

HEINL RADIO BUSINESS LETTER

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FCC ENGINEERING REPORT URGES MODERNIZATION, NO RADICAL CHANGES

Establishment of six classes of broadcasting stations, retention of at least 25 clear channels for exclusive use of high power stations, a minimum power of 50 KW for clear channel outlets, and general modernization of Federal Communications Commission engineering regulations are proposed in a voluminous report submitted to the Commission this week by its Engineering Department.

Based on the October broadcast band hearings, the "preliminary" report suggests no radical shake-up in the present broadcasting system. On some of the more controversial issues, such as the advisability of setting up more super-power stations like WLW, Cincinnati, the department asks for further instructions in view of the economic factors involved.

In its recommended classification of stations, the FCC engineers make provision for higher power all along the line but leave the Commission free to act in each individual case by suggesting a wide range in power for each class of transmitters.

The report has not been acted upon by either the Broadcast Division or the full Commission. A supplementary report will be submitted shortly covering the economic and social factors involved in the allocation of broadcasting frequencies, T.A.M. Craven, Chief Engineer, stated in the preliminary report.

Commander Craven asked the Commission not to make any final decisions before seeing the supplementary report.

The general conclusions of the FCC engineers, together with a summary of their recommendations, follow:

"In general, based upon the evidence given at the hearing, the Engineering Department is of the opinion that from an engineering standpoint the existing system of allocation of frequencies within the broadcast band 550-1600 kc. which was inaugurated in 1928, is sound, particularly with reference to the fundamental 10 kc separation between channels and the use of both clear channels and shared channels to render service to the nation. However, in view of the information which has been accumulated since 1928, and in view of technical improvements as well as an increasing demand for better facilities, there is need for an improvement in the engineering features of the structure as well as in some of the standards of engineering practice which have been followed hitherto.

"In making this report the Engineering Department desires to make clear the fact that we have not endeavored to determine who should or should not be the licensees of radio stations, because this is primarily a matter of policy which the Commission will decide for itself. Our thought on this subject of allocation has been prompted primarily from the standpoint of sound engineering, and to this end we have made it our mission to ascertain how to make the best technical use of the very limited radio spectrum between 550-1600 kc so that the entire public may receive the maximum service both of transmission and reception, regardless of who may be the licensees of the various transmitting stations. In other words, we have felt that if the basic allocation engineering within this limited spectrum were such as to make possible the greatest number of stations properly distributed geographically, and each capable of rendering technically a good service to the public, there would be made available in all sections of the country the maximum possible facilities for the Commission to license or to continue to license whomever it feels should and could operate stations."

"Following is a summary of the Engineering Department's conclusions, recommendations and requests for instructions with respect to the broadcast band 550-1600 kc:

"(1) We believe that while the engineering principles of the allocation structure of 1926 are basically sound, technical progress, operating practice and the accumulation of new data since 1928 indicate conclusively that modifications are needed and that improvements can be made which, from a technical standpoint, will result in better broadcasting service to the public. We recommend that these modifications be made by revising the existing rules, regulations and standards of good engineering practice.

"The Engineering Department's proposals for modification would not change the 10 kc separation between channels, nor would it change fundamentally the conception as to the use of both clear channels and shared channels to render service to the nation. In the latter respect the recommendations tend toward the modification of the number of frequencies made available to each class of station.

"(2) As to the general procedure for making modification of the allocation structure, we believe and recommend that the Commission should continue its existing policy of evolution and experimentation through voluntary action of applicants rather than by enforced costly radical changes. The reasonableness of the details of any of the new rules and regulations could well be the subject of formal hearings after due notice is given of the effective date of the new rules. Applicants desiring to take advantage of the improvements made possible by the new rules might have their applications granted or designated for hearing, depending upon the facts in each individual case. In any event, the present prescribed legal procedure of the Federal Communications Commission could be maintained.

"(3) We recommend that the new rules be inherently flexible so as to permit practical adaptation of sound engineering to individual cases in accord with economic and social needs.

"(4) We suggest for consideration by the Commission the use of ultra high frequencies to assist in the solution of the educational broadcast problem.

"(5) We recommend six classes of broadcast stations in the band 550-1600 kc with powers as outlined in the following. The exact definitions will be submitted later by the Law and Engineering Departments, provided the general policies herein are approved:

<u>Class</u>	<u>Comparison</u>	<u>Purpose</u>	<u>Night Power 1/</u>
A	Similar to clear channel stations	To include remote rural coverage	Not less than 50 kw
B 2/	Similar to clear channel stations except other stations use channel so as to protect secondary coverage dominant station.	To include rural coverage	10 to 50 kw
C	Similar to high power regional stations	Large metropolitan <u>district</u> coverage as well as limited rural coverage.	5 to 50 kw
D	Similar to regional stations	Metropolitan <u>dis</u> <u>trict</u> coverage.	1 to 5 kw
E	Similar to existing regional stations separated by relatively short distances	City coverage	.5 to 1 kw
F	Similar to local Stations	City or town coverage	0.1 to 0.25 kw

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- 1/ The power for each station of a class is to be determined individually upon showing of need and proper consideration of channel conditions with respect to interference.
- 2/ The class of stations which will use the same channel as Class B stations and protect the latter's secondary coverage, are in general Class D or Class E stations, located at sufficient distance from Class B stations to enable proper service to be rendered in accordance with the standards of good engineering practice. It may be possible in some instances to permit Class C stations to use Class B station channels.

"(6) We request the Broadcast Division to designate which frequencies should be assigned to each class of station. In this connection we are ready to submit a separate memorandum setting forth the conditions existing on each frequency. This separate memorandum will assist the Division in designating frequencies to be assigned each class of station. We recommend that the following number of channels be assigned to the various classes of stations in the band 550-1500 kc.:

<u>Class</u>	<u>*Number of channels</u>
A	Not less than 25
B	Approximately 5
C	" 14
D	" 30
E	" 10
F	" <u>6</u>
Total	90

*The foregoing numbers exclude the frequencies now assigned exclusively to Canada.

"With reference to the band 1510-1600 kc., we suggest that the Commission has three courses of action open to it, depending upon which policy the Commission desires to follow:

- "1. To assign all 10 channels in the band 1510 to 1600 kc. to Class F stations. In our opinion, while this provides the maximum number of stations, it does not in all cases provide a facility which will enable service to be rendered to all of an area requiring service.
- "2. To assign all 10 channels to Class D stations. This would permit only a few of the cities which do not now have a station to secure facilities. It would, however, in the relatively few individual cases afford a facility capable of performing an adequate service to a large community.
- "3. To distribute the 10 channels to Class D, E and F stations. This would enable a large number of cities to be served and at the same time permit a degree of flexibility in utilizing facilities in a manner which may be required in individual cases. A division such as 3 channels to Class D, 4 channels to Class E and 3 channels to Class F might be suitable, or else 3 channels to Class D and 7 channels to Class E, in which the power range may be more suitable for individual areas, would be an effective engineering solution to the problem. Instructions in this matter are requested.

"(7) We recommend that when the Commission is satisfied a frequency assigned to one class of station has been utilized to the fullest and proper extent by stations of such class, that stations of another class be permitted to use the said frequency, provided the latter does not cause objectionable interference,

either to the good coverage of any station regularly licensed on the frequency or jeopardize the specified use of the channel, and provided further that the new stations shall be able to render service consistent with the standards of good engineering practice.

"(8) We recommend that when licensing new stations, or when increasing the power of an existing station of any class on a channel assigned to such class, due regard should be given to the standards of good engineering practice, particularly with reference to the interference that may be caused within the good service areas of other stations of the same class on the channel in question.

"(9) We recommend that the band 1510-1600 kc be opened for Class D, E or F stations, depending upon the policy to be determined by the Commission with respect to the number of additional stations and the type of service they should render.

"(10) We recommend that all stations except Class A operate simultaneously on shared channels at night, and whenever practicable, use methods to increase service and reduce interference.

"(11) We believe that two 50 kw stations separated by great distances and operating simultaneously at night on the same channel, are capable of rendering a service to a limited area, particularly if directional antennas are used. However, we do not recommend the universal duplication of all existing clear channel stations located on the coasts. We have recommended the retention of at least 25 clear channels permanently, and caution in duplicating other such channels, pending a North American arrangement.

"(12) We believe that directional antennas are feasible, but we recommend the careful and studied application of these antennas in individual instances.

"(13) We recommend against the general application of synchronization, but suggest it can be applied in certain instances to assist in increasing coverage of low powered stations.

"(14) While we believe that powers in excess of 50 kw on clear channels are technically sound and are in accord with scientific progress, we recognize that social and economic factors involved in the use of 500 kw may outweigh in importance engineering considerations, and request instructions from the Division as to its desires with respect to regulations on the question of super-power. We feel that, in the matter of super-power, the Commission should give full consideration to our report summarizing the economic testimony in the October 5 hearing prior to making a decision.

"(15) We feel that there is a need for increased signal intensity and have recommended that in general power increases are required to better the service to the public. However, we recommend that the regulations in this respect be sufficiently flexible to

permit the Commission to judge each individual case upon its merits, particularly as to the needs and economic and social circumstances.

"(16) We believe that from an ideal standpoint the "bloc" system of allocation to classes of stations may reduce the disadvantages of a disparity in power between stations on adjacent frequencies, but because of practical considerations, we do not recommend a radical change in allocation to accomplish this scientific ideal.

"(17) We recommend against the establishment of standards of receiver selectivity and fidelity, but instead we recommend incorporation in the standards of good engineering practice the basis of receiver performance which is utilized in arriving at necessary ratios between desired and undesired signals to avoid objectionable interference.

"(18) We suggest the paramount importance of economic and social factors in the determination of the distribution of facilities to licensees in any section of the country, and state that a separate report will be submitted giving in detail a summary of the evidence presented at the October 5 hearing. We hope the Commission will consider this summary of evidence before making final decisions.

"(19) We recommend against changing the existing requirements with respect to frequency stability, modulation, harmonics and power determination.

"(20) We suggest proceeding in an evolutionary manner toward the improvements in the broadcast band 550-1600 kc without endeavoring to await developments in other bands of frequencies, because we feel that the public needs the possible technical improvements in the existing broadcast service.

"(21) We recommend that the present empirical standards be revised and issued in the form of "standards of good engineering practice" and used as a guide in administration and in testimony when no better evidence is available."

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COPELAND REINTRODUCES BILL CONTROLLING RADIO AT SEA

A bill to amend the Communications Act of 1934 for the purpose of promoting safety of life and property at sea through the use of wire and radio communications and to make more effective the International Convention for the Safety of Life at Sea, 1929, was reintroduced this week by Senator Copeland (D.), of New York.

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CONNERY DEMANDS BROAD RADIO AND FCC INVESTIGATION

A broad inquiry into charges of "irregularities" and "monopoly" in the broadcasting industry and its administration by the Federal Communications Commission was demanded this week by Representative Connery (D.), of Massachusetts, in a House Resolution (No. 61).

Mr. Connery made a similar demand last year, but his resolution was successfully pigeon-holed by the House Rules Committee, of which Representative O'Connor, of New York, a former colleague of Anning S. Prall, Chairman of the Federal Communications Commission, is Chairman.

The Massachusetts member, an ardent labor spokesman, proposed that the inquiry be made by seven members of the House, to be named by the Speaker, and suggested in a supplemental statement that he be appointed Chairman.

The House Rules Committee is expected to try to forestall the inquiry again this year. Its success will depend upon the pressure that is brought to bear by friends and foes of the FCC and the broadcasting industry.

The Connery resolution in a preamble states "there is reason to believe that contrary to the intent and spirit, as well as the language of the laws in force, a monopoly exists in radio broadcasting"; that "certain types of programs . . . are allegedly indecent"; and "it is contrary to public policy . . . to allow any private groups to traffic in property reserved to and for the people."

The Special Committee would be "authorized and directed to inquire into and investigate the allegations and charges that have been or may be made relative to irregularities in or pertaining to the monopoly which exists in radio and the activities and functions carried on under the Communications Act of 1934 and all matters pertaining to radio and radio broadcasting."

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FCC ASKS \$350,000 TO CONTINUE TELEPHONE INQUIRY

For the purpose of continuing the inquiry into the American Telephone & Telegraph Company, the Federal Communications Commission this week asked of Congress through the Budget Bureau, \$350,000 in a supplemental appropriation.

The FCC explained that of the \$300,000 appropriated in the first Deficiency Act of 1936, \$335,000 has been obligated, leaving a balance of \$65,000.

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RADIO ADMINISTRATION SEEN RETURNING TO COMMERCE DEPARTMENT

Return of the administration of radio and other forms of communications to the Commerce Department, which nurtured it in its infancy, was forecast this week as one of the ultimate results of the President's plan for reorganization of the executive departments.

While the plan is facing considerable opposition in Congress and may be altered before being adopted, it now provides for the abolition of all independent commissions.

The Federal Communications Commission consequently would disappear as such and its functions would be absorbed by the Commerce Department. It is not unlikely, however, that most of the personnel and some of the Commissioners would be retained in the transfer.

The reorganization plan proposed that the duties of independent commissions be divided. One section would handle all administrative and licensing details, while the other section would constitute a Board of Review and would comprise the present Commissioners.

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FRANK ARNOLD HEADS RCA INSTITUTE'S TECHNICAL PRESS

The appointment of Frank A. Arnold, prominent for many years in broadcasting circles, as Managing Director of the RCA Institutes' Technical Press, was announced this week by Charles J. Pannill, President of the RCA Institutes.

Mr. Arnold's work in the broadcasting field began in 1926, when he became Director of Development for the newly-formed National Broadcasting Company. In this position, he became one of the most widely known executives in radio broadcasting and was responsible for the formation of many NBC policies which since have become part of the enormous advertiser and listener structure of that company. He is the author of many books and brochures on radio advertising and analysis of public response to programs.

In his new work, Mr. Arnold will direct publication of the RCA Review, a quarterly journal of radio progress, which numbers among its subscribers leading radio, sound and optical engineers in more than 70 countries. The RCA Institutes Technical Press, a department of RCA Institutes, Inc., the oldest radio technical school in the United States, also publishes books and other data dealing with television and many related electronics subjects. The new director comes to this work from the Institute of Public Relations, Inc., of which he has been Vice-President for the past year.

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PAYNE SUCCEEDS CRUSE IN COMMERCE DEPARTMENT POST

As predicted last week in the Heintz News Letter, John H. Payne, formerly with Westinghouse Company, this week was appointed Chief of the Electrical Division, U. S. Bureau of Foreign and Domestic Commerce. He succeeds Andrew W. Cruse, who transferred to the Federal Communications Commission as Assistant Chief Engineer.

Mr. Payne had the endorsement of several trade organizations, including the Radio Manufacturers' Association.

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NETWORK BILLINGS NEAR \$60,000,000 FOR LAST YEAR

Representing an increase of 19.1 percent over 1935's gross revenue, time sales by the three major networks - NBC, CBS and Mutual - amounted to \$59,679,671 in 1936, constituting the largest income of networks they have yet enjoyed. Their returns in 1935 were \$50,079,838.

Of the 1936 total \$34,523,950 was billed on NBC-Red and Blue networks; \$23,168,148 on CBS, and \$1,987,573 on Mutual. Included in the 1936 billings is about \$2,000,000 spent by political parties during the presidential campaign.

CBS reported its 1936 figures as 31.4% greater than 1935; NBC is up 10.8%, and Mutual reports the largest percentage increase over 1935, 53.7%. A breakdown of the NBC networks reveals that the Red had yearly receipts of \$22,645,527 and the Blue \$11,878,423.

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WESTINGHOUSE STATIONS FORM NEW CORPORATION

Formation of the Westinghouse Radio Stations, Inc., by the Westinghouse Electric and Manufacturing Company was disclosed this week in a statement filed with the Securities and Exchange Commission. Westinghouse introduced radio broadcasting as it is known today in 1920, through KDKA, the first one to operate on a daily schedule.

The new company is expected to play a part in the operation of the Westinghouse chain, which consists of four stations, including KDKA. The statement related that Westinghouse bought all the outstanding capital stock of the Main Auto Supply Company of Indiana on August 1st and that the name was changed to Westinghouse Radio Stations, Inc., two days later.

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NEW STATION FOR RICHMOND, VA., IS AUTHORIZED

Reversing Examiner John P. Bramhall, the Federal Communications Commission this week granted a construction permit to the Times-Dispatch Co., Richmond, Va., newspaper publisher, for a new broadcasting station to operate on 1500 kc., with 100 watts power, unlimited hours. The order is effective February 2nd.

The Commission at the same time denied a permit to the Century Broadcasting Co., of Richmond, and authorized WMBG, Richmond, to move its transmitter, install new equipment, and transfer from 1210 to 1350 kc., increase power to 500 watts, and hours to unlimited.

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LA GUARDIA SEEKS NON-COMMERCIAL NETWORK

New York's Mayor La Guardia hopes to link the country's non-commercial radio stations into a new broadcasting chain, with the municipal station WNYC as one of the links.

He outlined the plan this week at the annual meeting and luncheon of the Municipal Art Committee in the Rainbow Grill, Rockefeller Center, according to the New York Times. As yet, he explained, there are not many non-commercial radio stations in the country, but enough exist to form the nucleus of a system devoted to educational and cultural activities.

Inter-station communication would be accomplished by short wave, the Mayor explained, pointing out that technically this method was now practicable. The stumbling block in realizing the plan, however, has been a ruling of the Federal Communications Commission, which he hopes will be changed, he added.

"During the Harvard Tercentenary we tried to rebroadcast over WNYC one of the programs sent to the Municipal Station from Harvard by short wave, but were prevented by the Federal Communications Commission. This body ruled that where a telephone line was available for interstation communication, short-wave could not be utilized. Such a ruling is as absurd as insisting that where railway lines run between two cities, travelers may not use airplanes."

Mr. La Guardia pointed out that WNYC's facilities would soon be much improved when a new broadcasting plant in Greenpoint was put in operation. This has been erected with PWA funds.

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ZENITH VOTES 50 CENTS A SHARE FOR THIRD QUARTER

Directors of the Zenith Radio Corporation, Chicago, this week voted a dividend of 50 cents a share for the third quarter of the fiscal year, which ends January 31st, according to Commander E. F. McDonald, President.

Zenith sales for this year are running 100 percent above last year, he said, which was the company's biggest profit year.

The Chicago company will move February 15th into its new plant at Dickens and Susten Avenues, Commander McDonald said, but auto set production will continue in present quarters.

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COMPETITION INTENSE IN CUBAN RADIO MARKET

The extent of the competition in radio receiving set market of Cuba is indicated in a report to the Commerce Department from the American Commercial Attache at Habana.

During the month of November, the report shows, no less than 32 different makes of radios were included in the import returns. The only non-American make of any consequence now sold in the Cuban market is the Dutch radio, "Philips."

According to private compilations from ships' manifests, imports of radio receiving sets into Habana during November amounted to 3,414 units, valued at \$84,198, compared with 3,436 units, valued at \$98,903, in October, and 3,419 units, valued at \$90,303 in November, 1935, the report states.

Local distributors throughout Cuba express the view that the outlook for sales of radio sets during the coming season is very favorable, according to the report.

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The Federal Communications Bar Association this week recommended establishment of a Motions Court by the Federal Communications Commission's Broadcast Division to assist in maturing cases for hearing.

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