

HEINL RADIO BUSINESS LETTER

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March 19, 1940

"F.M." MORE IMPORTANT THAN TELEVISION, ARMSTRONG HOLDS

An intimation that frequency modulation broadcasting development will affect more persons than television was given by Maj. Edwin H. Armstrong, noted inventor, as hearings opened yesterday (Monday) before the Federal Communications Commission on the requests of "F.M." sponsors for more channels, greater power, and a lifting of the experimental limitation.

Major Armstrong, occupying the witness stand throughout the first day, defended the system of radio transmission that he has developed in the face of skeptical cross-examination by members of the Commission.

He predicted that FM stations gradually will replace the present day standard AM stations in urban centers because broadcasters, he explained, will want to replace an "imperfect medium" with a "perfect medium".

Rural areas will still have to depend upon standard amplitude modulation stations of today, Major Armstrong said, because of the difficulty in stringing a network of unwired FM stations across an area that can't support it commercially.

The operations of FM stations in the Northeast already have proved them superior in overcoming interference and static and in faithfulness of reproduction to present-day stations, the inventor said. The secret, he added, is the wider wave used in the ultra high frequencies.

Standard stations of today, Major Armstrong observed, cannot achieve high fidelity reproduction on account of "a mistake made by eight wise men, of whom I am one", when Herbert Hoover took steps to regulate the new industry as Secretary of Commerce. The mistake was the limitation of station separations to ten kilocycles, he explained.

There are now three manufacturers making FM transmitters and ten are licensed to produce FM receivers, the witness said. More than 75 applications for construction permits are awaiting action by the FCC.

Television, which only recently was given an "amber light" by the Commission, now stands somewhat in the way of FM broadcasting, a cross-examination of Major Armstrong disclosed, as frequency modulation sponsors want some of the channels assigned to visual broadcasting.

Major Armstrong suggested that television be moved up into the higher ultra high waves. Intimating that FM broadcasting has made greater progress than television, he replied that "a very small portion of the public would be affected" when Commissioner T.A.M. Craven asked whether the public should be deprived of television development to give the FM broadcasters what they wished.

"If I hadn't been burdened with the development of frequency modulation", Major Armstrong said, "I probably could have showed the television people how to use the high frequencies myself."

Chairman James L. Fly remarked that the FCC expected to see some "substantial improvements" in television by September 1st, when the new rules become operative.

An indication that the Radio Corporation of America will oppose any encroachment on the television channels in the bands around 40 megacycles came from Frank W. Wozencraft, counsel of RCA, who insisted that Major Armstrong read additional paragraphs from an RCA report on FM several years ago. The witness had read only a portion which endorsed the system.

Major Armstrong, in explanation, said that engineers of the R.C.A. Communications, Inc., had made one finding, but that RCA engineers had reached an opposite conclusion.

Commissioner Craven several times asked Major Armstrong how many 50 KW. FM stations would be needed to serve the entire country, but the witness insisted that he could not furnish the information. Subsequent witness might, he added.

Major Armstrong said that the primary service area of FM stations would be larger than that of standard stations of the same power and the clearness of signals considerably greater. FM stations, however, have no secondary service area, he added.

Relay distances, without wires, whereby an FM network can operate may be as great as 130 miles, the witness said.

Ten channels in the ultra high frequency band might be satisfactory as a starter for FM expansion, Major Armstrong said, although this would furnish "service of a sort" only in the East. Wide bands will provide much better service, he said, than narrow bands, experiments have shown.

Major Armstrong said that his predictions as to the future of FM, made during an FCC hearing in 1936, had "been borne out in every respect".

Anticipating objections from educational groups, he said he believed that they would want to broadcast with FM equipment once frequency modulation broadcasting is commercialized because it would give them the advantage of proximity to commercial channels on the receiver's dial.

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76 APPLICATIONS FOR FM; 22 HOLD FCC PERMITS

The latest count of applications for construction permits to erect frequency modulation stations is 76, all of which are awaiting the decision of the Federal Communications Commission on the general question of lifting the experimental limitation on FM and assigning it more channels.

Sixteen FM stations are licensed and operating and six more hold construction permits.

FM stations on the air are:

117,430kc.
W2XMN, Edwin H. Armstrong, north of Alpine, N.J., /40,000 watts, 42800 kc.; W2XQR, Bamberger Broadcasting Service (WOR), New York City, 1,000 w., 43,400 kc.; W2XDA, General Electric Co., (WGY), Schenectady, N.Y., 50 w., 43200 kc.; W2XOY, General Electric Co. (WGY), New Scotland, N.Y., 150 w., 43200 kc.; W2XQR, John V. L. Hogan (WQXR), New York City, 1000 w., 43200 kc.; W3XO, Jansky & Bailey, Washington, D. C., 1000 w., 43200 kc.; W9XAO, The Journal Co. (WTMJ), Milwaukee, Wis., 1000 w., 42600 kc.; W2XWG, National Broadcasting Co. (WEAF), New York City, 1000 w., 42600 kc.; W2XAG, Carman R. Runyon, Jr., Yonkers, N. Y., 5000 w., 117190 kc.; W1XPW, WDRG, Inc., Hartford, Conn., 1000 w., 43400 kc.; W8XVB, Stromberg-Carlson Co. (WHAM), 1,000 w., 43200 kc.; W1XSO, Travelers Broadcasting Service Corp. (WTIC), Hartford, Conn., 1000 w., 43200 kc.; W1XSN, Westinghouse E. & M. Co. (WBZA), Springfield, Mass., 1,000 w., 42600 kc.; W8XVH, WBNS, Inc., Columbus, O., 250 w., 43000 kc.; W8XAD, WHEC, Inc., Rochester, N.Y., 1,000 w., 42600 kc.; W9XEN, Zenith Radio Corp., Chicago, Ill., 1000 w., 42800 kc.

FM stations authorized for construction:

W9XYH, Head of the Lakes Broadcasting Co., (WEBC), Superior, Wis., 1000 w., 43000 kc.; W3XMC, McNary & Chambers, Bethesda, Md., 100 w., 42600 kc.; W1XK, Westinghouse E. & M. Co. (WBZ), Boston, Mass., 1000 w., 42600 kc.; W1XTG, Worcester Telegram Pub. Co. (WTAG), Worcester, Mass., 1000 w., 43400 kc.; W1XOJ, Yankee Network, Boston, Mass., 50,000 w., 43000 kc.; The Crosley Corp. (WLW), Cincinnati, O., 1000 w., 43200 kc.

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STATIONS NUMBER 821 AS OF MARCH 1

The Federal Communications Commission issued operating licenses to two stations and granted four permits for the construction of new stations during the month of February. There were 771 stations operating and 50 construction permits outstanding as of March 1, bringing the total to a new high of 821.

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ASCAP HOLDS BUCK ARREST WAS RADIO "BOOMERANG"

The arrest of Gene Buck, President of the American Society of Composers, Authors, and Publishers has done the broadcasters, who instigated it, much more harm than the Composers, according to an official of ASCAP.

"Not the slightest harm of any sort has come to ASCAP as a result of the Buck arrest, nor has any good been done to the cause of the broadcasters", he said. "On the contrary, you would be amazed at the extent of comment written, telegraphed and telephoned that we have received which, to say the least, is very critical of this action upon the part of the broadcasters, and very complimentary to ASCAP as to its purposes, policies and method of operating. The act was a boomerang, and repercussions from it will for a long time be detrimental to the interests of those who fomented the matter.

"As to Buck, personally, I think it may have hurt him physically a good deal. He is not well - he was under tremendous mental strain for a prolonged period prior to the death of his mother, and her passing was a terrible shock. Seeking tranquility in a purely personal capacity out in the middle of the desert, broadcasters arrested him on faked charges at a time and under circumstances when they could give him the greatest inconvenience and personal humiliation. It was a wholly unworthy, unethical, malicious and contemptible act."

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NEW DEVICE HIDES SOURCE OF BBC BROADCASTS

A new secret British radio invention, more complicated, perhaps, in its scientific make-up than the recent electrical device that now enables ships to sail unharmed over German magnetic mines, has placed the British Broadcasting Corporation in the unique position of being able to continue its news and other programs without interruption by Nazi air raiders, according to a London correspondent of the New York Times.

In Germany and, for that matter, France up to a few days ago the approach of hostile aircraft has necessitated closing down the transmitting station in case its radio "beams" should give the airmen a guide to their destination - much the same way as ships are steered in fog by radio beams sent out from shore stations.

Now the British claim to have discovered a means of sending out radio programs without giving a listening airman any directional clue regarding its source, and the discovery is expected to go down in history as one of the outstanding radio achievements of the war.

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USE OF RADIO IN SPECIAL EMERGENCIES CITED BY FCC

There is one class of radio station license issued by the Federal Communications Commission which, though little known, is playing an increasingly important role in the economic life of the nation, according to the Federal Communications Commission. This particular type of license covers special emergency stations. These stations have already demonstrated their value in time of localized stress, and now loom as a valuable adjunct to the linking of communications for widespread protection of life and property.

Special emergency stations have rendered valuable service in regional disasters, such as the New England hurricane and in time of flood when the normal means of communication are destroyed or are rendered inoperative. It would be difficult to obtain information as to casualties and extent of damage, and even more difficult to restore communication, were it not for the temporary facilities which can be rapidly established to meet such emergencies. The use of special emergency stations in this connection is probably the most spectacular use to which these stations are now put.

The Long Lines Division of the American Telephone and Telegraph Company, as well as many local telephone companies, have been issued licenses for special emergency stations. Special equipment has been designed for the purposes. This equipment can be stored in a chest. In time of emergency, it can be loaded in a truck, driven to the scene, and quickly and easily set up for operation. When so used, the design of these stations permits either communication between construction crews at the scene of the emergency or the interconnection of regular land lines in such manner that regular subscriber communication can be re-established.

Aside from service in time of disaster, these stations are in growing daily use by public utilities. For example:

The economic life of our country has become so dependent upon electricity that a sudden and complete disruption of electric service to any large metropolis would make that city practically uninhabitable. The network of interconnecting electric power lines has greatly reduced the hazards which would be created by failure of a single plant. However, constant vigilance is required to maintain the transmission lines, which constitute this network, for the most efficient service. As these transmission lines normally carry very high voltages, and since they cannot be disconnected for any extended period, close coordination is needed between the working parties and the switching central at the power house.

Special emergency stations make this possible. Some utility engineers say the time is rapidly approaching when no power distribution system or gas, oil, or water distribution system operating over a large area will be considered fully equipped unless it has a radio communication system to augment the

wire, telegraph, telephone, and carrier current communication systems.

There is a particular day-to-day emergency demand for radio communication by public utilities within the metropolitan districts. To illustrate: Should an automobile run into a light pole and knock it down, electrical voltages of dangerous potentials are exposed and endanger passers-by. Also, there have been occasions in which a street car has run over a pedestrian and in order to remove the victim it has been necessary to jack up the street car from the rail. Without radio communication, it is necessary for a service truck to be dispatched from some far quarter to the scene even though a truck with proper equipment might be working only a block or two away.

Other emergency services of this nature include repairs of wires downed because of sleet, and restoration of power to hospitals, etc. To meet these situations, the Commission allocates appropriate frequencies and issues authorizations to public utilities interested solely in metropolitan area service.

Inasmuch as the number of frequencies available for such assignment is extremely limited, it is required that those public service units eligible to receive emergency station licenses cooperate among themselves in the choice and use of frequencies so as to avoid duplication and interference. For this and other reasons it has become common practice for various public utilities in a single area to pool their needs, one utility requesting the license and rendering the service while the other utilities receive this service and contribute to the cost of operation on a pro-rated basis.

Recent Commission authorizations illustrate this arrangement. In the New York metropolitan area there are a number of public utilities, including the New York Telephone Company, which are eligible for and have need of special emergency radio communication. In order to reduce the capital investment and to receive the maximum benefits from this type of communication, the New York Telephone Company has taken the lead and is constructing a sufficient number of special emergency stations to serve all utilities in that metropolitan area.

This radio service will be made available for the handling of only such communications as meet the definition of emergency in the Commission's rules and regulations. In order that the cost of operation may be recovered, and to prevent this new system from becoming a burden on the general telephone subscriber, the telephone company is to make charges to the various utilities concerned, in much the same manner as to the telephone and teletype subscribers. In other words, a definite charge per call will be made and the company will be given a guarantee in the form of a minimum service charge.

On January 1 of this year, 76 special emergency systems involving 368 individual transmitters had been authorized by the Commission.

The rules and regulations governing special emergency stations appear as Part 10 of the Rules and Regulations of the Federal Communications Commission, which are available in pamphlet form from the Superintendent of Documents, Government Printing Office, Washington, D. C., at a cost of 5 cents a copy. Information and application forms may be obtained either from the Washington headquarters of the Commission or from any of its field offices.

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FCC INSPECTORS HELP FIND ODD INTERFERENCE

Not all of the interfering noises which come out of a loud speaker are due to the operation of other radio stations, a neighbor's oil burner or the electric sign at the corner. Recently, severe interference was experienced to air-ground communication at one of the larger municipal airports. Although it was obvious from the nature of the interference that it was not caused by radio station operation, the Federal Communications Commission was requested to cooperate in the location of the sources.

After some investigation, the interference was located on the fifth floor of a building about two miles away from the airport. The machine causing the interference was a printing press equipped with a high tension device used to neutralize the frictional electric charge produced on the paper being printed. The actual source of the interference was a spark discharge in a defective high tension switch, which switch was connected with approximately twenty feet of unshielded wire. An adjustment made to the defective switch eliminated the spark discharge and the interference.

Because of their manifold duties and limited number, the Commission's Inspectors are physically unable to investigate all cases of interference. However, they are glad to cooperate when possible consistent with their regular duties and to give advice even though personal participation in an investigation is impracticable. Many power companies maintain apparatus for and have personnel trained in the location of the sources of interference and willingly cooperate with the public.

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Stations KSAL, Salina, KVGB, Great Bend, and KFBI, Wichita, all located in Kansas, are the newest affiliates of the Mutual Broadcasting System, swelling the total to 123. KSAL, Salina, operating on 1500 kc., with 250 w. day and 100 w. night, and KVGB, Great Bend, operating on 1370 kc. with 100 w. power, joined the network on March 16. KFBI is now located in Abilene, Kans. When the station moves to Wichita on May 1, its affiliation with Mutual will become effective. KFBI operates on 1050 kc. with 5000 w. power at sunset, Pacific time. These three stations, along with KTSW, Emporia, will form the newly-organized Kansas State Network, with WHB, Kansas City, Mo., as the key point.

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U.S. TELEVISION PROGRESS ALARMS BRITISH INDUSTRY

The British Postmaster-General was questioned in the House of Commons recently concerning the present situation with regard to television broadcasting in this and other countries, and whether he would consider an early resumption of television broadcasting, as an encouragement both to research work and to manufacturers of television sets, enabling them to establish a British product in world markets, according to the American Commercial Attache at London. The Postmaster-General replied that television service from Alexandra Palaces was suspended in the national interest on the outbreak of war, and he could hold out no hope of its early resumption. He stated he understood television services were being conducted in a few other countries, but he had no information suggesting they had passed the experimental stage.

"Despite this expressed opinion, agitation for resumption of television continues in the trade and press", the American representative reports. "It has been stated the Radio Manufacturers' Association is to ask the Postmaster-General to receive a deputation which will submit the case for reviving the British Broadcasting Corporation's television service from Alexandra Palace. Manufacturers believe that it would be possible to reopen the station, taking proper precaution to prevent the transmissions from being used as a beacon by enemy raiders. Leaders of the industry contend that Britain, which led the world in television, will fall far behind the United States unless an effort is made to continue regular programs during the war.

"An instance of America's progress was pointed out in the news that an American firm had developed a link extending the range of television to 1,000 miles. It was stated that similar equipment was actually ordered by the Post Office from a British firm in 1939 and was to have been delivered this Spring, which would have made possible the erection of provincial transmitters, taking their programs from Alexandra Palace. Television manufacturers maintain television will ultimately benefit export trade and provide foreign currency; it will encourage research for vital national purposes. Again the British manufacturers stress the fact that the last war gave America domination of the film market, and fear this may repeat itself with television."

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The Esso Television Reporter, first sponsored news series designed expressly for the new medium, will be televised for the first time Wednesday, March 20, over the National Broadcasting Company's Station W2XBS. William Spargrove, one of several NBC announcers used in the Esso daily broadcast news series, will be the reporter.

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\$5,500,000 TELEPHONE RATE REDUCTION EFFECTED

Impending reduction of long distance telephone rates to effect a saving to the public of approximately \$5,500,000 annually was announced last week by the Federal Communications Commission.

As a result of conferences and negotiations which it initiated with the American Telephone and Telegraph Company, long distance rates are cut to benefit the public by almost half a million dollars a month.

The reductions will apply to calls beginning with air line mileages of 420 miles and extend through the maximum mileage covered by the schedule, which is 3,000 miles. The proportionate reduction is increased with air line mileage so that the greatest reduction is at the maximum mileage represented approximately by the rates from New York to San Francisco. For example: The new schedules will reduce the station-to-station day rate between New York and San Francisco from \$6.50 to \$4.00. The reduced rates are to become effective not later than May 1.

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McNINCH WOULD BACK FARLEY, SAYS WILE

Frederic William Wile writes in his syndicated column:

"To the political sensation of the hour - President Roosevelt's reported and undenied statement that Jim Farley is ineligible, on religious grounds, to a place on the 1940 Democratic ticket - this column is enabled to make a significant contribution. It consists of categorical evidence that one of the men chiefly responsible for Al Smith's failure to carry the Solid South in 1928 would heartily support any presidential ticket of which Jim Farley might be a part. The man in question is Frank R. McNinch of North Carolina, former Chairman of the Federal Power and Federal Communications Commissions, and at present a Special Assistant to the Attorney General.

"About three years ago, when Mr. Farley's presidential ambitions began to bud, Mr. McNinch took occasion to communicate with the Postmaster General. At that time there were no suggestions of a Roosevelt third-term candidacy. Big Jim was just one of a dozen 1940 Democratic 'possibilities'. What the then F.C.C. chief said to Mr. Farley in effect was that if the national chairman should be the nominee this year, Jim's religion would in no degree militate against Mr. McNinch's hearty support of the ticket. The North Carolinian expresses no preference, as of today, for any Democratic candidacy, but as far as a Farley nomination might be concerned, the leading Southern 'Hoovercrat' of 1928 would not be swayed from his regular party allegiance on religious grounds. He would be heart and soul for Sunny Jim, should the latter be nominated at Chicago for either place."

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"DRIPPING DRAMAS" ON AIR DEFENDED BY BROADCASTERS

"Dripping" love dramas and the crackling of gangster guns on the air waves were defended last week as good business, if not culture, by broadcasting company officials as a symposium in Mount Vernon, N. Y., before representatives of Westchester women's clubs who are conducting an "I'm Not Listening" boycott of radio programs they find objectionable.

"We are in the broadcasting business to make money and dripping dramas pay for the worthwhile programs that don't pay their way", Donald S. Shaw, Executive Vice President of Station WMCA, told the thirty-five club presidents and committee chairmen, according to the New York Times.

He said that it might be a "sad commentary", but it was a fact that a leading soap company had found through surveys that the radio public listens to serial stories and "they sell soap - and plenty of soap."

Radio listeners like to be teased; that is why there are so many serials of the "Did Jenny really break her left leg? - Tune in tomorrow afternoon and find out" type, according to Mr. Shaw. He added that radio had never offended to such an extent as some of the comic magazines.

Mrs. Charles H. Phelps, Jr. of Bronxville complained that the radio hours from 5 P.M. to 8 P.M. had become "hideous" with sordid adventure and "cheap wisecracks that belong in the gutter". Her 9-year-old son, Mrs. Phelps said, had become, through the radio, altogether too familiar with "gun-toting gangsters, gun molls, the Big Boss and his henchmen, the inside of prisons and the hot seat". He knows, she added, "how to cover up a traip to escape the bulls, how to cut telephone wires, how to hide license plate numbers, so that he can scam successfully." She recommended as a substitute for gangland theatrics the dramatization of historical events dealing with romantic but actual heroes, even that stories from the Bible be sandwiched between Charlie McCarty and "flashes in staccato fashion on the latest tidbits from Hollywood" on Sunday evenings.

A. L. Simon, Publicity Director of Station WHN, advised the women to be patient. He said radio was in its infancy, but bad as some of its programs might be, it already had advanced education. "To women not so culturally fortunate as you club ladies, radio is a boon", he said.

Leslie Evan Roberts, a WMCA Vice President, asserted that there was "as much tripe to be found in literature and on the stage as on the radio". It was his opinion that the majority of listeners either did not understand or were bored by the higher type of program, and as long as they demand serials, they will get them.

Gilson Gray, Commercial Editor of the Columbia Broadcasting System, sent a letter expressing regret that he was unable to attend and deploring "the boycott inherent in the 'I'm Not Listening' campaign." It was, he said, "not quite democratic or American."

Mrs. Everett L. Barnard, Chairman of the "I'm Not Listening" Committee, reported that the movement had spread to 39 States.

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