. — Strike out all particulars.
 CALAMACUS. — United Fruit S. S. Corp. owner of vessel.
 CALIFORNIAN. — Range, 300; system, Telefunken, 1000; w. l., 300, 450, 600, 1800; station operated and controlled by United American Lines.
 CALLAN. — J. H. Mahony owner of vessel.
 CAMDEN (KDKL). — United Fruit Tanker Corp. owner of vessel.
 CAPE HENRY. — Station operated and controlled by S. O. R. S.
 CARE J. BRADLEY. — System, R. C. of A. (v. t., telephone, and R. C. of A.); spark, 1000; w. l., 300, 450, 475, 600.

- CARRIZO.**—United Fruit S. S. Corp. owner of vessel.
- CARTAGO.**—United Fruit S. S. Corp. owner of vessel.
- CATHERINE D.**—Rates, North and South American and transoceanic services 8 c. per word, effective August 1, next.
- CENTRAL AMERICAN.**—Strike out all particulars.
- CHARLES PRATT.**—System, R. C. of A., 1000.
- CHESTER W. CHAPIN.**—Range, 150; system, Cutting & Washington, 1000; w. l., 300, 450, 600; rates, North and South American and transoceanic services 8 c. per word; station operated and controlled by I. W. T. Co.
- CLAREMONT.**—Hurt-Wood Lumber Co., owner of vessel.
- CLAVARACK.**—W. l., 300, 450, 600.
- COCHIN.**—Strike out all particulars.
- COCKBURN.**—Range, 300; system, Navy-Lowenstein, 1000; w. l., 300, 450, 600.
- COMMONWEALTH.**—System, Cutting & Washington, 1000; w. l., 300, 450, 550, 600; rates, North and South American and transoceanic services 8 c. per word; station operated and controlled by I. W. T. Co.
- COVERUN.**—Fred J. Gauntlett owner of vessel.
- COWARDEN.**—Strike out all particulars.
- COWEE.**—Fred J. Gauntlett, owner of vessel.
- COWICHS.**—W. l., 300, 450, 600; California and Oregon Lumber Co. owner of vessel; station operated and controlled by S. O. R. S.
- CRANESBURG.**—Morton Salt Co. owner of vessel.
- DAKOTAN.**—Station operated and controlled by United American Lines.
- DELPHINE (KIPD).**—Name changed to Stellaris; Stellar F. Schlotman owner of vessel.
- DELROSA.**—Station operated and controlled by S. O. R. S.
- DOLPHIN.**—Range, 150; system, R. C. of A., 1000; w. l., 300, 450, 600; rates, North and South American and transoceanic services 8 c. per word; station operated and controlled by owner of vessel.
- EASTERN CLOUD.**—Garland S. S. Corp. owner of vessel.
- EASTERN IMPORTER.**—Range, 200; system, Navy-Kilbourne & Clark, 1000; w. l., 300, 450, 600.
- EASTERN SEA.**—Station operated and controlled by S. O. R. S.
- EASTERN STAR.**—W. l., 300, 450, 600.
- ETNA.**—System, Navy-Kilbourne & Clark, 1000.
- EMPIRE STATE.**—Name changed to President Wilson.
- ESPARTA.**—United Fruit S. S. Corp. owner of vessel.
- FEJORE.**—Range, 300; w. l., 300, 600.
- FLORIDIAN.**—Station operated and controlled by United American Lines.
- FOREST KING.**—Rates, North and South American and transoceanic services 8 c. per word; effective August 1, next.
- FRED'K LUCKENBACH.**—Name changed to Castle Lodge.
- GANERI.**—Strike out all particulars.
- GEORGIAN.**—Station operated and controlled by United American Lines.
- GLENDARCEL.**—Station operated and controlled by I. W. T. Co.
- GOLDEN STATE.**—Name changed to President Cleveland.
- GULFON.**—W. l., 300, 450, 600.
- HALF MOON (KUVX).**—Range, 300; system, Navy-Marconi, 1000; w. l., 300, 450, 600.
- HAWAIIAN.**—Station operated and controlled by United American Lines.
- HAWKEYE STATE.**—Name changed to President Pierce.
- HEFFRON.**—Range, 300; system, Navy-Lowenstein, 1000; w. l., 300, 450, 600.
- H. F. ALEXANDER.**—Range, 200; system, R. C. of A. (v. t. telephone and telegraph, c. w. and i. c. w.); w. l., 300, 550, 600, 1800; rates, North and South American and transoceanic services 8 c. per word; station operated and controlled by R. C. of A.

- H. M. STOREY.—Standard Oil Co. of Calif. owner of vessel.
 H. T. HARPER.—Standard Oil Co. of Calif. owner of vessel.
 HUKEY.—Range, 200; system, Navy-Simon, 1000; w. l., 300, 600.
 HULVER.—W. l., 300, 450, 600.
 IOWAN.—Station operated and controlled by United American Lines.
 IPSWICH.—Station operated and controlled by United American Lines.
 KERMIT.—Range, 200; w. l., 300, 450, 600; hours, X; station operated and controlled by United American Lines.
 KEYSTONE STATE.—Name changed to President McKinley.
 LABORER.—Name changed to Wm. G. Howard; Thomas J. Howard owner of vessel.
 LAKE ARTHUR.—System; Navy-R. C. of A., 1000.
 LAKE WINthrop.—Station operated and controlled by I. W. T. Co.
 LEVIATHAN.—Strike out all particulars.
 LEVISA.—United Fruit S. S. Corp. owner of vessel.
 LIMON.—United Fruit S. S. Corp. owner of vessel.
 MADONNET.—Name changed to Elizabeth; A. H. Bull S. S. Co. owner of vessel.
 MADREQUET.—Name changed to Lillian; A. H. Bull S. S. Co. owner of vessel.
 MAJOR WHEELER.—System, Navy-Kilbourne & Clark, 1000; w. l., 300, 450, 600; hours, X.
 MANCHURIA.—W. l., 300, 450, 600; rates, North and South American and transoceanic services 8 c. per word.
 MANUKA.—W. l., 300, 450, 600.
 MARBON.—Range, 300; system, R. C. of A., 1000; w. l., 300, 600; rates, North and South American and transoceanic services 8 c. per word, station operated and controlled by R. C. of A.
 MARTINIQUE.—Range, 200; system, Navy-I. R. T. Co., 1000; w. l., 300, 450, 600.
 MARY.—Bull-Insular S. S. Co. owner of vessel.
 MEXICAN.—Station operated and controlled by United American Lines.
 MINNESOTAN.—Station operated and controlled by United American Lines.
 MONTICELLO.—W. l., 300, 450, 600; hours, X; station operated and controlled by United American Lines.
 MONTEKLER.—W. l., 300, 450, 600; hours, X; station operated and controlled by United American Lines.
 MOUSLITE.—Pacific S. S. Co. owner of vessel.
 MOUNT BAKER.—Frank B. Peterson owner of vessel.
 MOUNT CARROLL.—Station operated and controlled by United American Lines.
 MOUNT CLAY.—Station operated and controlled by United American Lines.
 MOUNT CLINTON.—Station operated and controlled by United American Lines.
 MYSTIC.—Station operated and controlled by United American Lines.
 NACODIGONES.—Strike out all particulars.
 NEBRASKAN.—Station operated and controlled by United American Lines.
 NRYADAN (WFF).—Station operated and controlled by United American Lines.
 NEW JERSEY.—Range, 200; system, I. W. T. Co., 1000; w. l., 300, 600; rates, North and South American and transoceanic services 8 c. per word.
 NIKA.—W. l., 300, 450, 600; H. K. Goodwin owner of vessel.
 NORTHERN STAR.—Range, 300; system, Navy-Wireless Improvement Co., 1000; w. l., 300, 450, 600.
 NORTH WIND.—A. C. Burton owner of vessel.
 NORWOOD.—Rates, North and South American and transoceanic services 8 c. per word, effective August 1 next.
 OHIOAN.—Station operated and controlled by United American Lines.
 OREGONIAN.—Station operated and controlled by United American Lines.
 ORIENTAL.—Range, 300; system, R. C. of A., 1000; w. l., 300, 600.
 ORMDALE.—Station operated and controlled by I. W. T. Co.

- OSMO.**—Strike out all particulars.
- PANAMAN.** Station operated and controlled by United American Lines.
- PAN-AMERICA.**—Range, 300; system, Federal arc; w. l., 300, 450, 1500; hours, N.
- PARSONNA.**—United Fruit S. S. Corp. owner of vessel.
- PASTORES.**—United Fruit S. S. Corp. owner of vessel.
- PENNSYLVANIA STATE.**—Name changed to President Roosevelt.
- PENNSYLVANIAN.**—Station operated and controlled by United American Lines.
- PENOBSCOT.** System, Navy-Marconi, 1000.
- PETOSKEY.**—Range, 150; system, R. C. of A., 1000.
- P. J. BRILLY.**—Station operated and controlled by I. W. T. Co.
- POZNAN.** Luckenbach S. S. Co. owner of vessel.
- PRESIDENT GARFIELD.**—System, Navy Marconi, 1000.
- PRESIDENT ROOSEVELT (KDRW).**—Name changed to Buckeye State.
- PRISCILLA.**—Range, 150; system, Cutting & Washington, 1000; w. l., 300, 450, 550, 600; rates, North and South American and transoceanic services 8 c. per word; station operated and controlled by I. W. T. Co.
- BROWNWOOD.**—Rates, North and South American and transoceanic services 8 c. per word, effective August 1 next.
- RESCUE.**—Strike out all particulars.
- RESCUEE (KDYA).**—Station operated and controlled by United American Lines.
- ROCKAWAY PARK.**—System, Navy-Wireless Improvement Co., 1000; w. l., 300, 450, 600.
- SABALE.**—W. l., 300, 450, 600.
- SAN JOSE.**—United Fruit S. S. Corp. owner of vessel.
- SARANACK.**—United Fruit S. S. Corp. owner of vessel.
- SEKANDIBEE.**—Range, 100; system, R. C. of A. v. t., telephone, and R. C. of A. spark, 1000; w. l., 300, 450, 475, 600.
- SILVER STATE.**—Name changed to President Jackson.
- SIXAOLA.**—United Fruit S. S. Corp. owner of vessel.
- STANLEY.**—System, Navy-Kilbourne & Clark, 1000; w. l., 300, 450, 600.
- STELLARS.**—W. l., 300, 450, 600.
- SUBBURY.**—Station operated and controlled by United American Lines.
- SUKICHO.**—Range, 300; system, Navy, 1000; w. l., 300, 450, 600.
- SURICO.**—Range, 300; system, Navy, 1000; w. l., 300, 450, 600; rates, North and South American and transoceanic services 8 c. per word.
- TEXAN.**—Station operated and controlled by United American Lines.
- THE LAMBS.**—Range, 300; system, Navy, 1000; w. l., 300, 450, 600; hours, N.
- TRIVISA.**—United Fruit S. S. Corp. owner of vessel.
- TURRIABA.**—United Fruit S. S. Corp. owner of vessel.
- VALLORES.**—Strike out all particulars.
- VICTORIOUS.**—System, Navy-Wireless Speciality Apparatus Co., 1000.
- VINCENT.**—System, Navy-Kilbourne & Clark, 1000; w. l., 300, 450, 600; hours, N; station operated and controlled by S. O. R. S.
- VIRGINIAN.**—Station operated and controlled by United American Lines.
- WEST IMBOEN.**—Range, 250; w. l., 300, 450, 600.
- WEST ISLETA.**—System, Navy-Kilbourne & Clark, 1000; w. l., 300, 450, 600.
- WILLIAM B. LIVINGSTONE.**—Strike out all particulars.
- WILLIAM M. MILLS.**—Name changed to D. F. McAllister; Daniel P. McAllister owner of vessel.
- W. J. CROSBY.**—North Shore Transit Co., owner of vessel.
- YANKTON.**—Strike out all particulars.
- YONKICK (KDWE).**—Rates, North and South American and transoceanic services 8 c. per word, effective August 1 next; station operated and controlled by S. O. R. S.

COMMERCIAL LAND AND SHIP STATIONS, ALPHABETICALLY BY CALL SIGNALS.

KDCM, *read* President Cleveland; KDNV, *read* President Pierce; KDPA, *read* President Jackson; KDRW, *read* Buckeye State; KDSL, *read* President McKinley; KDSV, *read* President Wilson; KDVR, *read* President Madison; KDWS, *read* President Roosevelt; KEJT, *read* D. F. McAllister; KGV, *read* Castle Lodge; KIFL, *read* Stellaris; KIST, *read* Wm. G. Howard; KOKT, *read* Irene; KORC, *read* Elizabeth; KOZO, *read* City of Los Angeles; KUGZ, *read* Lillian; WBC, *read* New York, N. Y.; WDF, *read* Glendarnet; WGB, *read* Ormidale; WSE, *read* East Moriches, N. Y.; strike out all particulars following the call signals, KDAQ, KDDW, KDWT, KDXH, KEIR, KEQG, KERI, KESL, KFT, KGC, KIBZ, KKIC, KOBS, KRP, KUJL, KULR, WAX, WDU, WDK, WKOU, and WQR.

GOVERNMENT LAND STATIONS, ALPHABETICALLY BY NAMES OF STATIONS.

(Attention and corrections to be made to the List of Radio Stations of the United States, edition of June 30, 1913.)

AKUTAN, ALASKA. Service, O; hours, X.
 BOSTON, MASS. (WVO).—Service, O; hours, X.
 BURWOOD, LA.—Strike out all particulars.
 JUPITER, FLA. (radio compass station).—Strike out all particulars.
 PUGET SOUND, WASH. (NPZ).—Call changed to NPG.

GOVERNMENT SHIP STATIONS, ALPHABETICALLY BY NAMES OF VESSELS.

(Attention and corrections to be made to the List of Radio Stations of the United States, edition of June 30, 1913.)

AUG.—Strike out all particulars.
 BROOKLYN.—Strike out all particulars.
 DIX.—Strike out all particulars.
 EIDER (KOKI).—Call signal changed to NURK.
 LEBANON.—Strike out all particulars.
 NORTH PACIFIC.—Strike out all particulars.
 OSPREY.—Strike out all particulars.
 SCHENCK.—Correct orthography Schenck.
 S. O. 426.—Strike out all particulars.
 TATTNALL.—Correct orthography Tattall.
 TRACEY.—Correct orthography Tracy.

GOVERNMENT LAND AND SHIP STATIONS, ALPHABETICALLY BY CALL SIGNALS.

KOKI *read* NURK, NEMG, *read* Schenck; NEPS, *read* Tattall, NPZ, *read* NPG; NUJL, *read* Tracy; strike out all particulars following the call signals, NAQ, NBX, NFA, NIJL, NIUT, NIQC, NIZ, WIM, and WXC.

BROADCASTING STATIONS, BY CALL SIGNALS.

KIJ (Los Angeles, Calif.).—W. L., 360, 485.
 KJR (Seattle, Wash.).—W. L., 360 only.
 KMI (Presno, Calif.).—W. L., 360, 485.
 KOJ (Reno, Nev.).—Strike out all particulars.
 KQI (Los Angeles, Calif.).—Strike out all particulars.
 KWH (Los Angeles, Calif.).—W. L., 360, 485.
 KZY (Oakland, Calif.).—*Read* San Francisco, Calif., 646 Mission Street.
 WAAB (New Orleans, La.).—Station operated and controlled by Valdemar Jensen, 137 South St. Patrick Street.
 WAAF (Chicago, Ill.).—Station operated and controlled by Chicago Daily Drovers Journal.
 WAAC (Shreveport, La.).—Address 341 Liatre Street.

- WAAK (Milwaukee, Wis.)—W. L., 360, 485.
 WCK (St. Louis, Mo.)—W. L., 360, 485.
 WGH (Montgomery, Ala.)—Strike out all particulars.
 WGI (Medford Hillside, Mass.)—W. L., 360, 485.
 WGY (Schenectady, N. Y.)—W. L., 340, 485.
 WIK (Indianapolis, Ind.)—Address 75 North New Jersey Street.

SPECIAL LAND STATIONS, BY NAMES OF STATIONS.

- ATLANTA, GA. (4XA) —W. L., 293, 275, 375.
 BANGOR, ME. (1XG) —W. L., 275, 375.
 BERKELEY, CALIF. (6ZAF) —Address 65 Market Street.
 BLACKWELL, OKLA. (5ZZ) —Address 304 West College Street.
 BUFFALO, N. Y. (8XAD) —W. L., 206, 250, 375.
 BUFFALO, N. Y. (8YQ) —Strike out all particulars.
 CAMDEN, N. J. (3YQ) —Address 201 Federal Street.
 CAMP DIX, N. J. (2YA) —Strike out all particulars.
 CLEVELAND, OHIO (8ZP) —5415 Herman Avenue.
 DALLAS, TEX. (5XG) —Strike out all particulars.
 DEARBORN, MICH. (8XD) —W. L., 460, 480, 500, 520.
 ELLSWORTH, ME. (1XC) —W. L., 275, 375.
 FORT PIERCE, FLA. (4ZN) —Strike out all particulars.
 GAINESVILLE, FLA. (4ZC) —Strike out all particulars.
 GREENSBORO, N. C. (4ZA) —Strike out all particulars.
 HIGHLAND PARK, MICH. (8XAF) —W. L., variable 200 to 530.
 HOBOKEN, N. J. (2XD) —Address 160 Duane Street, New York, N. Y.
 HOUSTON, TEX. (5ZE) —Address Brookline Avenue.
 JACKSON, TENN. (5YH) —Strike out all particulars.
 LANSING, MICH. (8XM) —Strike out all particulars.
 LEXINGTON, VA. (3ZX) —Address 23 Edmundson Avenue.
 LITTLE ROCK, ARK. (5YH) —Strike out all particulars.
 LOS ANGELES, CALIF. (6XN) —Strike out all particulars.
 MOUNT CARROLL, ILL. (9ZG) —Read Byron, Ill.
 MOUNT CLEMENS, MICH. (8XAE) —Address Fenobant Building, Detroit, Mich.
 NEW YORK, N. Y. (2XK) —Address 10 West Belmont Street.
 NORTHVILLE, MICH. (8XJ) —W. L., 425, 500.
 OAKLAND, CALIF. (6XC) —Read San Francisco, Calif., 645 Mission Street.
 OAKLAND, CALIF. (6ZAE) —Address 4045 Eighty-third Avenue.
 PAWTUCKET, R. I. (1XAD) —Address 90 Bayley Street.
 PHILADELPHIA, PA. (3XI) —Strike out all particulars.
 PHILADELPHIA, PA. (3YI) —Strike out all particulars.
 PITTSBURGH, PA. (8XV) —Montier Street, Wilkinsburg, Pa.
 RICHMOND, VA. (3ZL) —Strike out all particulars.
 ROCK ISLAND, ILL. (9XAC) —Read Davenport, Iowa; w. L., variable; address 313 East Twenty-ninth Street.
 SAVANNAH, GA. (4NB) —W. L., 280, 375.
 SCHENECTADY, N. Y. (2XQ) —W. L., 250, 1500.
 SEATTLE, WASH. (7XE) —Address 233 Broadway, New York, N. Y.
 SUNNYVALE, CALIF. (6XAG) —Address 121 East San Fernando Street.
 URBANA, ILL. (9XZ) —Address 715 Michigan Avenue.
 WACO, TEX. (5ZP) —Address Box 427.
 WASHINGTON, D. C. (3YA) —Address 401 Ninth Street NW.
 WASHINGTON, D. C. (3ZP) —1556 Newton Street NW.
 WHEELING, W. VA. (8ZW) —Station operated and controlled by John O. Stroebel, jr., and Earl W. Weimer; address 42 Poplar Avenue.
 WHITFORD, PA. (3ZT) —Address "South Hill."

MISCELLANEOUS.

COMMUNICATIONS FOR BLACK SEA PORTS.

The United States Navy Department has assigned call letters NPTX as a general call for any naval vessel stationed at Constantinople. A station ship is maintained there at all times with continuous radio watch. Any United States Shipping Board vessel having communications for Black Sea ports can clear same through this station on 600 meters without charge. The vessel also collects communications from vessels in the Black Sea intended for Shipping Board representatives at Constantinople and London or other Shipping Board vessels in that vicinity.

ADMIRALTY NOTICE TO MARINERS.

St. John's W/T station (WZM) will close down about the end of May, 1922.

The broadcasting of synoptic weather reports by Aberdeen W/T station (call signal BYD) has ceased.

Carosore W/T D. F. station has ceased to operate.

Particulars regarding the Kidbrooke W/T station: Position, lat. 51° 28' N., long. 0° 02' E. (approximately); call signal, GFA; wave length, 4,100 meters c. w.; details, weather bulletins are broadcasted daily by this station at 0830 G. M. T. (civil). The bulletin consists of a synoptic data message and contains the same details formerly transmitted by Aberdeen W/T station.

—From Admiralty Notice to Mariners, No. 755, of the year 1922.

ALASKAN STATIONS REOPENED.

The stations named below opened for the season as follows: Becherof (KUDV), June 5; Metha Nelson (KMP), June 12; Daly (KDMT), June 13; Hawk Inlet (KKAD), June 23.

KILLED WHILE ERECTING AERIAL.

Recently in Cleveland, Ohio, a father, 48 years of age, and his son, 15 years of age, were killed in a tragedy brought on when an aerial touched a 2,200-volt wire. In a hurry to set up a receiving set to hear a concert the young son, with the aid of another boy, who was seriously burned, had attached the aerial to the chimney of his house, and in doing so threw it over a high-tension wire. Not heeding the caution of other persons to tie a rope to the aerial, the young men clutched it. In the meantime friction of the aerial had rubbed off the insulation of the electric wire, a flash, the youth was killed instantly, and his father, who rushed to save him, died within a few minutes. This fatality should serve as a warning to others to be extremely careful in avoiding high tension wires, and for that purpose this narrative is published.

OPERATORS' LICENSES SUSPENDED.

First-class, second-grade license No. 1359, issued at Baltimore, Md., August 29, 1921, has been suspended for a period of three months for violation of section 5, act of August 13, 1912, in that he willfully interfered with the transmission of another station.

First-class, second-grade license No. 3695, issued at New York, N. Y., June 27, 1922, has been suspended for a period of three months for violation of article 6 of the International Convention service regulations, in that he carried on an unofficial conversation with the operator of another vessel.

INFORMATION FROM THE BERNE INTERNATIONAL BUREAU.

Great Britain.—The coast station Grimsby radio is now open, call signal GKZ. Beginning January 1, 1922, ships at sea will be able to obtain the following information by sending to one of the coast stations Cullercoats radio, Devized radio, Fishguard radio, Grimsby radio, Land's End radio, Malin Head radio, Niton radio, North Fore-

land radio, Port Patrick radio, Seaforth radio, Valentia radio, and Wick radio a radio-telegram drawn up in the form indicated below:

| <i>Information requested.</i> | <i>Form of radiogram to use.</i> |
|--|---|
| 1. A report of the local weather conditions predominating at a coast station of any post office or at a signal station of Lloyd's in the United Kingdom. | 1. Indicate weather at ——— 1. (1, write name of the station with the subject on which one desires information and the name of the ship.) |
| 2. Information on the weather in different regions of the United Kingdom or of the continent. | 2. Indicate weather at ——— meteorological ——— 2. (2, write name of ship.) |
| 3. Previsions of the weather of the Meteorological Office | 3. Indicate forecast for next ——— 3; ——— 4; meteorological ——— 5. Indicate previsions for the ——— 3 next hours ——— 4; meteorological ——— 5. (3, period ought to be indicated in hours and not to exceed 48 hours; 4, region or route desired; 5, name of ship.) |

The tax due to the coast station for the request and the reply is 6 francs 25 centimes in case where the reply can be given from the information already in possession of the coast station with which the ship is in communication. Where the coast station has to obtain the information, the tax is 9 francs and 37½ centimes, which includes the charges for an interior telegram anywhere which may be necessary.

British West Indies. The coast rate of the Kingston (Jamaica) station is 60 centimes per word, no minimum.

Mesopotamia.—The station Basra radio is now open to service with ships. The rate is 80 centimes per word.

Dutch Indies.—Beginning April 1 last the coast charge for all stations of the Dutch Indies open to general public correspondence is 60 centimes per word, no minimum.

Russia.—The coast charge of Russian stations open to general public service is 60 centimes per word; no minimum. The interior rate of Russia, applicable on ordinary radiograms originating in or addressed to this country and exchanged directly with coast stations of this same country, is 15 centimes per word; no minimum.

New Zealand.—The coast charge for the station Kaoweling radio is 30 centimes per word, no minimum, for radiograms exchanged with ships of Australia and New Zealand and 40 centimes per word for vessels other than those of Australia and New Zealand.

Solomon Islands.—The coast charge of the station Kieta radio is 30 centimes per word, no minimum, for radiograms from vessels of Australia and New Zealand and 60 centimes per word, no minimum, for vessels other than those of Australia and New Zealand.

INTERFERENCE WITH ICE REPORTS.

During the broadcasting of ice reports by the North Atlantic ice patrol vessels the radio stations of ships while in the vicinity of the patrol vessels are required by Article XLV, paragraph 3, International Convention service regulations, to cease all transmitting except distress signals. A number of complaints of violation of this regulation have been recently received by this office, and in order to eliminate this interference the department may suspend the license of any operator who maliciously interferes with the transmission of such reports.

The following is from the Hydrographic Bulletin, June 28 last: "The ice patrol vessels send out information daily relative to the ice conditions, namely, 6 p. m. and 4 a. m. (seventy-fifth meridian), but owing to the use of radio by vessels * * * the interference is so great that the purpose of the patrol is not accomplished, as it is often impossible, especially at 4 a. m., for the receiving stations to secure the information desired in time to be of the fullest benefit to shipping."

ERROR IN MAY BULLETIN REGARDING CALL SIGNALS OF NAVAL STATIONS.

On page 17 of the Bulletin for last month the following corrections should be made in the list of stations given at the bottom of the page: St. Thomas, Virgin Islands, call signal NHB; San Juan, call signal NAU; Navassa Island, call signal NKC; Guantanamo, Cuba, call signal NAW.

SEIHEL TOWER TIME SIGNALS.

Time signals are now transmitted from Eiffel Tower at 9.25 a. m. and 10.45 p. m., instead of 10 a. m. and 12.45 p. m.

RATES FOR CANADIAN STATIONS ON PACIFIC COAST.

Effective the first of this month, the coast station rate of the Canadian government stations on the Pacific coast will be reduced from 12 to 10 cents per word.

LOUISBURG (CAPE BRETON) STATION.

The Marconi Wireless Telegraph Co. of Canada has opened a continuous wave coast station at Louisburg, call signal VAS, normal transmitting wave, 2200. Coast rate 10 cents per word.

SCHEDULE OF LEAFIELD AND CLIFDEN STATIONS.

This office has been advised that on and from June 5 to 6, the period during which the high power continuous wave station Oxford-Radio (Leafield) will transmit radiograms to ships, will be 0100-0150 G. M. T. daily instead of 2300-2400 G. M. T., as heretofore. In consequence of the above it has been necessary for us to change the times of transmission of private messages and press from the Clifden station. Therefore, on and from the morning of June 6, Clifden will commence the program to ships at 0200 G. M. T. instead of 0100 G. M. T. Arrangements have been made for the notification of the alteration to be broadcasted from both Leafield and Clifden and instructions have been also given to telegraphists on outward-bound ships to advise homeward-bound ships of the alteration in the times of transmission by the respective stations.

BROADCASTING SCHEDULE OF MARKET REPORTS.

The following is a broadcasting schedule of market reports by radio. These reports are sent as press items, except where it is indicated that they are sent in code form. Forms are necessary for copying the reports sent by code, sample copies of which may be obtained from this bureau for Federal and air mail stations and for all others by writing to the broadcasting station direct. While this schedule is not complete, it is the most accurate that can be prepared from the information available and will be revised as rapidly as data are received. With the exception of Federal stations, practically all market, crop, and weather reports are sent out on 485 meters, while entertainment, news, etc., are broadcasted on 300 meters.

Federal, State, and private broadcasting stations.

(Submitted by Bureau of Agricultural Economics.)

| Name and call letters of station. | Nature of reports. | Source. | Time of transmission. | Type of transmission. |
|--|--|--------------|--------------------------------------|--|
| Arlington, Va. (Washington, D. C.), Navy Radio Station, N.A.A. | Livestock receipts five or more principal markets (code). | Federal..... | Eastern standard time. 8.45 a. m. | Telegraph, 3950 meters continuous wave transmission. |
| | Weather forecast..... | do..... | 10.00 a. m. | Do. |
| | Hog market flash, Chicago and St. Louis..... | do..... | 11.15 a. m. | Do. |
| | Fruit and vegetable shipments and shipping point information..... | do..... | 11.20 a. m. | Do. |
| | Fruit and vegetable markets..... | do..... | 1.40 p. m. | Do. |
| | Crop reports and special market news..... | do..... | 2.25 p. m. | Do. |
| | Closing live stock markets..... | do..... | 3.45 p. m. | Do. |
| | Hay and feed markets, Monday, Wednesday, and Friday..... | do..... | 4.00 p. m. | Do. |
| | Weather forecast..... | do..... | 5.00 p. m. | Do. |
| | Daily market summary..... | do..... | 5.30 p. m. | Do. |
| Ames, Iowa: Iowa State College, WOL. | Weather forecast..... | do..... | 8.45 p. m. | Do. |
| | Information not available..... | | Central time. | Phone. |
| Atlanta, Ga.: Atlanta Constitution, WGM. | Information not available..... | | do..... | Do. |
| Atlanta, Ga.: Atlanta Journal, WSB. | Weather reports..... | Federal..... | Central time. 12.00 noon. | Phone. |
| | Market report, close on cotton, grain, and spot quotations..... | do..... | 2.30 p. m. | Do. |
| | Entertainment..... | Local..... | 4.00 p. m. | Do. |
| | Hall scores, news, etc..... | do..... | 5.00 p. m. | Do. |
| Austin, Tex.: University of Texas, WFM. | Entertainment..... | do..... | 7.00 p. m. | Do. |
| | Opening cotton and grain markets..... | do..... | 9.30 a. m. | Phone. |
| | News call on cotton..... | Local..... | 12.30 p. m. | Do. |
| | Live stock report..... | do..... | 2.45 p. m. | Do. |
| | Close on cotton and grain..... | do..... | 3.15 p. m. | Do. |
| | Laredo cotton report and general shipping point news..... | do..... | 4.00 p. m. | Do. |
| Boston, Mass. (Worcester): Clark University, WCN. | Report on markets of Dallas, Fort Worth, Houston, and San Antonio, and general crop information..... | do..... | 8.00 p. m. | Do. |
| | Weather reports..... | Federal..... | Eastern time. 11.15 a. m. | Do. |
| | Massachusetts State market reports..... | State..... | | Do. |
| Bridgeport, Pa.: Diamond State Fiber Co., WEA-G. | Weather reports..... | Federal..... | 5.15 p. m. | Do. |
| | Market and crop reports..... | do..... | 11.45 a. m. | Do. |
| Buffalo, N. Y.: Federal Telephone & Telegraph Co., WGR. | Music (Thursday)..... | Local..... | 7.30 p. m. | Do. |
| | New York State market reports..... | State..... | 12.00 noon. | Do. |
| | Weather reports..... | Federal..... | 5.30 p. m. | Do. |
| | New York State market reports..... | State..... | 5.30 p. m. | Do. |
| | Education talks and entertainment..... | Local..... | 7.30 p. m. | Do. |
| Charlotte, N. C.: Southern Radio Corporation, WBT. | Weather reports..... | Federal..... | 11.00 a. m. | Do. |
| | Hall scores, etc..... | Local..... | 6.00 p. m. | Do. |
| | Market reports..... | Federal..... | 8.00 p. m. | Do. |
| | Entertainment..... | Local..... | 8.30 p. m. | Do. |
| Chicago, Ill.: Westinghouse Electric & Manufacturing Co., KYW. | Weather reports..... | Federal..... | Central time. 2.15 p. m. | Do. |
| | Fruit, vegetable, live stock, and grain (code)..... | do..... | | Do. |
| | Fruit, vegetable, live stock, grain and dairy products (code)..... | do..... | 4.15 p. m. | Do. |
| | Fruit, vegetable, live stock, and feeds..... | do..... | 6.00 p. m. | Do. |
| Cincinnati, Ohio: Cino Radio Manufacturing Co., WIZ. | Fruit, vegetable, live stock, grain and dairy products (code)..... | do..... | 7.30 p. m. | Do. |
| | Wholesale fruit and vegetable report..... | do..... | 12.00 noon. | Do. |
| | Live stock report, Chicago and St. Louis..... | do..... | 5.30 p. m. | Do. |
| | Financial and market report..... | do..... | 1.30 p. m. | Do. |
| | Entertainment, etc..... | Local..... | 3.00 p. m. | Do. |
| Crosby Manufacturing Co., WJW. | Talks, news items, music..... | do..... | 3.30 p. m. | Do. |
| | Financial and market report..... | do..... | Central time. 11.00 a. m. | Do. |
| Precision Equipment, WMT. | Live stock report, Chicago and St. Louis..... | Federal..... | 4.00 p. m. | Do. |

* Not broadcast on Saturdays from June 15 to Sept. 15.

Federal, State, and private broadcasting stations—Continued.

| Name and call letters of station. | Nature of reports. | Source. | Time of transmission. | Type of transmission. | |
|--|---|---|---------------------------|---|--------|
| Dayton, Ohio: Filke-Kumler Co., WFO. | Weather report..... | Federal | Central time, 11.30 a. m. | Phone. | |
| | Entertainment and news..... | Local | 9.00 a. m. | Do. | |
| | do..... | do | 11.00 a. m. | Do. | |
| | Market report and weather..... | Federal | do | Do. | |
| | News and entertainment, Monday, Wednesday, Thursday..... | Local | 4.00 p. m. | Do. | |
| | do..... | do | 7.00 p. m. | Do. | |
| Detroit, Mich.: The Detroit News, WWJ. | Entertainment, etc..... | do | 9.30 a. m. | Do. | |
| | Weather report..... | Federal | 10.15 a. m. | Do. | |
| | United States time signals..... | do | 11.55 a. m. | Do. | |
| | Entertainment..... | Local | 12.05 p. m. | Do. | |
| | Market quotations..... | do | 3.30 p. m. | Do. | |
| | Weather report..... | Federal | 4.05 p. m. | Do. | |
| | Sport and world news..... | Local | 5.00 p. m. | Do. | |
| | Entertainment..... | do | 7.00 p. m. | Do. | |
| Eldorado, Kans.: Midland Refining Co., WAIL. | Weather and market report..... | Federal | 10.30 a. m. | Do. | |
| | Market report..... | do | 1.30 p. m. | Do. | |
| | Weather report..... | do | 3.30 p. m. | Do. | |
| | Entertainment..... | Local | do | Do. | |
| | Market report (Saturday)..... | Federal | 1.00 p. m. | Do. | |
| Elko, Nev.: Air mail radio station, KTRK. | Live-stock receipts (code)..... | do | Pacific time, 8.30 a. m. | 3000 arc (undamped). | |
| | Live stock Chicago (code)..... | do | 12.00 noon | Do. | |
| | do..... | do | 4.00 p. m. | Do. | |
| Fort Worth, Tex.: Fort Worth Record, WFA. | Weather report..... | do | Central time, 11.30 a. m. | Phone. | |
| | do..... | do | 2.50 p. m. | Do. | |
| | Market report..... | do | 4.30 p. m. | Do. | |
| | Bull scores and news..... | Local | 5.00 p. m. | Do. | |
| | Entertainment..... | do | 7.30 p. m. | Do. | |
| | News and weather reports..... | do | 10.00 p. m. | Do. | |
| | Production, grain, and cotton opening..... | Federal | 8.45 a. m. | Do. | |
| | Weather report (code)..... | do | 11.00 a. m. | Do. | |
| | Cotton, grain, sugar, and cattle report (code)..... | Local | 2.00 p. m. | Do. | |
| | Fort Worth cash grain..... | do | 3.20 p. m. | Do. | |
| Grand Lakes, Ill. (Chicago, Ill.): Navy radio station, NAL. | Live-stock receipts (code)..... | Federal | 8.00 a. m. | Telegraph, 4900 meters (37-tube wave transmission). | |
| | Hog market flash, Chicago..... | do | 8.50 a. m. | Do. | |
| | Weather forecast..... | do | 9.00 a. m. | Do. | |
| | Hog flash Eve or more markets..... | do | 10.00 a. m. | Do. | |
| | Print and vegetable shipments, and shipping point information..... | do | 10.10 a. m. | Do. | |
| | Dairy products market report, New York and Chicago..... | do | 10.40 a. m. | Do. | |
| | Live-stock market: | | | | |
| | Chicago..... | do | 11.15 a. m. | Do. | |
| | Kansas City..... | do | 11.25 a. m. | Do. | |
| | St. Louis..... | do | 11.40 a. m. | Do. | |
| | St. Paul..... | do | 12.00 noon | Do. | |
| | Omaha..... | do | 12.20 p. m. | Do. | |
| | Chicago class code, advance estimated..... | do | 12.40 p. m. | Do. | |
| | Reports: | | | | |
| | Cash report (code)..... | do | 1.45 p. m. | Do. | |
| | Print and vegetable market report..... | do | 2.00 p. m. | Do. | |
| | Hay and feed market report..... | do | 3.45 p. m. | Do. | |
| | Dairy and poultry market report..... | do | 5.00 p. m. | Do. | |
| | Daily marketgram..... | do | 6.00 p. m. | Do. | |
| | Weather forecast..... | do | 5.30 p. m. | Do. | |
| | Weather and market reports as transmitted by University of Minnesota..... | State | 1.00 p. m. | Phone. | |
| | Hutchinson, Minn.: Hutchinson Electric Service Co., WFAN. | Weather and market reports as transmitted by University of Minnesota..... | State | 1.00 p. m. | Phone. |
| | | Market reports, estimated receipts Kansas City, St. Louis, and Chicago hog opening, and Kansas City grain (code)..... | Federal and State | 9.30 a. m. | Do. |
| | | Kansas City and St. Louis livestock and Kansas City grain..... | do | 11.30 a. m. | Do. |
| | | Chicago butter and eggs, St. Louis potatoes, and Kansas City grain (code)..... | do | 2.00 p. m. | Do. |
| Marketgram, general market information (daily except Tuesdays and holidays)..... | | do | 5.00 p. m. | Do. | |

¹ Not broadcasted on Saturdays from June 15 to Sept. 15.

Federal, State, and private broadcasting stations—Continued.

| Name and call letters of station. | Nature of reports. | Source. | Time of transmission. | Type of transmission. |
|---|---|-----------------------|--|--|
| Kansas City, Mo.: Sweeney Radio Electric Co., WILL. Western Radio Co., WDAQ. | Grain market reports for the Kansas City Board of Trade (half-hour schedule). | Local. | <i>Central time.</i> 8:30 a. m. to 12:30 p. m. | Phone. |
| | Hog report. | Federal. | 9:45 a. m. | Do. |
| | Live stock Kansas City (code). | do. | 11:30 a. m. | Do. |
| | Fruit and vegetable. | do. | 11:45 a. m. | Do. |
| | Grain report (code). | do. | 2:45 p. m. | Do. |
| | Live stock Kansas City (code). | do. | 2:45 p. m. | Do. |
| | Live stock Chicago (code). | do. | 2:25 p. m. | Do. |
| | Fruit and vegetable, Kansas City, Chicago, and St. Louis. | do. | 2:35 p. m. | Do. |
| | Repeat the 2 and 2:30 p. m. reports. | do. | 7:30 p. m. | Do. |
| | Omaha hogs and sheep, and grain report for Chicago, Omaha, and Kansas City. | Federal. | 10:15 a. m. | Do. |
| Weather forecast, Nebraska. | do. | | | |
| Los Angeles, Calif.: Lee J. Mayberg Co., KYT. | Weather forecast. | do. | <i>Pacific time.</i> 9:00 a. m. | Do. |
| | Lectures University of Southern California. | Local. | 2:30 p. m. | Do. |
| | Stock exchange report. | do. | 4:00 p. m. | Do. |
| | Music and entertainment. | do. | 4:00 p. m. | Do. |
| Madison, Wis.: University of Wisconsin, WHA. | Chicago, potatoes, hogs, cattle, sheep, egg, butter, cheese, poultry, and hay (code). | Federal. | <i>Central time.</i> 12:10 noon. | Telegraph. |
| | Weather for Wisconsin. | do. | 12:30 p. m. | Do. |
| | Weather summaries at 12:20 p. m. | do. | 12:25 p. m. | Phone. |
| | United States time signal. | do. | 12:59 p. m. | Do. |
| Manhattan, Kans.: Kansas State Agricultural Col- lege, WTQ. | Weather forecast. | do. | 9:35 a. m. | Do. |
| | Weather and opening cotton market. | do. | 11:15 a. m. | Do. |
| | Close on cotton, live stock, and produce. | do. | 2:30 p. m. | Do. |
| | Baseball news. | Local. | 6:00 p. m. | Do. |
| Memphis, Tenn.: Reichman-Cree- by Co., WEN. | Entertainment. | do. | 8:25 p. m. | Do. |
| | Sermons (Sunday). | do. | 11:00 a. m. | Do. |
| | | | <i>Daylight saving, central time.</i> | |
| | | | 10:00, 11:00, 12:10 a. m. & 1:25. | Do. |
| Milwaukee, Wis.: Gimbel Brothers Department Store, WAAK. | Market quotations of Milwaukee Chamber of Commerce. | do. | 11:00 a. m. | Do. |
| | Weather forecast (Wisconsin). | Federal. | 11:00 a. m. | Do. |
| Minneapolis, Minn.: University of Minnesota, WLB. | Weather report, Minnesota, Wisconsin, North Dakota, South Dakota, and Montana. | Local. | <i>Central time.</i> 12:10 noon. | Telegraph and followed by phone. |
| | St. Paul live stock summary of morning's market. | State and Federal. | 12:00 noon. | Do. |
| | Minneapolis wheat closing cash and futures, Minneapolis and St. Paul potatoes, summary. | Local and Federal. | 7:30 p. m. | Do. |
| Newark, N. J.: Weatinghouse Electric & Manu- facturing Co., WJZ. | Market reports, New York City wholesale fruit and vegetable. | State. | <i>Eastern time.</i> 12:00 noon. | Do. |
| | New York City wholesale fruit and vegetables, eggs, hay, butter, etc. | do. | 6:00 p. m. | Do. |
| North Platte, Nebr.: Air mail radio station, KPHM. | Live stock receipts (code). | Federal. | <i>Central time.</i> 9:30 a. m. | Telegraph. |
| | Live stock Chicago (code). | do. | 12:00 noon. | 4000 meters, are undamped. |
| | do. | do. | 5:00 p. m. | Do. |
| | Live stock, Kansas City. | do. | 8:20 p. m. | Do. |
| Omaha, Nebr.: Air mail radio station, KDEF. | Live stock, Omaha, Nebr. | do. | 8:30 p. m. | Do. |
| | Live stock receipts (code). | do. | 9:00 a. m. | Telegraph. |
| | Live stock, Chicago (code). | do. | 11:00 a. m. | 2500 meters, are undamped. |
| | Live stock, Omaha (code). | do. | 12:00 noon. | Do. |
| | Live stock, Kansas City (code). | do. | 1:00 p. m. | Do. |
| | Grain, Omaha (code). | do. | 2:00 p. m. | Do. |
| | Live stock, Chicago. | do. | 4:30 p. m. | Do. |
| | Live stock, Kansas City. | do. | 7:00 p. m. | Do. |
| Live stock, Omaha. | do. | 7:30 p. m. | Do. | |

Federal, State, and private broadcasting stations -Continued.

| Name and call letters of station. | Nature of reports. | Source. | Time of transmission. | Type of transmission. |
|---|--|--------------------|--|---------------------------------------|
| Pittsburgh, Pa. (East Pittsburgh) Westinghouse Electric Manufacturing Co., KDKA. | Fruit and vegetable (Pittsburgh) live stock (Chicago), grain. | Federal. | Eastern time. 7.45 p. m. | Phone. |
| | Chicago, hay and feed. | Local. | 7.45 p. m. | Do. |
| Reno, Nev.: Air mail radio station, KDFN. | Live stock receipts (code). | Federal. | Pacific time. 9.00 a. m. | Telegraph. 3200 meters, arc undamped. |
| | Live stock, Chicago (code). | do. | 1.30 p. m. | |
| Richmond, Ind.: Palladium Printing Co., WOP. | Indianapolis markets. | Local. | Central time. 12.00 noon. | Phone. |
| | Weather forecast. | Federal. | 4.30 p. m. | Do. |
| | Complete market reports. | Local. | 4.30 p. m. | Do. |
| | Weather, local news, music. | Federal and local. | 9.30 p. m. | Do. |
| Rochester, N. Y.: Rochester Times Union, WEQ. | New York State market reports. | State. | Eastern time. 7.45 p. m. | Do. |
| Rock Springs, Wyo.: Air mail radio station KDRN. | Live stock receipts (code). | Federal. | Mountain time. 9.00 a. m. | Telegraph. 3000 meters, arc undamped. |
| | Live stock, Chicago (code). | do. | 12.00 noon. | |
| | Live stock, Chicago. | do. | 4.50 p. m. | |
| | Live stock, Kansas City. | do. | 8.30 p. m. | |
| Schenectady, N. Y.: General Electric Co., WGY. | Live stock, Omaha. | do. | 8.30 p. m. | Do. |
| | New York City market fruit and vegetables, butter, eggs, poultry, hay, and country dressed meat. | State. | Eastern time. 7.00 p. m. | Phone. |
| St. Louis, Mo.: St. Louis University, WELW. | Market reports, live stock receipts, St. Louis and Chicago Leg. opening (code). | Federal. | Central time. 10.15 a. m. | Do. |
| | St. Louis and Kansas City opening, trend of market, Liverpool cables. | do. | 10.15 a. m. | Do. |
| | Fruit and vegetable, Chicago potatoes, live stock, St. Louis close, closing grain market. | do. | 2.15 p. m. | Do. |
| | Market reports Saturday. | do. | 1.00 p. m. | Do. |
| | Merchants Exchange reports, opening future market. | Local. | 8.40 a. m. | Do. |
| | Future market receipts and shipments. | do. | 9.40 a. m. | Do. |
| | Future market. | do. | 10.40 a. m. | Do. |
| | do. | do. | 11.40 a. m. | Do. |
| | Closing future market cash grain prices. | do. | 12.10 p. m. | Do. |
| | do. | do. | 12.10 p. m. | Do. |
| Springfield, Mass.: Westinghouse Electric & Manufacturing Co., WWSZ. | Weather forecast. | Federal. | Eastern time. | Do. |
| | Massachusetts State market reports. | State. | | Do. |
| State College, N. Mex.: New Mexico College of Agriculture and Mechanical Arts, KOB. | Time signal. | Federal. | Mountain time. 1.55 a. m. | Do. |
| | Weather forecast. | do. | 12.00 noon. | Do. |
| | Crop reports. | do. | 12.35 p. m. | Do. |
| | Music and entertainment. | Local. | 8.00 p. m. | Do. |
| Tampa, Fla.: Tampa Daily Times, WDAF. | Information not available. | | Eastern time. | Do. |
| Toledo, Ohio: The William B. Duck Co., WHD. | Grain market (Toledo). | State. | Eastern time. 9.45-12.50 and 1.45. | Do. |
| | Live stock and vegetables. | do. | 12.30 p. m. | Do. |
| | Baseball and news. | do. | 3.30 p. m. | Do. |
| | Musical entertainment Tuesday and Thursday. | Local. | 9.00 p. m. | Do. |
| Tulsa, Okla.: Midland Receiving Co., WAH. | Live stock reports. | Federal. | Central time. 10.35 a. m. and 1.30 p. m. | Do. |
| | Weather forecast. | do. | 10.30 a. m. and 3.30 p. m. | Do. |
| | Concerts (not regular). | Local. | 7.45 p. m. | Do. |

Federal, State, and private broadcasting stations—Continued.

| Name and call letters of station. | Nature of reports. | Source. | Time of transmission. | Type of transmission. |
|---|---|--------------------|--|------------------------|
| University Place, Nebr.; Nebraska Wesleyan University, WCAJ. | Weather forecast and news..... | Federal and local. | Central time. 8.30 a. m. | Phone. |
| | Omaha live stock, Chicago grain (code and press). ¹ | Federal..... | 4.00 p. m. daily 12.15 p. m. Saturday. | Do. |
| | Concerts, lectures, etc., Tuesday and Thursday. | Local..... | 9.30 p. m. | Do. |
| Washington, D. C. Post Office Department air mail radio station, WWX. | Fruit and vegetable (Washington, D. C.). | Federal..... | Eastern time. 10.30 a. m. | Phone, 1180 inlets. |
| | Live stock receipts and St. Louis and Chicago hog opening (code). |19..... | 12.30 p. m. | Do. |
| | Live stock, Chicago and St. Louis (code). ¹ |19..... | 2.45 p. m. | Do. |
| | Crop reports and special market news. ² |19..... | 3.00 p. m. | Do. |
| | General fruits and vegetable (code). |19..... | 3.30 p. m. | Do. |
| | Dairy products, New York and Chicago (code). ¹ |19..... | 5.00 p. m. | Do. |
| | Grain (code). |19..... | 5.30 p. m. | Do. |
| | Live stock and grain (code). ¹ |19..... | 7.30 p. m. | Do. |
| Fruit and vegetable (code). |19..... | 8.00 p. m. | Do. | |
| Wichita, Kans.; The Cozaco Co., WFX. | Board of trade reports, information not available. | | | Phone. |

¹ Not broadcasted on Saturday from June 15 to Sept. 15.

Note.—When no form number is indicated straight copy is used.

INTERDEPARTMENT ADVISORY COMMITTEE ON GOVERNMENTAL RADIO BROADCASTING.

At the request of the Secretary of Commerce each of the 10 Government departments have appointed representatives on an Interdepartment Advisory Committee on Governmental Radio Broadcasting. There are, in addition, representatives of the office of the chief coordinator, Bureau of the Budget, and the United States Shipping Board. The membership of the committee is as follows: Agriculture, W. A. Wheeler, Radio Development Section; Commerce, Dr. S. W. Stratton, director, Bureau of Standards; Interior, O. P. Hood, chief mechanical engineer, Bureau of Mines; Justice, S. Ely, chief clerk; Labor, A. E. Cook, office of the Secretary; Navy, Commander D. C. Bingham, Naval Communication Service; Post Office, J. C. Edgerton, air mail division; State, W. S. Rogers, International Communications Conference; Treasury, L. J. Heath, Public Health Service; War, Maj. Gen. G. O. Squier, chief signal officer; Chief Coordinator, Capt. H. P. Ferrill, assistant coordinator, Bureau of the Budget; United States Shipping Board Emergency Fleet Corporation, F. P. Guthrie, head of radio division, operating department.

The chairman of the committee is Dr. S. W. Stratton and the secretary is Dr. J. H. Dellinger, chief of the radio laboratory, Bureau of Standards, Department of Commerce. In accordance with recommendations of the committee an experimental system of Government broadcasting by "primary" broadcast stations has been established, utilizing only previously existing Government stations and equipment. The "primary" stations are stations which broadcast official Government news by continuous wave (code) telegraphy for the purpose of furnishing this information to local broadcast stations for rebroadcasting by radiophone. The eight stations thus far included send out daily bulletins of Government news, mostly agricultural market data. They are: Arlington, Va. (Navy, 5950 meters), Great Lakes, Ill. (Navy, 4900 meters), Washington, D. C. (Post Office, 1950 meters), Omaha, Nebr. (Post Office, 2500 meters), North Platte, Nebr. (Post Office, 4000 meters), Rock Springs, Wyo. (Post Office, 3000 meters), Elko, Nev. (Post Office, 3000 meters), Reno, Nev. (Post Office, 3200 meters).

The committee has made a preliminary classification of the kinds of material which the several departments may have to broadcast by the primary stations, namely, market prices and data, weather and hydrographic news, standard radio signals (such as wave length and time signals), executive announcements, statistics, and educational material. One of the functions of the committee is to advise regarding priority of the types of Government material to be broadcasted and regarding schedules of operation.

The committee has recognized the principle that radio must be used, primarily, for types of service that can not be as satisfactorily given by other means of communication, and that therefore radio broadcasting should not be used in general where wire telegraphy or telephony or printed publication would be as satisfactory. It is possible that the scope of the committee's activities may be extended beyond the subject of broadcasting, and that the committee will act in an advisory capacity to the Secretary of Commerce in matters of Government radio regulation and will consider all radio questions of interdepartmental interest.

—Submitted by Bureau of Standards.

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