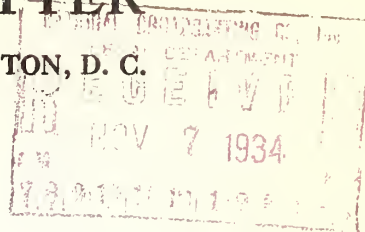


HEINL RADIO BUSINESS LETTER

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HIGH FIDELITY KEYNOTE AT ROCHESTER ENGINEERS' MEETING

High fidelity receivers and other technical topics of the moment will be considered at the Rochester Section of the Institute of Radio Engineers, November 12-14. Because of the presence of Dr. C. B. Jolliffe, Chief Engineer of the Federal Communications Commission, and other speakers of prominence, the meeting will assume national importance.

The program follows:

Monday Morning, November 12

Technical Session

Iron Core Tuning Systems - A. Crossley, Consulting Engineer
High Fidelity Reproducers with Acoustical Labyrinths (With Demonstration), B. Olney, Stromberg-Carlson Telephone Mfg. Co.

Group Luncheon

Monday Afternoon

Technical Session

Automatic Reactance Control Systems
Charles Travis and Murray Clay, RCA License Laboratory
Putting Ultra-High Frequencies to Work (With Demonstration),
L. C. F. Horle, Consulting Engineer, and C. J. Franks,
Radio Frequency Laboratories
Diode Coupling Considerations, J. R. Nelson, Raytheon Production Corporation
Inspection of Exhibits
Meeting of RMA Committees on Receivers and Television

Monday Evening

Group Dinner

Joint Session with Radio Club of America

Transmission and Reception of Centimeter Waves (With Demonstration), I. Wolff, E. G. Linder, and R. A. Braden, R.C.A. Victor Company.

Tuesday Morning, November 13

Technical Session

The Use of Cathode Ray Tubes in Receiver Distortion Measurements (With Demonstration), Henry W. Parker, Rogers Radio Tubes, Ltd., and F. J. Fox, Rogers Majestic Corporation.
Converter Tubes at High Frequencies, W. A. Harris, RCA Radiotron Company
Input Losses in Vacuum Tubes at High Frequencies,
B. J. Thompson and W. R. Ferris, RCA Radiotron Company
Group Luncheon

Tuesday Afternoon

Technical Session

New Equipment for the Radio Designer and Engineer,
C. J. Franks, Radio Frequency Laboratories
Detector Distortion, Kenneth W. Jarvis, Consulting Engineer

Tuesday Afternoon (Continued)

Inspection of Exhibits

Meeting of RMA Committee on Vacuum Tubes

Meeting of RMA Committee on Sound Equipment

Tuesday Evening

Stag Banquet

W. E. Davison, Toastmaster.

Entertainment.

Wednesday Morning, November 14Joint Technical Session with RMA Engineering Division on
Radio InterferenceBrief Discussions on Desirability of Reduction of Radio
Interference from the Viewpoint of:

The Consumer - O. H. Caldwell

The Public Utilities - J. O'R. Coleman

The Radio Manufacturer - L. F. Muter

The Radio Dealer - Benjamin Gross

The Federal Communications Commission - C. B. Jolliffe

Summary - A. N. Goldsmith

Investigation and Suppression of Inductive Interference,
H. O. Merriman, Radio Branch, Department of Marine,
Canada.

Group Luncheon

Wednesday Afternoon

Technical Session on Radio Interference (Continued)

Discussion by Interested Organizations on Promotion of
Interference Reduction.

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SWEDISH NEWS BROADCASTS SUBSIDIZED

News broadcasts over the network of some 15 principal broadcasting stations is part of the Riksprogram regularly every day of the week. Tidningarnas Telegrambyra (TT), a central news organization for the entire Swedish press, broadcasts the most important items of domestic and foreign news between the hours of 7:18 to 7:25 A.M., and from 9:47 to 9:55 P.M., or during a single 15-minute period, Osborn S. Watson, Commercial Attache at Stockholm reports.

Remuneration is paid the Tidningarnas Telegrambyra by Aktb. Radiotjänst (Swedish Radio Service operating under Government charter), according to a sliding scale based on the number of radio-receiving licenses issued by the Government. At the present time this income to TT is approximately 8,000 Swedish crowns a month (about \$3600).

The material used in the broadcasts is a resume of news items in Stockholm afternoon newspapers, which is often repeated in the newspapers of the following morning.

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ESTIMATES 1934 RADIO ADVERTISING EXPENDITURE \$100,000,000

The expenditure by advertisers for "radio time" of the stations of the United States is estimated to exceed \$100,000,000 in a defense filed in the Federal Court of New York in answer to the charges of monopoly brought by the government against the American Society of Composers.

"It was not until 1927 that the broadcasting stations began really to sell their 'time' to sponsors, and their sales of 'time' to sponsors grew from \$3,832,500 in the year 1927 to \$39,107,000 in 1932", the Composers' brief sets forth.

"In a brief period of seven years, the people of the United States purchased radio receiving equipment at an expenditure averaging \$495,873,000 per annum."

"The nearly six hundred broadcasting stations are scattered all over the United States. They are owned and operated by many different interests, and in some cases by huge corporations. The preparation and conduct of a suit for infringement of copyright is an involved and expensive procedure, too involved and too expensive to be undertaken by an individual copyright owner. The disposition of the stations first, to deny entirely the rights of copyright owners, and secondly, to openly infringe them if these rights were not safeguarded by the Society, was perfectly apparent. Had the Society not been available as an instrumentality through which the musical copyright owners could ascertain piracies and protect their rights as well as license the legitimate public performance of their works, there can be no doubt but that these rights in actual practice would have been completely lost and the owners thus illegally deprived of their properties."

"In round figures, 80% of the time a station is 'on the air', it is broadcasting musical works. This spectacular and unprecedented growth in the popularity of radio as a medium of entertainment has changed the musical habits of the nation. Of pianos, there were sold in the United States in the year 1925 the total value of \$93,670,000, but in 1931, this figure had shrunk to \$12,000,000. The sale of phonograph records in the United States shrank, from 1925 to 1931, over 80% and by 1932, the shrinkage had reached 90%, and today there is being sold something less than 10% of the phonograph records that found a ready market in 1925. In 1925 sales of phonographs totalled \$22,600,000 but in 1931 the sales had shrunk to \$4,869,000, a shrinkage of about 75%. From 1925 to the end of 1931, the average sales of sheet music shrank more than 70%. The broadcasters grew tremendously in strength, financially and politically, whilst those who created music grew poorer and poorer. It would have been impracticable and impossible for an individual musical copyright owner in such circumstances to have protected his rights."

In conclusion the Composers' brief, filed by Nathan Burkan, alleged "that continued radio broadcasting of musical compositions has a tendency to surfeit the public and to destroy the popularity and value of musical compositions within a few weeks after their publication; that dramatico-musical compositions currently successful upon the stage, are produced at a great investment, sometimes as high as \$200,000.00 or \$300,000.00; that if radio broadcasters were permitted, unrestrained and unrestricted, to perform the musical compositions which are part and parcel of such dramatico-musical works, the desire of the public to attend such productions in the theatre would be extinguished, and the value of the rights in said musical compositions and dramatico-musical works would be likewise destroyed; and for that reason the Society, at the instance of individual members thereof, restricts from indiscriminate broadcasting, from time to time, such musical compositions, in order to prevent destruction of the rights therein and the rights of the members of the Society therein."

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NEW ALL-WAVE SETS BOLSTERING UP BUSINESS

Although trade conditions in the radio industry still leave much to be desired, the outlook has been improved by the favorable reception accorded the new all-wave sets currently being offered in various price ranges, says the Standard Statistics Co. of New York currently.

"With the aid of satisfactory sales of the new models indications are that distribution of sets during the present quarter may reach the highest levels since 1929. In addition to the encouraging increase in unit volume, there is a marked trend toward the higher-priced sets, which provide wider profit margins. Earlier in the year sales of auto radio sets were of record proportions and prospects of this division for the Spring of 1935 are equally promising.

"The weakest situation in the radio industry is in the tube division, where prices have been reduced repeatedly. In some cases manufacturers claim that operating economies have made the reductions possible, but other trade sources indicate that profits have been sacrificed. The primary motive of the price cutting is undoubtedly to induce the public to replace tubes more frequently. It is doubtful if this result has been achieved.

"Television still remains in an uncertain state. There is no clear indication that a practical device can be marketed on a broad scale for home use, or that public purchasing power has reached a point where there is any assurance of even moderate demand for a set which would undoubtedly retail at a comparatively high price. Broadcasting and communication divisions of the industry have been a source of satisfactory profits and should become increasingly important contributors to income."

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NEWARK INSTALLS ULTRA HIGH FREQUENCY POLICE SYSTEM

The tip of a flag pole serving as an antenna, hollow wires which like water pipes carry electricity without leaking, and a quartz crystal scarcely thicker than a hair which acts as a control by vibrating 5,000,000 times a second, are among the features of the radio system just placed in operation by the Police Department of the City of Newark.

The system jointly produced by the Western Electric Company and Bell Telephone Laboratories uses an ultra-high frequency, 30,100 kilocycles. This is about 20 times higher than is regularly assigned to the police and is within a new band tentatively assigned for police work by the Federal Communications Commission to relieve crowding in the medium bands. A leader in opening up this band, Newark gains the advantage of radio operation free from atmospheric disturbances and from overlapping with other stations.

In addition to a main control room at headquarters, duplicate controls together with the transmitter are located on the 34th floor of the National Newark & Essex Bank Building, highest building in Newark. Vacuum tubes in the transmitter multiply the vibrations of the hair-thick crystal six times producing the precise frequency required.

A "concentric" transmission line composed of one copper tube within another runs to the roof, the outer tube preventing the escape of any current and thus making the line "water tight". The line runs up the inside of a 100-foot flag pole topped by a 22-foot brass tube which acts as the antenna 600 feet above street level.

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ESTIMATES N. Y. BROADCASTS WEEKLY ATTENDANCE AT 55,000

Columbia network's two former legit houses in New York, the Hudson and the Avon, will soon be catering to around 25,000 non-payees a week, according to Variety. "Web expects to have within that time 24 programs originating from the two spots", the publication goes on. "Together the houses seat slightly more than 2,000 persons. Total guests at the NBC broadcasts in Radio City average 30,000 a week.

"With CBS the top ticket demand is for the Fred Waring (Ford) programs. What helps pull 'em to this event is the 30 to 45 minutes of added entertainment Waring unlimbers following the regular broadcast. Rating the second biggest ticket call is the Chesterfield series. Next three programs and in that order are Casa Loma-Walter O'Keefe (Camel), George Givot (sustaining), and Lud Gluskin-Block and Sully (Ex Lax)."

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NEW ORGAN FOR RADIO CITY

What is described as the most unusual pipe organ in the world is nearing completion in one of the big NBC studios in Radio City. Specially designed for broadcasting by Aeolian-Skinner, in cooperation with NBC engineers, the new three-manual instrument will reproduce an almost unlimited variety of orchestral effects while matching in beauty of tone and flexibility of operation the organs of the greatest cathedrals.

The new NBC organ is being installed in studio 3B, one of the largest Radio City studios. Its three keyboards of 61 notes each, and its 20 pedals, magnetically operate 1024 pipes which are housed in a special organ loft at one end of the studio behind two sets of shutters, also electrically controlled. Chimes, which can be played on all three manuals, and by the pedals, and a harp also are included in the banks of stops on each side of the console.

Every combination of string and woodwind orchestral effects can be produced at a touch of the fingers, the many sets of couplers and plungers beneath the keys of each manual permitting instantaneous variation of the thousands of effects and combinations.

A huge electric blower, which, like the entire studio itself, is set on springs, sends washed air to the pipes. More than 400 wires lead from the organ to the magnetic switchboard to hook up each of the stops in scores of combinations.

Installation of the organ was simplified, because many of the problems of acoustics ordinarily encountered had been worked out by NBC engineers when the Radio City studios were built a year ago. At that time organ lofts were built into three of the largest studios and the auditoriums themselves were so designed that the organ music could be picked up by the microphones without loss or distortion. The engineers and the Aeolian-Skinner organ experts combined their knowledge and experience to provide well-nigh perfect settings for the superb instruments to be installed in these studios, of which the one now being completed is the first.

Special organ concerts will be broadcast and network audiences will hear many world famous organists in recitals; also the big instrument will be an important adjunct in other programs with orchestras and choral ensembles.

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100 SPECIAL TRAINS BRING VISITORS TO BERLIN RADIO SHOW

Attendance at the German Radio Exhibition was "over 300,000." Official sources do not give a more accurate figure. One hundred and eight special trains brought visitors to the Berlin show, and of the total number of visitors, 46 percent were from outside Berlin. Compared with attendance figures at Radiolympia, the radio show in London, Berlin had a lower average. Olympia was open for 9 days, with a total attendance of 240,000, while the Berlin exhibition was open for 13 days. The Radiolympia daily average was 26,666, and Berlin's 23,063. Within an hour of the opening, one firm at the London show had booked an order for £300,000 worth of receiving set and equipment. This is believed to be the greatest order ever placed in England.

Business done at Berlin was much greater than for last year, but no complete figures are available. One firm sold 40,000 sets in 1933, and over 100,000 this year.

The number of licenses issued in Germany showed a marked increase during the month of August, which is no doubt a result of the propaganda in connection with the Berlin Radio Exhibition. The total number of listeners was 5,440,466 on September 1, 1934, an increase of 82.647 over the figure for August 1. The total includes 428,836 licenses which were issued free of charge, 294,460 of which were to unemployed persons.

Also there was a rise in the number of radio sets in England. Approximately 260,300 wireless receiving licenses were issued during August, it was announced by the Daily-Telegraph, September 12, 1934. The figure represents a net increase of 35,180. The total number of licenses in force at the end of August was 6,428,960, compared with 5,654,400 at the corresponding date a year ago.

The French Radio Show recently held in the Grand Palais at Paris likewise apparently attracted considerable public attention. However, the sixth Brussels Radio Show, which opened on September 1 for a period of 10 days, has shown only a partial success. The attendance was up to expectations but according to G. R. Canty, Acting Commercial Attache at Brussels, the volume of sales was not very satisfactory.

The conspicuous absence of complete foreign sets indicated very clearly that the new Belgian duty rates, which entered into force in February of this year, have had a disastrous effect on the import of completed sets from abroad. As a matter of fact, most of the exhibits were of local origin, or, at least, were mounted in Belgium partly from imported parts. Therefore, at first glance, it appears that the American production, which predominated 2 years ago and was still important even last year, has disappeared from the market, Attache Canty observed. In fact, as an indication that the American trade is shifting from completed sets to accessories, it was noted that practically all tubes and important parts used in the mounting of these local sets were of American or German manufacture.

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CITES I.R.E. AWARD TO ARMSTRONG

John V. L. Hogan, well known radio engineer, addressed the following letter to the New York Times:

"The letter printed in the Times from Lee de Forest on the recent action of the Supreme Court in the de Forest-Armstrong controversy is particularly interesting because it is there suggested that a straw vote among the engineers familiar with the development of the regenerative invention would show the general view to be that the job had been done by de Forest and not by Armstrong.

"In making this suggestion Dr. de Forest seems to have overlooked the fact that such a straw vote has already been taken. Last May, soon after the Supreme Court held that de Forest had made this invention, Armstrong returned to the Institute of Radio Engineers the medal of honor that had been awarded to him as a recognition of his contributions in this field.

"The Board of Directors of the Institute devoted a special meeting to a review of the situation, and thereupon, at the convention of the Institute in Philadelphia, refused to accept the return of the medal and reaffirmed its earlier award to Armstrong. This action was unanimous on the part of the Board and was enthusiastically acclaimed by the hundreds of engineers present at the convention.

"There is no doubt that the great majority of well-informed radio engineers regard Armstrong and not de Forest as the inventor of the regenerative circuit."

A few days later the following letter appeared in the Times from Dr. Lee de Forest:

"Letter No. 3 in the Pupin series reminds me of an interesting incident occurring in March, 1914, during a meeting of scientists at the Bureau of Standards, Washington. On that occasion I met Dr. Langmuir for the first time. I was then making the first public exhibition of the 'beat-note' phenomenon, whereby two audion circuits, oscillating each at a slightly different radio-frequency, produced an audio-frequency which I then amplified in a two-stage audion amplifier to a loud-speaker.

"I carefully explained the operation of this arrangement to Dr. Langmuir, who very graciously vouchsafed the opinion that 'when you put the grid in that tube you did something worth while.' If Dr. Langmuir is now correctly quoted by Professor Pupin, it would indicate a lamentable lapse in memory on the part of the originator of sundry 'Greco-Schenectady' sobriquets for the three-electrode tube.

"During that same Washington exhibition, while I was demonstrating the siren beat-note phenomenon, Dr. Pupin rushed up and fairly shouting at me demanded: 'What right have you to do this? That's Armstrong's!'"

"I was totally flabbergasted by this astonishing outburst; for until that moment I had no idea just what was the Armstrong invention, concerning which there had been sedulously maintained such plutonian secrecy on Morningside Heights.

"From subsequent events, extending now for the past twenty years, it would seem that Dr. Pupin's choler has not been reduced by a single decibel.

"Regarding Dr. Leonard Fuller, the printed records of his testimony in the case will show that he himself called attention to my April, 1913, entry in the Palo Alto notebooks, wherein I had written: 'This day I got the long-looked-for beat note.'

"Dr. Fuller was not with the Federal Telegraph Company during the preceding Summer when I first discovered the feedback circuit; otherwise his testimony concerning that date would doubtless have been equally convincing. Yet Dr. Pupin now states that Professor Fuller 'supported Armstrong.'

"Despite all epistolary efforts, con and pro, the thoughtfully unbiased decision of the United States Supreme Court still stands!"

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WOR TO STUDY RADIO EFFECT ON CLIMATE AND LIVING THINGS

When the new 50,000-watt transmitter of WOR goes on the air early in December, it will have a corps of scientists from universities to conduct observations over a period of more than a year to ascertain the effects on human, animal and vegetable life. Furthermore, experts will carry on a long series of tests on meteorological conditions in the vicinity of Carteret, N. J., the site of the new transmitter, to discover just what effect the powerful radio waves are to have on the weather; whether or not they produce humidity or aridity, rain or shine, cold or heat, or whether they have absolutely no effect at all, as is claimed by many scientists.

Engineers and other plant-attendants will be examined before they go to work at the new transmitter. At regular intervals they will be examined again to see if, as has been asserted, the high frequency current affects the faculties, growth, glands and bodily functions. The New Jersey State College of Agriculture will install equipment around the station for the scientific study of the current effects on plant growth and plant-parasites. The ground beneath the antenna is to be sown with vegetables and flowers. A plot of ground of the same area miles away will be planted with the same seeds and both plots will be given the same care. Results of these and other observations will be published quarterly.

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SPARKS FLY IN BROADCASTER-EDUCATOR EXCHANGE

A sharp clash has developed between the broadcasters and the educators as a result of an appeal by Joy Elmer Morgan, Chairman, National Committee on Education by Radio, to educational authorities of the country that they back up the plea of Floyd W. Reeves, of the Tennessee Valley Authority, for government ownership of radio. Philip Loucks, Managing Director of the National Association of Broadcasters in a sharp retort called attention to the fact that Mr. Morgan had addressed his letter to educators, accompanied by the statement of Mr. Reeves, three days after the Reeves testimony had been "repudiated" by Arthur Morgan, Chairman of the TVA.

Another angle which broadcasters declared inconsistent with Joy Elmer Morgan's endeavoring to stir up sentiment in favor of government radio ownership was that when he testified before the Federal Communications Commission, Mr. Morgan stated that his Committee has never contended for changing broadcasting in the United States to a completely government owned system "contrary to statements often made by commercial interests."

In transmitting the testimony of Mr. Reeves, who advocated government ownership of broadcasting, to educators, Joy Elmer Morgan attached the following letter to educators:

"To Those That Believe America Is Entitled to Better Radio Service Than It Is Getting: A federal chain of radio stations is recommended by the Tennessee Valley Authority in the attached article. This proposal coming from one of the foremost organizations in American life is unusually consistent and full of promise. It will receive favorable consideration if enough people demand it.

"Will you not write at once, putting the matter in your own way, urging the Communications Commission to carry out this recommendation? Address your letter to Hon. Hampson Gary, Chairman of the Broadcasting Division of the Federal Communications Commission and ask that it be made a part of the official record of the hearings now in progress. Send a copy of your letter to your representatives in Congress and copy to the National Committee on Education by Radio."

Upon learning of this appeal, Mr. Loucks addressed the following letter to Mr. Morgan:

"On October 26 on the stationery of the National Committee on Education by Radio, you wrote a letter signing yourself as Chairman to "Those That Believe America Is Entitled To Better Radio Service Than It Is Getting", in which you enclosed a statement made by Mr. Floyd W. Reeves, Director of Personnel of the Tennessee Valley Authority, before the Federal Communications Commission.

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"While your letter was addressed three days after the Communications Commission inserted in the record a telegram from Mr. Arthur E. Morgan, Chairman of the Board of Directors of the Tennessee Valley Authority, repudiating the testimony of Mr. Reeves, you did not call attention to Mr. Morgan's telegram, repudiating this testimony of Reeves, his subordinate.

"In all fairness the National Association of Broadcasters requests that you address a letter to all those who received communication of October 26th with the testimony of Reeves attached explaining that Chairman Arthur E. Morgan repudiated the testimony of Mr. Reeves and that you enclose a copy of the record of the Federal Communications Commission, which I am enclosing, setting forth the action of Mr. Arthur Morgan."

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COX PERMITTED TO MOVE STATION FROM ERIE TO DAYTON

The Federal Communications Commission reconsidered, and by unanimous consent, granted former Governor James M. Cox, of Ohio, onetime Democratic presidential candidate, permission to move Station WLBW from Erie, Pa. to Dayton, Ohio. The Commission had previously set the case for a hearing.

Governor Cox had bought the Pennsylvania station to operate in connection with his paper, the Dayton News. The Commission's reconsideration was seen as a courtesy to Mr. Cox personally and also to Col. Thad H. Brown, of Ohio, Vice-Chairman, who, though a Republican, was said to have owed his reappointment largely to the good offices of Governor Cox, an old friend.

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NBC REPORTED BUYING REMAINING HALF OF WMAQ

The National Broadcasting Company, already half owner of the station, is reported to have bought the Chicago Daily News' half of Station WMAQ in that city. The price was said to be in the neighborhood of \$500,000.

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