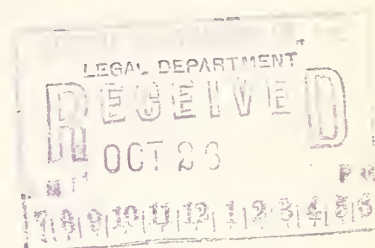


HEINL RADIO BUSINESS LETTER

2400 CALIFORNIA STREET

WASHINGTON, D. C.



INDEX TO ISSUE OF OCTOBER 25, 1940

Not The War But Ionosphere Storms.....	2
FCC Amends Amateur Rules.....	3
Paid Time Seen As Political Test.....	3
Richmond Station Asks Increase.....	3
Newfoundland Station Figures In Portland Denial.....	4
Engineers Prepare For Fall Meeting.....	5
Full Steam Ahead For RCA In National Defense.....	6
Sixteen Stations Granted Power Increases.....	8
Crosley On All Six International Frequencies.....	9
Cornell-CBS Hookup Approved.....	10
Trade Notes.....	11
Defense Commission Surveys Radio.....	11
NBC Returns To Air With Television Tests.....	12
WJJD And WIND On Competitive Basis.....	12

No. 1277



NOT THE WAR BUT IONOSPHERE STORMS

If the short-wave programs from Europe do not come in as clear this Winter as those from South America, don't blame it on the war. Dr. A. T. Consentino of the Argentine Ministry of the Interior, and Dr. J. H. Dellinger in the U. S. Bureau of Standards in Washington, declare in a joint article that because of ionosphere storms radio signals going north and south at this season are much greater in volume and considerably less variable than broadcasts between the United States and Europe.

The study was made to determine what happens on transmission paths between South America and the other continents, and has yielded an explanation of the North Atlantic anomaly.

The work was confined to the northern winters or southern summers, because it is only at that time of year that there is an opportunity to make observations in the Americas on radio broadcasting from Europe. Radio transmission at broadcast frequencies occurs over great distances only at night, and it is only in December and adjacent months that there are periods when local interference is absent and night prevails throughout the region between Europe and eastern North America or Argentina.

The work of the noted Argentine and American scientists has established the fact that radio transmission between South America and either North America or Europe is relatively free from influences that seriously impair transmission between North America and Europe. For the time of year at which the measurements were made (northern winter or southern summer), the received intensities for transmission between North America and South America average approximately 25 times the intensities between North America and Europe, and are only about one-fifteenth as variable.

The conditions of low and variable received intensity are characteristic of radio transmission over any path at times of ionosphere storms. Since the North America-Europe transmission path is near the magnetic pole and auroral zone, where ionosphere storms have maximum effects, that path is thus markedly subject to ionosphere storms, even relatively slight ones which would have no effect on transmission over paths farther south.

The effect occurs at high as well as broadcast frequencies and is so marked that it is commonly impossible to communicate directly between North America and Europe during ionosphere storms, and radio traffic is then actually carried on by relaying through Buenos Aires. As these conditions prevail for several days, the North America-Europe transmission path is almost never entirely

free from ionospheric storminess, the prevalence of which in the transmission path appears to present a complete explanation, Dr. Consentino and Dr. Dellinger conclude, of the unsatisfactory transmission between North America and Europe.

X X X X X X X X X

FCC AMENDS AMATEUR RULES

The Federal Communication Commission's Rules and Regulations was modified for a temporary period so as to permit an amateur station which is moved from one permanent location to another permanent location prior to May 1, 1941, to be operated at the latter location (in accordance with the provisions governing portable stations) for a period not exceeding four months, but in no event beyond the expiration date of the license; provided a proper application for modification of license is duly filed with the Commission.

X X X X X X X X X

PAID TIME SEEN AS POLITICAL TEST

Mark Sullivan, the political writer, has offered the following suggestion as to how to tell the difference between "President Roosevelt" and "Mr. Roosevelt, the Third Term candidate".

"To save hearers and readers from the inconvenience of determining which of Mr. Roosevelt's utterances is political and which presidential, a method of labeling has been thoughtfully arranged. When the Democratic National Committee pays the cost of the radio time and the expense of the trip, it is a political speech. When the Government pays the expense of the trip, and the radio time is donated to the President as a public official, that is a presidential speech.

Thus, the public is benevolently enabled to know when Mr. Roosevelt is appealing impartially and officially to all the people, in the interest of national defense, and when he is seeking votes for himself."

X X X X X X X X X

RICHMOND STATION ASKS INCREASE

A construction permit to install a new transmitter, make changes in directional antenna for night use and an increase of power from 1 kilowatt to 5 kilowatts on 880 kc., has been applied for to the Federal Communications Commission by Station WRNL, Richmond Radio Corporation, Richmond, Va.

X X X X X X X X X

NEWFOUNDLAND STATION FIGURES IN PORTLAND DENIAL

International, as well as domestic considerations, figured in denial by the Federal Communications Commission of two petitions for rehearing of its grant, on July 16, to the Portland Broadcasting System, Inc., of a construction permit to change the frequency of radio station WGAN at Portland, Me., from 640 to 560 kilocycles, and to increase power from 500 watts limited time to 5 kilowatts unlimited time.

Rehearing was sought by two petitioners each of whom has an application pending for the use of 560 kilocycles. They are Community Broadcasting Service, Inc., licensee of WABI, at Bangor, which has applied to change its frequency from 1200 kilocycles to 560 kilocycles and to increase its power from 250 watts to 1 kilowatt; and William H. Rines, who has applied for a construction permit to erect a new station at Portland to operate on 560 kilocycles, with power of 5 kilowatts day and 1 kilowatt night. The three applications are mutually exclusive.

The Commission points out that before WGAN filed its present application, it had filed an application (later withdrawn) for unlimited time on 640 kilocycles. Shortly thereafter the government of Newfoundland advised the Commission that the 640 frequency was assigned to it by the North American Regional Broadcasting Agreement and that Station VONF, which operates on this frequency, is in many instances the only effective means of keeping the Newfoundland public informed as to weather reports, government decrees, and other news. Newfoundland pointed out that even as then operated WGAN caused serious interference to the secondary service area of VONF and that the grant of the application would increase the interference. Newfoundland proposed that if the Commission would not assign 640 kilocycles to any station in the United States which would cause interference to VONF's secondary service area, Newfoundland would relinquish in favor of the United States all claims to the frequency 560 kilocycles also assigned to Newfoundland. These terms are mutually agreeable to both countries.

The Commission found that WGAN and WABI were both qualified to operate stations as proposed in their applications. Between these two stations the question narrowed as to whether the public would be better served by location of new facilities in Portland (WGAN) or in Bangor (WABI).

It was found that WGAN would provide a greater service than WABI. Further, it appeared that there is greater need in Portland for the radio service requested than in Bangor. Portland, Maine's largest city, is served both day and night by only one local station as compared to two stations serving Bangor, with less than half Portland's population.

In the case of the Rines application, the Commission determined that public interest, convenience or necessity would be better served by the WGAN grant. WGAN offered more adequate cover-

age. The WGAN grant did not involve objectionable interference to any station, whereas the proposed Rines service would interfere with CJKL at Dane, Ontario, in violation of the North American Regional Broadcasting Agreement. The WGAN equipment is satisfactory but part of the proposed Rines installation is not. The licensee of WGAN is better qualified and has had more radio experience than Rines. Competition between radio stations in Portland will be keener under the WGAN grant, for the Rines family is interested in Portland's other station - WCHS - as well as WRDO, Augusta, and WFEA, Manchester, N. H.

X X X X X X X X

ENGINEERS PREPARE FOR FALL MEETING

Several hundred radio manufacturers and executives are expected to attend the annual Fall meeting of the Institute of Radio Engineers and the Engineering Department of the Radio Manufacturers' Association in Rochester, N.Y., beginning November 11th.

James S. Knowlson, of the Stewart Warner Company, Chicago, President of the RMA, will be the speaker at the banquet Tuesday evening, November 12, on the subject, "Engineers and Industry". The toastmaster will be Dr. A. F. Van Dyck of New York.

Many meetings of engineering committees and subcommittees will be held during the Rochester sessions, and there will be a meeting of the RMA General Standards Committee on Monday, November 11.

Numerous papers by outstanding engineers on television, frequency modulation and other subjects will be read at the technical sessions, whose Chairmen will include L. C. F. Horle, President of the IRE, W. R. G. Baker, of the General Electric Company, Bridgeport, Conn., Dr. Alfred N. Goldsmith of the Radio Corporation of America, Keith Henney and Henry Sheve of New York, and Ralph A. Hackbusch of the Canadian Radio Manufacturers' Association. Also there will be technical exhibits of component parts and testing equipment, specially arranged for engineering staffs and manufacturers, by thirty-two exhibiting companies.

X X X X X X X X

The Federal Communications Commission has had to censure, by mail, a Pacific Coast ship captain who, in radio discussion with another vessel about position and weather, could not refrain from cussing the latter. His unlawful superfluous language was heard by others and reported to the Commission.

X X X X X X X X

FULL STEAM AHEAD FOR RCA IN NATIONAL DEFENSE

National defense has become the radio industry's main theme song, according to an RCA press statement. Radio from research to assembly line is geared and moving as never before in its history to provide Uncle Sam with the most efficient and extensive communication system ever operated on land, sea and in the air.

The recent \$7,605,773 order placed by the United States Army with the Radio Corporation of America was the largest order of its kind in the records of radio manufacturing. The industry is gearing the machinery of manufacturing to accelerate production of all types of radio apparatus. Vacuum tubes now are being turned out by the industry as a whole at the rate of 400,000 daily.

Evidence of RCA's policy of "full steam ahead" is found in the recent announcement that the corporation has arranged with a group of banks to borrow \$15,000,000 at 1½ percent for five years, for expansion of research and production facilities to speed national defense orders of the Government.

Recognizing the vital role of communication in national defense, the radio men last Summer placed large orders for tool machinery and took steps to remove any possible "bottlenecks" long before actual orders were received. In the case of RCA, throughout the entire organization national defense is the "must" program bulletined as No. 1 all the way from television research to manufacturing, from domestic broadcasting to international communication. It is no secret that the National Research Council at a time such as this calls in the experts of all fields, and that the RCA Laboratories have been enlisted to help the United States Government.

"As a leader in radio, the RCA is conscious of its obligation to the Government in the speedy advancement of the defense program", said Meade Brunet, Manager of Engineering Products, who is also in charge of the Washington Office of the RCA Manufacturing Company. "For more than six months RCA has been training additional personnel, while expanding research and production facilities in a program that has added considerably to employment. Employees by the thousands have pledged themselves to play their parts in the defense program and to deliver all equipment on schedule.

"The program was carefully mapped last June", said Mr. Brunet, "and we are following it to the letter. Thoroughly coordinated all along the line, it has entailed an expenditure of several million dollars in tools and in expanding manufacturing space. The RCA did not wait for the passage of the amortization and tax bill before swinging full force into action for national defense. We recognize defense as self-preservation, and that is why plans were so elaborately made early in 1940. This foresight has averted any curtailment of our regular manufacturing of radios for the home. We took time by the forelock, since the World War shed evidence

enough of what might be expected of radio in national defense", said Mr. Brunet.

So vast has the radio industry become since the World War that it is estimated military orders for radio equipment in 1940 will be fifty to one compared with 1917, when radio did not have the world-wide scope it has today. It is pointed out that vacuum tubes in 1917 were limited in number and highly expensive, yet today more than 500 different types are manufactured at prices that represent only a fraction of those prevailing twenty years ago. Also during the World War an aviator "just looked to the ground" to find his way or get back to his base. Today, radio provides him with a voice that travels far, with blind flying instruments, and with direction finders.

Furthermore, development of auto radios, short waves, microwaves and broadcasting, unknown or little used during the World War, are now powerful "weapons" in communication on land, sea and in the air. The massive alternators of 1917 have been replaced by the more efficient vacuum tubes that hurl spoken words around the globe. It was a real achievement in 1917-18 to toss dots and dashes across the Atlantic on long wavelengths. Communication experts point out, therefore, that all the new uses discovered for radio since the Armistice was signed in 1918, now put radio far to the front in any program that pertains to national defense. To a large extent, radio men confess, their activities must be couched in secrecy at this time, especially in regard to the development of secret communication. But they are quick to add, "national defense is our No. 1 theme song".

In addition, through broadcasting and continued improvement of the American system, the public is being informed quickly of all new developments at home and abroad. Since broadcasting as a public service was a "by-product" of the World War, such simultaneous contact with the populace was not possible when the A.E.F. was overseas. Also today, radio is an important Pan-American link of friendship that helps to knit the Americas "all for one, one for all".

The key to putting the United States far in the lead in radio is generally recognized as research, out of which it is expected, based on World War experience, to bring forth new instruments, if, as, and when world peace lifts the curtain of mystery behind which the radio research experts are now at work.

X X X X X X X X X

A Baltimorean has made inquiry at the Federal Communications as to his eligibility for a license to operate an amateur station on premises which he owns jointly with his mother who is an alien. This would be contrary to regulations which restrict place of amateur station operation to control of United States citizens exclusively.

X X X X X X X X X X

SIXTEEN STATIONS GRANTED POWER INCREASES

At one sitting this week the Federal Communications Commission granted increases in power to sixteen stations and set hearings for boosts for three more. The stations and their increases follow:

WJAR, The Outlet Company, Providence, R. I., increase night power from 1 to 5 kilowatts, move transmitter to five miles southeast of center of Providence, install new directional antenna with different adjustments for day and night use; 890 kilocycles, 5 kilowatts day, unlimited time.

KARK, Arkansas Radio & Equipment Co., Little Rock, Ark., increase night power from 1 to 5 kilowatt, and make changes in directional antenna; 890 kilocycles, 5 kilowatts day, unlimited time.

WMMN, Monongahela Valley Broadcasting Co., Fairmont, W. Va. increase night power from 1 to 5 kilowatts, make changes in directional antenna; 890 kilocycles, 5 kilowatts day, unlimited time.

WBAA, Purdue University, W. Lafayette, Ind., increase power from 1 kilowatt day, 500 watts night, to 1 kilowatt night, 5 kilowatts until local sunset; 890 kc.; move transmitter to 5 miles south of Lafayette, and install directional antenna for night use.

WBRY, American Republican, Inc., Waterbury, Conn., install new transmitter, change directional antenna system, increase power from 1 to 5 kilowatts; 1530 kc., unlimited time.

KFUN, Las Vegas Broadcasting Co., Inc., Las Vegas, Nevada, increase in night power from 100 to 250 watts; 1420 kc., 250 watts day, unlimited time.

KENO, Nevada Broadcasting Co., Las Vegas, Nevada, approval of transmitter location and antenna, change in type of transmitter and increase in night power from 100 to 250 watts; 1370 kc., 250 watts day, unlimited time.

WTJS, The Sun Publishing Co., Inc., Jackson, Tenn., increase from 250 watts to 1 kilowatt, change frequency from 1310 to 1360 kilocycles, install new transmitter and directional antenna for night use.

KLPM, John B. Cooley, Minot, N. Dak., increase nighttime power from 500 watts to 1 kilowatt, upon compliance with Rule 3.45; 1360 kc., 1 kilowatt day, unlimited time.

KFOR, Cornbelt Broadcasting Corp., Lincoln, Neb., move transmitter, antenna changes and increase in night power from 100 to 250 watts; 1210 kc., 250 watts day, unlimited time.

KPRC, Houston Printing Corp., Houston, Tex., install directional antenna for night use and increase from 1 kilowatt night 5 kilowatts day to 5 kilowatts unlimited; 920 kc.

WTAW, Agricultural and Mechanical College of Texas, College Station, Tex., install new transmitter, increase from 500 watts day to 1 kilowatt day, and extend completion dates 60 days after grant and 180 days thereafter; 1120 kc., specified hours.

KFEL, Eugene P. O'Fallon, Inc., Denver, Colo., increase from 1 kilowatt to 5 kilowatts day and night, install new transmitter and directional antenna for day and night use; 920 kc.

WPEN, Wm. Penn Broadcasting Co., Philadelphia, Pa., install new transmitter, increase from 1 kilowatt to 5 kilowatts, using directional antenna at night; 920 kc., unlimited.

KOMO, Fisher's Blend Station, Inc., Seattle, Wash., install directional antenna for night use and increase from 1 kilowatt night, 5 kilowatts day, to 5 kilowatts unlimited; 920 kc.

KRNT, Iowa Broadcasting Co., Des Moines, Ia., move transmitter locally, install new transmitting equipment, install directional antenna for night use, and increase power from 1 kilowatt night, 5 kilowatts day, to 5 kilowatts unlimited time; 1320 kc.

The stations seeking more power and scheduled for a hearing are: KOWH, World Publishing Co., Omaha, Nebr., increase from 500 watts to 5 kilowatts; also to change frequency from 660 kc., to 890 kc.; increase hours of operation from day only to unlimited; move transmitter site, install new transmitter, and directional antenna for night use; requests facilities of KUSD and KFNF

KUSD, University of South Dakota, Vermillion, S. Dak., C.P. to install new vertical antenna, change frequency from 890 kc. to 660 kc., change hours of operation from 500 watts night and day to 500 watts daytime, shares-KFNF; to be heard jointly with KOWH, and application for renewal of license KFNF, Shenandoah, Iowa.

WNAX, South Dakota Broadcasting Corp., transferor Iowa Broadcasting Co., transferee Yankton, S. Dak., asks to transfer station of Station WNAX from South Dakota Broadcasting Corp., to Iowa Broadcasting Co.; 570 kilocycles, 1 kilowatt night, 5 kilowatts day, unlimited time.

X X X X X X X X

CROSLY ON ALL SIX INTERNATIONAL FREQUENCIES

Less than one week after its formal dedication, WLWO, Cincinnati, little brother of WLW at Cincinnati, becomes the only international short wave station in the United States, according to a Crosley press statement, authorized to operate on each of the six international wavelengths, with unshared frequencies and with unlimited time. The distinction came to WLWO when the Federal Communications Commission granted WLWO's application to operate on the 9, 11, and 15 megacycle bands, with exclusive frequencies and no restrictions on time.

R. J. Rockwell, Technical Director of the Crosley Corporation, Broadcasting Division, reported that WLWO can now establish schedules for Latin American coverage which will utilize each of these frequencies at their periods of maximum effectiveness.

Mr. Rockwell explained that different frequencies are more effective in reaching Latin America at different times of the day. During the past Summer, for instance, studies revealed that the 21 megacycle band was excellent for South American coverage from 11 A.M. to 2 P.M.; EST. As evening drew near, lower frequencies were employed.

The complete list of WLWO frequencies in kilocycles is as follows: 6,080; 9,590; 11,710; 15,250; 17,800; 21,650

Mail response from South America indicates that WLWO is now delivering the most powerful international signal in South America, Mr. Rockwell said. He stated that in addition to a large volume of mail from regular listeners in countries throughout South America, reports from Embassy and other sources also indicate that WLWO is "coming in" with greater intensity than any other station, North American or European. The WLWO signal is reported to be "much stronger" than those of German and other signals originating in Europe.

The unusual effectiveness of WLWO is attributed to the combination of frequencies with an antenna structure that enables engineers to "beam" the signal within a comparatively narrow area, instead of dispersing it in all directions. Though the radio wave enters the antenna system with a strength of 50,000 watts, a power attained so far only by WLWO on international frequencies, the effect of the beamed signal in South America is that of a 600,000-watt station.

X X X X X X X X X

CORNELL-CBS HOOKUP APPROVED

The Federal Communications Commission recently put its O.K. on the application of Station WHCU, owned by Cornell University at Ithaca and the Columbia Broadcasting System.

The official order on this was as follows:

"It appearing that the contract of April 1, 1938 between Cornell University and the Elmira Star-Gazette, Inc., upon the basis of which the renewal application herein was designated for hearing, has been cancelled; that the existing contract between Cornell University and the Columbia Broadcasting System is in the usual chain affiliation form; that the general subject of chain affiliation contracts is now being studied by the Commission and that any decision or opinion with respect to the existing contract between Cornell University and Columbia Broadcasting System should be reserved until consideration and action by the Commission upon the entire subject of chain broadcasting agreements;

"It is ordered, that said petition for reconsideration and grant without hearing be, and it is hereby, granted; that the hearing on the above-described application be, and it is hereby, cancelled; and that the application of Cornell University for renewal of license for Station WHCU be, and it is hereby, granted."

Station WHCU at Cornell, now the principal Eastern university representative of CBS, will also originate for the network programs of information and entertainment in which students and faculty will participate. In addition to the studio already on the campus, there will be another studio in downtown Ithaca completed at a cost of \$25,000. Students in the Cornell School of Engineering will fill many of the positions in operating the station; the Cornell Radio Guild will prepare the programs.

WHCU will operate daytime only on 850 kc., 1 KW power.

X X X X X X X X X

TRADE NOTES

Station WEAJ has requested an extension of time from the Federal Communications Commission of the completion date of its new station in New York City from November 6 to December 6.

Gerald A. Vernon, of the Research Department of the National Broadcasting Company, has been transferred to the Sales Promotion Department in the Central Division with headquarters in Chicago.

The Tropical Broadcasting Company desires to construct a 250-watt station at DeLand, Florida, on 1340 kilocycles under the North American Regional Agreement.

The Seventeenth Annual Convention of the Radio Manufacturers' Association and Radio Parts National Trade Show will be held in Chicago, June 10, 1941.

Galveston, Texas, has added four additional portable mobile police high frequency police transmitters.

KFBK, Sacramento, KWG, Stockton, KERN, Bakersfield, and KOH, Reno, will be formed into a group to be known as the California-Nevada Group to become a part of the Pacific Coast Blue Network.

X X X X X X X X X X

DEFENSE COMMISSION SURVEYS RADIO

The National Defense Commission, through Stacy May, Director of its Bureau of Research and Statistics, has requested the assistance of the Radio Manufacturers' Association to discuss possible procedure regarding radio requirements of the National Defense program. James S. Knowlson, of Chicago, President of the Association, will appoint a committee of five to cooperate with the said Commission. Radio necessities of the Army, Navy, British procurement and civilian demands will be canvassed with a view to providing adequate industry capacity to meet the greatly increased demands and prevent "bottlenecks" in production and deliveries. Similar procedure with other industry organizations is contemplated by the Council of National Defense, but the radio industry is one of the first approached in the new field of industrial cooperation.

X X X X X X X X X X

NBC RETURNS TO AIR WITH TELEVISION TESTS

The National Broadcasting Company announced that it would shortly resume television tests over Station W2XBS. Operation of the station was suspended August 1 to make changes required by the new assignment of television frequencies by the Federal Communications Commission.

"These test programs, the first of which will be a film transmission on Sunday evening, October 27, will necessarily be irregular", said Alfred H. Morton, NBC Vice-President in Charge of Television. "As we try out each of the different pieces of equipment, time will be required to coordinate them with other parts of the complete system.

"We plan to put power through the sight and sound transmitters on Friday and Saturday evenings, October 25 and 26, transmitting test pattern on both occasions. This will enable us to make the first of the necessary adjustments to the new equipment and circuits and will give the televiewer a chance to tune up his receiver."

The new test images will be in 441 scanning lines with transmission at the rate of 30 complete images a second, pending the final conclusions of the National Television Systems Committee.

The NBC television station will broadcast over the new No. 1 television channel, 50-56 megacycles, which can be found on most receivers in the New York area under No. 2 or No. 4 on the station selector of the receiving set.

X X X X X X X X X X

WJJD AND WIND ON COMPETITIVE BASIS

Ralph Atlass this week moves the studios and sales office of WJJD and WIND to new headquarters on Michigan Avenue, according to a news dispatch from Chicago.

Complete separation of offices for the WJJD, Chicago, and the WIND, Gary-Chicago, outfits has been arranged by Mr. Atlass so that the two stations will work on a strictly competitive basis.

X X X X X X X X X X

A poll of the Association of National Advertisers in convention at White Sulphur Springs revealed that 56 percent of the members who had set tentative budgets for 1941 expect to boost their expenditures; 38 percent will spend approximately the same amount as this year, and only 6 percent indicate a lowering of budgets.

X X X X X X X X X X X X