

HEINL RADIO BUSINESS LETTER

INSURANCE BUILDING

WASHINGTON, D. C.

ISSUED TWICE A WEEK AND CONTAINING THE LATEST INFORMATION REGARDING THE RULINGS OF THE FEDERAL RADIO COMMISSION, RADIO LEGISLATION, DEPARTMENT OF COMMERCE REGULATIONS, CHANGES IN WAVELENGTH, CALL LETTERS AND POWER, PATENTS, EXPORTS, FEDERAL TRADE COMMISSION RULINGS AND OTHER MATTERS OF INTEREST TO BROADCASTERS AND MANUFACTURERS. :: :: CONFIDENTIAL—NOT FOR PUBLICATION. :: ::

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No. 368

WILL PUT CLAMP ON LICENSE TRANSFERS

All requests for assignment of radio broadcasting licenses are being most carefully scrutinized by the Commission, and its various divisions, to determine the financial responsibility of the new applicant for a license, his standing in the community and the necessity, if any, for continuing the station.

So many applications for change of ownership of stations have been filed recently that it appears trafficking in radio licenses is a new form of speculation developing in this country.

Section 12 of the Radio Act provides that no station license shall be transferred or assigned either voluntarily or involuntarily without the consent in writing of the licensing authority.

Emphasis is placed on the fact that all privileges granted under a license expire at the end of a license period, that the license is a franchise which cannot be sold.

Another apparent effort to take advantage of the Commission is the fact that numerous stations licensed to broadcast daily for short periods for the benefit of schools and churches are making application for the assignment of their licenses to commercial corporations. In most cases the request is accompanied by an appeal for more time on the air.

It is common knowledge that the Commission, in its desire to promote educational features and to carry church programs to the homes of the people, have been most liberal in granting licenses to those groups of applicants.

A few stations licensed to conduct charitable and altruistic work have been commercialized and now insist on more time to take care of advertisers.

All applications for assignment of such licenses will be carefully studied by the Commission and its investigators, and a real necessity for a commercial station must exist before such transfers are authorized.

It is likely that the Commission, in many cases, will find it advisable to cancel these licenses, rather than add to the overloaded channels. It would be a fine, patriotic service for these licensees to retire voluntarily from the field, if there is no longer any need of radio in their service, thus aiding the Commission in relieving some of the congestion in the air.

The Commission has just authorized an investigation of reports that the harmonics emitted by some broadcasting stations are causing much interference with reception on some frequencies used largely by commercial stations.

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MIDGET RADIOS ON THE MARKET

The midget is the thing this season in sports and automobiles, and now the radio industry has reduced its receiving set cabinet to meet the demands of miniature golf course players and drivers of baby cars.

Forty-four manufacturers are placing some 58 models of midget receivers on the market this Fall, the current issue of Radio Retailing reveals. A variety of shapes, but all small enough to place on console tables or mantelpieces, are on display.

Some of them have the shapes of clocks and even have small timepieces in the center of the cabinets, making the illusion more realistic.

They range in size from $14\frac{1}{2}$ x $13\frac{1}{2}$ x 9 inches to 20 x $13\frac{1}{2}$ x 7 inches. Prices run from \$59.50 (with tubes) to \$75, and the weights of the whole cabinet and speaker range from 18 to 40 pounds.

Some of their names are as characteristic as those attached to the one-lot golf courses. For instance, there is the Tom Thumb, several Juniors, Home Pal, and a few Mantels.

Several of the midget sets even include a phonograph.

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SHORT WAVE CASE OCT. 13

Oral arguments in the continental short wave litigation involving the claims of four appellants for radio frequencies with which to create domestic radio telegraphic networks, will be heard by the Court of Appeals of the District of Columbia on October 13th.

Parties to the case are the Radio Corporation of America, the Mackay Radio and Telegraph Company, the Intercity Radio Telegraph Company, for which a receiver has been appointed, and the Wireless Telegraph and Communications Company, which appealed jointly with Intercity.

The status of the case has been altered by virtue of the receiverships of the Intercity and Universal companies, and the Court will be formally apprised of these conditions.

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N. J. RADIO PLANTS EMPLOY 25,000

By Sept. 19, Camden, N. J., will have 25,000 workmen engaged in the manufacture and distribution of radio sets, Senator Baird (Rep.), of New Jersey told President Hoover on September 12th.

A concentration of manufacturing and distributing activities of the Radio Corporation of America, the Victor Company, the General Electric, Westinghouse, and Graybar companies, already has 18,000 men working in Camden, the New Jersey Senator said. Mr. Baird is endeavoring to secure the Secretary of Commerce, Robert P. Lamont, for an address to the employees on September 19th when the plants will be formally opened. They will have a capacity of 10,000 sets a day, he said.

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BETTER RADIO SALES SEEN IN BRAZIL

Following are excerpts of a report on Brazil as a radio market, prepared by Trade Commissioner David S. Green at Sao Paulo for the Department of Commerce:

"While popular favor at present leans toward cheap low-powered sets, projected improvements in the quality and diversification of programs will undoubtedly be reflected substantially in the sales volume of more expensive equipment. During the year 1929, exports of radio apparatus from the United States to Brazil amounted to \$550,037 in value, according to United States export statistics. Of this amount \$171,973 was accounted for by complete receiving sets and \$128,422, was for receiving set components. Radio tubes exported to Brazil during that year amounted to \$90,248. United States export statistics for the first six months of 1930 show that the value of radio apparatus destined for Brazil amounted to \$250,656. Stocks are low, however, and a substantial increase in orders is anticipated before the end of the Summer.

"The location of the City of Sao Paulo and most of the State on a plateau, with mountains, separating it from Rio de Janeiro, seriously impairs the reception of distant broadcasting, with the exception of several very powerful short-wave stations in the United States which are heard in Brazil very well by those people possessing the proper type of receiver.

Only Two Stations

"At present there are only two stations operating in the City of Sao Paulo, one of these having been in operation for six years and offering an excellent program. It is equipped with crystal control, and its power is 1 kilowatt. Another broadcasting station is to be placed in operation from the top of the 24-story Martinelli

building in Sao Paulo. This station is to be backed financially by an agent for several well-known American lines. The wave length of this station has not yet been determined.

"Several foreign radio groups are giving serious thought to the erection of stations to pick up short wave programs from the United States and Europe, planning to rebroadcast them over a wave within the range of the more popular receiving sets. The accomplishment of such a project would cause a decided increase in radio popularity.

"The Sao Paulo district is generally regarded as the most important one in Brazil from the standpoint of radio sales. Trade estimates have placed the number of receiving sets in operation in the State of Sao Paulo at 40,000. Of this total, probably 25,000 are crystal sets, 9,000 battery-operated sets, and 6,000 electrically operated sets. Of the 9,000 battery-operated sets, it is estimated that 5,000 were imported assembled and 4,000 made up locally largely of imported parts. At least 90 per cent of the electric sets are believed to have been imported in one or another stage of assembly.

No Local Industry

"Local manufacture of complete radio sets has ceased on an industrial scale, with the failure last year of Radio Industrial Brasileira. This firm imported very few of its parts and, perhaps largely for this reason, its sets did not give satisfaction for very long. There are, however, a number of radio enthusiasts who have developed into specialists and who construct sets, largely of imported parts. Servicing facilities are comparatively good, at least in the city of Sao Paulo. Special servicing departments are now maintained by the outstanding distributors.

"At present the demand for short-wave receivers is limited only by their relatively high cost. Theoretically this should be a good market, owing to the relatively small time differential between Brazil and the United States or Europe. Reception from these points is comparatively good under favorable weather conditions. Many potential customers, however, are holding off in the expectation of early establishment of a Brazilian station to relay and rebroadcast short-wave programs from distant points.

"European manufacturers, particularly the Netherland firm Phillipa, are giving very strong competition in the sale of tubes. This firm is reported to be doing well in the Sao Paulo market with its new line of alternating-current tubes and with special battery tubes."

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: BUSINESS LETTER BRIEFS :

The Hazeltine Corporation of Jersey City filed an equity suit in Federal Court at Newark, September 10th for patent infringement against the Radio Frequency Laboratories, Inc., of Boonton, N.J. The defendants are charged with making profits exceeding \$500,000 by infringing on a radio invention of Louis A. Hazeltine. Judge William N. Runyon signed an order directing the defendants to show cause on September 22nd why a preliminary injunction should not be issued.

Despite the advance in the radio art, carrier pigeons are still being used as supplemental to wire and wireless communication in the Army although they have been virtually abandoned by the Navy. The Army still has about 700 pigeons, some 450 of which are at Fort Monmouth, N. J.

As was predicted in a recent Business Letter, the Crosley Radio Corporation has announced that a large number of land grant college and university stations throughout the United States are going to rebroadcast educational programs picked up from the Crosley short wave station, W8XAL. For the present programs from the Ohio Department of Education will be relayed, but it is rumored this service will be later extended to include addresses directly from Washington.

The radiotelephone was used to great advantage by the New York Times and press associations in covering the Argentine revolution after a censorship had been clamped on the cables. The telephone was used for communications for several days before the Argentine government officials awoke to the leak and put a censorship on its use also.

Said Prof. Henry Bailey Rathbone, of New York University, at a recent meeting of the New York State Publishers' Association: "Radio is becoming a dangerous competitor for newspaper advertising. Where the newspaper is reaching its hundreds of thousands, or its thousands, or merely its hundreds, the radio is claiming an audience of millions for its advertising messages."

American radio engineers have organized for the International Radio Consultative Conference at Copenhagen next year. Dr. C. B. Jolliffe, Chief Engineer of the Radio Commission, is Executive Chairman, and Gerald C. Gross, short wave engineer on the Commission, is Secretary. Four Committees have been named.

Capt. S. C. Hooper, Director of Naval Communications, is Chairman of the Committee considering stability of transmitters; Hardan Pratt, Chief Engineer of Mackay Radio & Telegraph Co., is Vice Chairman; and Lieut. Commdr. Redman, U.S.N., is Secretary. William D. Terrell, Chief of the Commerce Department Radio Division, is Chairman of the Committee to study the reduction of short wave interference, with Lloyd A. Briggs, of RCA, as Vice Chairman, and Laurens E. Whittemore, of the American Tel. & Tel., Secretary.

Marconi, in the inaugural address at the second meeting of the Italian Society for Advancement of Science September 11th, expressed belief that radio waves may travel long distances, even millions of miles beyond the earth's atmospheric layer, according to the Associated Press.

He said he did not see any reason why, as some scientists maintain, waves produced on the earth should not travel such a distance, since light and heat waves reach us from the sun, penetrating the atmospheric layer.

The Operadio Manufacturing Co., of St. Charles, Ill., which installed the public address equipment at the National Air Races in Glenview, Ill., submits the following sidelights on the equipment used:

The speakers used weighed approximately eight tons; approximately ten miles of wire were used in the installation; over \$30,000 worth of equipment was installed; approximately 345 watts of undistorted output was used; the installation was so designed that it could be controlled from a remote position; approximately one mile of grand stands and parking area were covered with sound.

Government radio stations which have been operated by the Radio Corporation of the Philippines were turned over to the Philippine Bureau of Posts on September 16, the Department of Commerce has been informed. The Governor General stated that "this is a temporary measure and not designed as a permanent solution of the problem."

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APPLICATIONS RECEIVED BY FEDERAL RADIO COMMISSION

September 11 - WGR, Radio Station WGR, Inc., Amherst, N.Y., request for authority to voluntarily assign license to Buffalo Broadcasting Corp.; WMAK, WMAK Broadcasting System, Inc., Grand Island, N. Y., request for authority to voluntarily assign license to Buffalo Broadcasting Corp.; WILL, University of Illinois, Urbana, Ill., request for authority to install automatic frequency control, application supersedes construction permit application dated 8/16/30; For New Stations: Chas. Smuck, Springfield, Miss., C. P. to erect a new station to use 1500 kc., 100 W., and unlimited hours; F. E. Garvin, M. R. Wagner, and Hoke Jones, d/b as Garvin Furniture Company, Newton, N. C., C. P. to erect a new station to use 1370 kc., 100 w. and unlimited hours; Roy Rhodes, LaGrange, Indiana, C. P. to erect a new station to use 1500 kc., 15 watts, and an average of 10 hours per day.

September 12, 1930 - WRDO, Albert S. Woodman, Augusta, Maine, modification of C. P. to extend completion date on c.p. to 12.9.30; WIBM, C. L. Carrell, near Jackson, Michigan, request for authority to voluntarily assign license to WIBM, Inc.; KFJF, National Radio Manufacturing Co., 9 miles east of Oklahoma City, Oklahoam, modification of C. P. to extend completion date on C. P. to 9/26/30; KJBS, Julius Brunton & Sons Co., San Francisco, Cal., license to cover C. P. issued 8/9/30 to make changes in equipment; KFIO, Spokane Broadcasting Corp., Spokane, Wash., modification of license to request authority to operate from midnight to local sunset, P.S.T., station now operates daytime hours only; Starret Construction Company, Detroit, Michigan, C. P. to erect a new station to use 1480 kc., 100 W., and unlimited hours.

Applications Other Than Broadcasting

September 11 - WBF, Tropical Radio Telegraph Co., Hingham, Mass., C. P. for change in location and change in equipment, 6770, 10450, 12940, 17580 kc., (2 transmitters) 1 KW each, public coastal service; also, C. P. for change in location, change in equipment and one additional transmitter, 147, 436, 500, 4172, 8550, 12370, 22400, plus calling frequencies (3 transmitters) 1 KW, 750 watts, 20 KW (new), Coastal service; WAG, Mackay Radio & Telegraph Co., near Rockland, Maine, license for new service (Marine Relay), 109 kc., 5 KW; RCA Communications, Inc.; WET, Rocky Point, N. Y., renewal of limited public license for 9470 kc., 80 KW; WAZ, New Brunswick, N. J., renewal of limited public license for 7415, 14920, 17860, kc., 80 KW; WQH, Rocky Point, N. Y., renewal of limited public license for 18880 kc., 80 KW; WQS, Rocky Point, N. Y., renewal of limited public license for 13915 kc., 80 KW; WQC, Rocky Point, N. Y., renewal of limited public license for 15040 kc., 80 KW; KTK, Globe Wireless, Ltd., Mussel Rock, Calif., modification of coastal license for new transmitter on 5525, 11050, 16580, 22100, 4116, 6515, 8630, 11020, 16900, 22160 kc., 500 watts; K7XF, A.A. McCue, on M/S "Kiska" in vicinity of Boc de Quadra, Alaska,

license to cover C. P. for 1604, 2398, 3256, 4795, 6425, 8650, 12850, 17300 kc., 50 watts, experimental service; American Radio News Corp., Carlstadt, Bergen Co., N. J., modification of C. P. for change in location of transmitter to Carlstadt, N. J.; J. Carroll Melton, Norfolk, Va., new C. P. for 6080 kc., 500 watts, experimental service.

September 12 - Pan American Airways, Inc.: KHFQJ, Airplane NC-146 M, KHFSH, Airplane NC-304-N, KHFWD, Airplane NC-945-M, KHASH, Airplane NC-9107; KHFKEP, Airplane NC-75-K; KHFOL, Airplane NC-144-M; KHAPK, Airplane NC-8044, KHATZ, Airplane NC-9151, KHAKP, Airplane NC-8000, KHFRI, Airplane NC-300-N, KHABY, Airplane NC-9776, KHAHZ, Airplane NC-9775, modification of Aircraft licenses for additional frequency of 8650 kc.

September 13 - WPDH, City of Richmond, Police Dept., Richmond, Ind., modification of C. P. for change in location of transmitter; also license to cover, C.P. for 2416 kc., 50 watts, limited commercial police service; Pan-American Airways, Inc., KHFAZ, Plane NC-9137; KHFNM, Plane NC-142-M, KHFVE, Plane NC-309-N, KHFUF, Plane NC-306-N, KHAVE, Plane NC-8020, modification of aircraft licenses for additional frequency of 8650 kc.

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DECISIONS OF THE FEDERAL RADIO COMMISSION

September 12 - The Commission granted the following applications:

KKB, Globe Wireless, Ltd., Sherwood, Oregon, license, frequency 500 kc., calling, 460 kc. working, 1500 watts; KJV, Radiomarine Corp. of America, Baytown, Texas, modification of license to read as follows: "hours of operation from 8 A. M. to 5 P. M., local standard time"; WDA, RCA Communications, Inc., Rocky Point, N. Y., license frequency 9480 kc., 80 KW, A1, A2, A3, Emission, to communicate with Curacao, Paramaribo, S. Martin and any other stations of RCA; WDB, RCA Communications, Inc., Rocky Point, N. Y., license frequency 6717.5 kc., 80 KW, A1, A2 and A3 emission, to communicate with Managua, Tokio and any other stations with which other RCA stations are licensed to communicate; Mutual Telephone Co., Honolulu, T. H., C. P. to install high frequency point to point equipment to carry on inter-island telephone service, general coastal telephone service, frequency 164 kc., 50 watts; Aeronautical Radio, Inc., frequency 5540 kc., to be used for period not to exceed 60 days on Blue Chain; KHILQ, Crosley Radio Corp., Plane NR-49 6-M, permission to use 457 kc., as a broadcast pickup frequency during period of National Reliability Tour, September 11th to 27th; WMAQ, WMAQ, Inc., Chicago, Ill., permission to use frequency 1584 kc., in lieu of 1564 kc., for test program from yacht on Lake Michigan; Loren W. Mendell, Airplane "Pride of Hollywood", license 3106 kc., calling and working frequency for itinerant aircraft (Not to be used for rebroadcast purposes) 2368 kc for transmission to be rebroadcast, not to be used for other purposes; 50 watts, A3 emission; KGJE and KRM, Federal State Marketing

Service, Sacramento, Cal., C. P. to erect 100 watt station at Santa Maria, Cal., frequ. 3250, 4244, 5365 kc., also granted license for Station KRM at Sacramento, 100 watts, frequency as above (these applications were heard in Los Angeles, July 17th, 1930. The Commission desired to go fully into question of what use was being made by this service of these frequencies).

Also, KIDO, Frank L. Hill & C. G. Phillips, d/b as Boise Broadcast Station, Boise, Idaho, modification of C. P. to make changes in equipment and install automatic frequency control, and change hours of operation to unlimited until other assignment on 1250 kc.; KFIO, Spokane Broadcasting Corp., Spokane, Wash., license on 1120 kc., 100 watts, daytime; KFQU, W. E. Riker, Holy City, Cal., license on 1420 kc., 100 watts, sharing with KGGC; KOOS, H. H. Hanseth, Inc., Marshfield, Ore., C. P. to move transmitter and studio locally in Marshfield; KWWG, City of Brownsville, Chamber of Commerce, Brownsville, Texas, C. P. to make changes in equipment; WISN, The Evening Wisconsin Co., Milwaukee, Wis., C. P. to install new equipment, maximum power of 500 watts, and automatic frequency control.

In addition to the above there was granted Ship Licenses as follows: 7 renewals; 5 new and 2 modifications.

Set For Hearing

WQDX, Stevens Luke, Thomasville, Ga., asks for C. P. to move studio locally in Thomasville, change frequency from 1210 to 1340 kc., increase power from 50 to 500 watts and change equipment; Robert J. Boudreau & Joshua A. Trotti, Lake Charles, La., asks for C. P. for new station, 1000 kc., 5 KW, unlimited time, also to use portable to test for location; WCDA, Italian Educational Broadcasting Co., New York City, asks for C. P. to install new equipment and increase power from 250 watts to 1 KW; WIOD-WMBF, Isle of Dreams Broadcasting Corp., Miami Beach, Fla., asks for C. P. to install new equipment and increase day power from 1 to 2½ KW (retain 500 w. night with additional 500 w. experimentally, unlimited time, and 1300 kc.). This application, which originally requested increase in power from 1 KW to 2½ KW day and night was set for hearing in Minutes of June 30th, request was amended to increase day power only as above; Atlantic Broadcasting Corp., Portable, Los Angeles, asks for C. P. to construct and use a transmitter in connection with the direction of motion picture filming, 4795 kc., 15 watts, unlimited time.

Applications Dismissed

The following were set for hearing but applicants advise they do not desire to be heard: WHP, Pennsylvania Broadcasting Co., Harrisburg, Pa., requested modification of license 930 kc., unlimited time, 250 watts, 500 w. LS.; KTSM, W. S. Bledsoe & W. T. Blackwell, El Paso, Texas, requested modification of license 1210 kc., 100 watts, unlimited time; Clement Finch and Ervin H. Knapp, Maysville, Ky., requested C. P. for new station 750 kc., 100 watts, unlimited time.

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HIGH POWER HEARINGS BEGIN

Hearings on applications of stations operating on cleared channels for permission to use 50,000 watts got under way Monday morning before the Federal Radio Commission with the case of Station WHAM, Rochester, N. Y., the first to be heard. The applications, which will be heard in the order of Zones, are confined to the First Zone this week.

Four applicants are to be heard, and in addition seven cleared channel stations, affected in one way or another, are attending upon invitation of the Commission and will probably testify.

R. McCann, President of the Stromberg-Carlson Manufacturing Co., operation of Station WHAM, was the first witness.

Ellis Yost, Chief Examiner, is presiding at the hearing, and Commissioner William D. L. Starbuck sat in Monday. It is expected that the several Commissioners will pay particular attention to their respective zones though they are not required to attend the hearings. Ben S. Fisher is the Commission's attorney.

Other applications scheduled this week are those of Stations WBZ, Boston, Mass.; WOR, Newark, N. J., and WJZ, New York City. Stations notified are WEAJ, New York City; WABC, New York City; WBAL, Baltimore; WPG, Atlantic City; WLWL, New York City; WOWO, Fort Wayne, Ind.; and WWVA, Wheeling, West Va.

A more complete account of the hearings will be carried in the Thursday Business Letter.

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CANADA TO USE ARMY-NAVY CHANNELS

In an effort to expand its broadcasting facilities with the least possible inconvenience to the United States, Canada has notified the State Department that it henceforth will use three long-wave channels which are outside the broadcast band internationally agreed upon and are now utilized by the Army and Navy of this country for aeronautical communication.

The Canadian problem has been a disturbing one for some time, but the United States has guarded jealously its large majority of broadcasting facilities. Out of the 96 kilocycles allotted to the North American continent, Canada has only six exclusive channels and shares eleven others with this country.

Upon receiving the information from Canada, William R. Castle, Assistant Secretary of State, immediately called a conference of the Federal Radio Commission, the Radio Division of the Department of Commerce and radio executives of the Army and Navy on September 12th.

While the details of the plan were not available, it was presumed that the Dominion intended to use the three designated channels for low power stations in the interior of the country. If such is the case, the chances are 99 out of 100, it was said, that no interference will be caused the Army and Navy.

According to the rules adopted by the International Radiotelegraph Convention in 1927, a Nation may use any channel provided no interference is caused with operations of other countries having a prior claim to the frequencies.

The channels are 520, 530, and 540 kilocycles, while the broadcast band is from 550 to 1,500 kilocycles. The former is close to the international distress signal, which is 500 kilocycles.

Should this experimental plan not prove feasible, it is likely that Canada will make a fight for more broadcasting frequencies at the next International Radio Convention. And as it is, this country hasn't enough channels to satisfy the numerous applicants.

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HEARINGS SCHEDULED BY FEDERAL RADIO COMMISSION

September 29 - WBBM-WJBT, Atlass Co., Inc., Chicago, Ill., modification of license, to 770 kc., 25 KW, unlimited time; KFAB, Nebraska Buick Automobile Co., Lincoln, Neb., modification of license to 770 kc., 5 KW; also C. P. to 770 kc., 25 KW, unlimited time.

September 30 - WIBJ, formerly C. L. Carrell, Springfield, Mo., C. P., 1200 kc., unlimited time, 100 w.; Howard T. Bailey, Elmer Hicklin & V. M. Blankenship, (KBHB Broadcasting Co.), Kennett, Mo., C. P., 1230 kc., unlimited time, 250 w.; KWKC, Wilson Duncan, Kansas City, Mo., modification of license, 1370 kc. 100 w., unlimited time; Clement Finch & Ervin H. Knapp, Maysville, Ky., C. P., 750 kc., 100 w., unlimited time; Howard P. Drake, Bolivar, Mo., C. P., 1320 kc 15 w., 2 hrs. day, 1 hr. evening; Wm. J. Kluth, Jr., Nevada, Mo., C. P., 1450 kc., 50 w., unlimited time; Harlan Radio Broadcasting Co., Harlan, Ky., C. P., 1210 kc., 100 w., unlimited time; Sewall B. Jackson, Memphis, Tenn., C. P., 1210 kc., 50 w., unlimited time; John R. Anderson, Cardwell, Mo., C. P., 1420 kc., 25 w., unlimited time; Milbourne O. Sharpe & Robt. T. Smith, Radio Station WMNT, Middlesboro, Ky., C. P., 1420 kc., 15 w., unlimited time; Dairy Farmers Station, Inc., Mayfield, Ky., C. P., 1420 kc., 50 w., unlimited time; J. L. Williford, C. Votaw, F. H. Jennings, Mt. Carmel on the Air, Mt. Carmel, Ill., C. P., 1420 kc., 15 w., daytime; E. St. Louis Daily Journal Co., E. St. Louis, Ill., C. P., 640 kc., 1 KW, unlimited time; Charles Rodgers & Glenn Schuler, Mt. Carmel, Ill., C. P., 1370 kc., 15 w., daytime hours.

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